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ORIGINAL LECTURES.

CLINICAL LECTURE ON CROUP AND DIPHTHERIA.(a)

By E. HEADLAM GREENHOW, M.D., F.R.S.,
Physician to the Middlesex Hospital.

GENTLEMEN,—We have lately had in quick succession, in Murray ward, two children who have presented the same prominent symptoms and have required the same treatment, but whose cases were, nevertheless, in my opinion, of a very different nature. Both the little patients suffered from pronounced dyspnœa, from stridulous breathing and harsh, clanging cough. Both were of anxious aspect and pale, livid countenance; and lastly, both required tracheotomy soon after their admission, on account of immediately threatening death from asphyxia. At first sight, therefore, identity of symptoms might easily have caused these cases to be regarded as identical in character. This identity of prominent symptoms, however, was due to the circumstance that, in both patients, the immediately threatening condition was caused by an impediment to the admission of air into the lungs; and, from whatever cause such an obstruction may arise, the same symptoms must necessarily ensue. Identity of prominent symptoms in these two children did not, therefore, by any means prove that the two cases were of the same character. The history of the illness and the presence of considerable fever in both cases sufficed, however, to exclude all the various possible causes of the symptoms, except croup and diphtheria.

The identity or non-identity of these two diseases has recently been a subject of much debate by the profession in this country, and on that account I am glad to take the opportunity of placing before you the clinical evidence afforded by these two cases in support of the opinion I have always expressed, that croup and diphtheria are really distinct diseases. It would, moreover, be difficult to find cases more characteristic of these diseases, and therefore better adapted to illustrate my views, than those I am about to read.

I shall direct your attention, in the first place, to the earliest of these cases in point of time. It was a case of diphtheria, and the patient, Amelia R., a little girl aged five years, was admitted on the 27th of last month. Her history before coming under our observation was not very full, but we ascertained that she had been ailing for about a week, that she had first suffered for several days from sore throat and difficulty of swallowing, and that subsequently her breathing had become embarrassed, and she had begun to cough. On admission her breathing was difficult and laborious, all the subsidiary muscles of respiration being brought into full play. The respirations were 25 in the minute, the pulse was 150, and the temperature 102°. She was so ill and restless that we were unable to examine her throat thoroughly, but I did ascertain that the fauces were red and swollen, and that a distinct patch of yellow false membrane existed on the uvula and arches of the palate; the glands at the angles of the lower jaws were also considerably swollen. The poor little patient grew rapidly worse, and in the course of the same day it became necessary to perform tracheotomy. She was greatly relieved, and rallied much after the operation; her breathing became easy, and her general aspect improved. In the evening the respirations were 20; pulse 150; temperature 101·2°; urine, specific gravity 1020, contained albumen in large quantity, but no blood. She took milk, beef-tea, and wine freely. On the following day, however, it was evident that the disease had extended upwards into the nasal passages; she had now coryza and profuse epistaxis, and sank on the second day after the operation.

At the post-mortem examination the wound in the throat was unhealthy in appearance. The epiglottis was covered with a thick, tough, firmly adherent, false membrane, which extended downwards through the larynx and trachea as low as the bifurcation; becoming, as it descended, gradually thinner and less firmly attached to the subjacent membrane. The mucous membrane underlying the exuded false membrane was extremely congested. The uvula and arches of the palate were also covered with a firmly adherent false membrane, and both tonsils presented a sloughy appearance. The lungs were pale-coloured, and here and there small portions of lung tissue were collapsed. The lower lobe of the right lung was somewhat congested, but otherwise healthy. The pulmonary pleura on both sides was studded with small ecchymoses. The bronchial tubes were healthy.

This was unmistakably a case of diphtheria, and the severity of the constitutional and local symptoms would have rendered the prognosis a very grave one, even if the course of the disease had not produced obstruction to the function of respiration. But before proceeding to comment upon it I must relate also the other case to which I have alluded.

William C., a little boy aged three years, was admitted on the 11th of the present month (January, 1876). The boy had once previously had an attack similar to that under which he was suffering, and it was said that one other child of the family had likewise had croup. The history of the illness previous to admission was that for about five days the child had been suffering from severe catarrh, when, on the day before he was brought to the hospital, he had begun to breathe with much difficulty, each inspiration being attended by a hoarse whistling.

On admission we found the pulse 145, the respirations 50 in a minute, and the temperature 102·6°. The breathing was laboured and gasping; the face somewhat cyanosed. Bronchitic cooing sounds were heard throughout both lungs. The fauces were slightly injected, but not swollen, and there was not the slightest appearance of exudation upon them. The child was so ill that tracheotomy was at once performed by Mr. Hulke. At 6 p.m., five hours after the operation, the patient had taken milk freely. Pulse 150; respirations 50; temperature 103·6°; urine, specific gravity 1028, not albuminous. The breathing was much less laborious, and the stridor was gone; but in other respects there was no important change. It is unnecessary to follow further the details of the case. The child died on January 13, having suffered throughout from symptoms of bronchitis.

At the post-mortem examination the tonsils, pillars of the fauces, pharynx, and epiglottis were all found perfectly healthy and free from exudation. The mucous membrane of the larynx was somewhat vascular and roughened. The whole tube of the trachea was filled with viscid mucus; and the tracheal mucous membrane, as low as the bifurcation, was covered with a layer of exudation of an opaque yellowish-green colour, excepting at intervals, where the surface of the mucous membrane was visible and appeared to be intensely red. This exudation extended downwards below the bifurcation of the trachea, into the right bronchial tubes to the third division, and there ceased somewhat abruptly. Below this point, and also in the left bronchial tubes, there was vivid injection of the mucous membrane, and a considerable amount of secretion was found plugging up some of the tubes. The lungs presented several patches of collapse, and a few patches of lobular pneumonia. The heart was healthy, and contained clots on both sides. The other viscera were all healthy.

This, then, was a case of croup complicated with universal bronchitis—a complication which led me from the first to form a most unfavourable opinion of the case, both because it added much to the immediate danger, and because it rendered it impossible to determine how far the exudation—presuming that exudation existed—might extend downwards into the air-passages. It was found, as you will recollect, after death, to have extended downwards as low as the third bifurcation of the bronchial tubes on the right side.

Now let me draw your attention to certain important differences between these two cases. In the case of diphtheria, the little patient had complained of sore throat for some days before the development of any symptoms connected with the larynx and trachea; and this fact, together with the appearance of the fauces during life and at the post-mortem examination, afforded ample evidence that the inflammation had commenced in the throat, and had spread, from that starting-point, downwards into the trachea and upwards into the nasal passages. Further, you will remember that the urine was profusely albuminous, and that there was considerable epistaxis.

In the case of croup, on the contrary, there was no soreness of throat at the outset of the illness, nor, indeed, at any later period; neither were any appearances found after death that would indicate any inflammatory affection of the fauces. The earliest symptoms of the disease, in this case, were those of catarrh of the respiratory passages, to which the symptoms of obstruction in the larynx and trachea were superadded

(a) Delivered January 26, 1876.

several days later. In this case, also, there was neither albuminuria nor epistaxis.

These two cases were thus obviously altogether different in their origin and course, although they both eventually produced the same fatal termination. But this termination, as I have shown you, is common also to several other diseases, whilst the differences of course and origin in these two cases are, in my opinion, differences distinctive of the two diseases—croup and diphtheria.

Diphtheria is a specific febrile disease, which has its local manifestation upon the fauces, from which the inflammation often spreads downwards and upwards, as in the case I have described, to the adjoining mucous surfaces.

Croup, on the other hand, is an inflammatory cattarhal affection of the larynx and trachea. It begins with symptoms of catarrh in the respiratory passages, with hoarse voice, followed by shrill cough of metallic tone, and by difficult breathing. Cullen perfectly described in a few words all its main symptoms: "Respiratio difficilis, inspiratio strepens, vox rauca, tussis clangosa." All these symptoms were present, and they were the prominent symptoms in my second patient.

The two cases upon which I have hitherto dwelt came under observation only when death from asphyxia was imminent, and tracheotomy afforded the one slender chance of prolonging life. I will, therefore, now read to you the notes of another case of croup which we had in the same ward about a year since :—

Archibald M., aged two years, was admitted into Murray ward on November 17, 1874. The child had been healthy until Sunday, November 15, on which day he had walked out with his father, and had got his clothes damp. On his return home he did not have them changed. In the afternoon of the 16th he showed symptoms of catarrh, and began to cough. In the course of the evening the cough became dry and harsh, the child grew very hot and restless, and became progressively worse up to the time of his admission into the hospital on the following day.

On admission his pulse was 120, and the respirations were 40 in a minute; his temperature was 102·2°. Breathing was difficult and laborious, and imperfectly performed; the lower ribs and epigastrium sinking inwards with each violent inspiratory effort. The subsidiary muscles of respiration were all brought into play, and the alæ nasi were working. There was shrill laryngeal cough, and stridulous breathing. The fauces were slightly injected, but perfectly free from exudation, and the glands at the angles of the lower jaw were not swollen. The chest was normally resonant on percussion, but the breath-sounds were completely masked by loud laryngeal wheezing. The child's breathing was so distressed that the propriety of immediate tracheotomy was seriously discussed. I, however, deemed it right to try other remedies before having recourse to the operation, and, in the first place, ordered an emetic of ipecacuanha and tartarated antimony, to be administered every ten minutes until free vomiting should be induced. Two leeches were next applied at the root of the neck, just above the sternum, and the throat was afterwards enveloped in a large poultice. As soon as the vomiting had subsided the child took four minims of antimonial wine every four hours, with half a drachm each of solution of acetate of ammonia and simple syrup. At 10 p.m. the breathing was free from stridor, and less difficult; the alæ nasi were no longer in action. Pulse 150; respirations 60; temperature 99·6°.

On November 18 the child's aspect was improved, but the lips were somewhat livid, and the cough was still troublesome, though it no longer had the metallic ring; the breathing, though still hurried, was easy. Pulse 138; respirations 50; temperature 99°. Towards evening the face became flushed, the pulse rose to 164, the temperature to 103·6°, and the respirations were 52.

On the 19th the cough was more troublesome, the breathing short, shallow, and gasping. Sibilus and moist crepitation were heard all over the back of both lungs. Urine, specific gravity 1025, not albuminous. I now ordered a warm bath, increased the dose of antimonial wine to seven minims every three hours, and prescribed a powder containing three grains of grey powder and one grain of compound ipecacuanha powder, to be taken at bedtime.

On the 21st the child was decidedly better, but on the 22nd the pulse once more rose to 144, and the temperature to 104°, and moist crepitation and impaired percussion resonance were detected over the lower lobe of the left lung. The child's strength remaining good, the dose of antimonial wine was increased to ten minims, and a linseed and mustard poultice was applied over the back of the chest. The powder was continued nightly. These untoward symptoms subsided again in a few days, and on December 2 the pulse was noted 92, the temperature 98°, and the respirations were only 28. There was still occasional cough, but the breath-sounds and percussion resonance over the left lung were almost normal; and the little patient was discharged quite well on December 16.

This case differed only from the other in being somewhat less severe and running a favourable course. It commenced, like the other case, with catarrh of the respiratory passages, and without sore throat, swelling of the glands at the angles of the jaw, or other symptoms characteristic of diphtheria. The catarrhal symptoms increased rapidly in intensity, until, at an early period, the passage of air through the larynx was impeded, and asphyxia was threatened.

It may perhaps be objected that this case is not shown to have been certainly one of croup, because there was no tangible proof of the existence of any membranous exudation in the larynx. But I would observe that, such exudation being only a consequence of the local inflammation, it may well be imagined that, in the slighter cases, the resolution of the inflammation may take place before the exudation produced is dense enough to form a solid membrane. And even when such a membrane has been formed, it usually, in cases which run a favourable course, comes away in shreds mixed with the expectoration, and may easily be overlooked or swallowed. One of these alternatives occurred, without doubt, in the case we have last considered, which differed in no respect in character, and but little in severity, from the previous case, in which the existence of the membranous exudation in the larynx was verified after death.

Cases of the nature of my last two had long been popularly known by the name of "the croup," before the disease was first described by Dr. Home, of Edinburgh, rather more than one hundred years ago. His treatise was founded on several cases which had come under his own personal observation, and he proposed for the disease the name of "suffocatio stridula," from its leading symptoms—the shrill voice and difficult breathing. Some of the cases he quotes recovered, and others were fatal; and as you are not likely to see this book, which has been long out of date, I make no apology for giving you a short abstract of his first fatal case, which you will find to be, in all essential respects, identical with mine :—

"September 29, 1760.—Was called to see a boy, seven years of age, who had recovered from the measles about six weeks before, and had been well, except a slight cough, till seized four days before I saw him with fever, heat, thirst, and shrill croupy voice. His pulse was quick, a little hard, but not strong. He swallowed easily, but complained of pain in the trachea when he spoke, or when I pressed it with my fingers. Great drought; breathing high, but not very quick. He sometimes expectorated, and often had frothy saliva on his lips. Was blooded, and had leeches to his throat and a blister round it. Next day pulse weaker, 175; breathing quicker. Died that night.

"On laying open the parts there was no appearance of inflammation on the fauces; but, to my great surprise, the whole superior internal surface of the trachea was covered with a white, soft, thick, preternatural coat or membrane, easily separable from it, and generally lying loose upon it, with purulent matter lodged below and around it. The subjacent parts were red, but showed no great degree of inflammation. The same appearances continued through the ramifications of the *aspera arteria*, though the membrane seemed here to become softer, thinner, and of a more purulent nature. All the branches of the windpipe and *bronchiæ* were filled with purulent matter, and we could easily squeeze it out in great plenty from all these pipes."

With reference to his cases that recovered, Dr. Home says: "The symptoms of these three patients and their cure show plainly the croup in this state to be a disease of an inflammatory nature, attacking the organs of voice and respiration, particularly the superior parts of the trachea; and that the local inflammation often ends by resolution." And this expresses precisely my own opinion.

In conclusion, to sum up what appear to me the essential differences between the two diseases we have been considering.

Diphtheria is a specific febrile disease, characterised by—

1. Considerable, sometimes extreme, prostration.
2. Sore throat, often difficulty of swallowing, usually pre-

ceding by some days the laryngeal symptoms, but no hoarseness of voice until stridulous breathing and cough supervene.

3. Injection and swelling of the fauces, which are more or less extensively covered with exudation.

4. Swelling of the glands at the angles of the lower jaw.

5. Presence of albuminuria or epistaxis in many cases.

Croup is a local catarrhal inflammation, in which—

1. There is little, and sometimes no, prostration.

2. Catarrh and hoarseness of voice precede, for a longer or shorter time, the urgent laryngeal symptoms, but, as a rule, there is no sore throat nor difficulty of swallowing, though patients often complain of pain in the trachea.

3. Shrill cough of metallic tone and stridulous breathing are early symptoms.

4. The fauces may be injected as they usually are in common catarrh; but they are not much, if at all, swollen, and there is no exudation upon them.

5. Swelling of the submaxillary glands, albuminuria, and epistaxis do not occur.

The last, but most important, point of difference between croup and diphtheria is that the constitutional treatment of the two diseases is totally opposite.

In diphtheria we are obliged to support the patient's strength from the commencement, and any depletory treatment would be most injurious; indeed, the prostration usually very soon becomes so profound that we are compelled to give stimulants rather freely. In croup, on the contrary, the patient's strength, as a rule, remains good; leeching, emetics, and antimonials are well borne, and often, as in my second case, bring about resolution of the inflammation and rapid recovery. I have also seen venesection practised in croup, certainly without injurious consequences; and Dr. Home twice took five ounces of blood from one of his patients, a girl only fifteen months old, who recovered. Such treatment, I need scarcely tell you, would be fatal in diphtheria. Therefore it is that, as I said at the commencement of this lecture, the question of the identity or non-identity of croup and diphtheria is not a mere question for theoretical discussion, but a practical question of the utmost importance, on the right solution of which must depend the therapeutical management of each individual case, and very often the ultimate result to the patient.

CLINICAL LECTURE ON AMPUTATION.

By T. HOLMES, F.R.C.S., etc.,
Surgeon to, and Lecturer on Surgery at, St. George's Hospital.

Steps of the Operation—Preparation of the Patient—Operating in a Spray of Carbolic Acid—Methods of Cutting the Flaps—Means of Controlling Hæmorrhage—Use of Esmarch's Bandage—Torsion and Catgut Ligature—Closure of the Wound—Importance of Drainage—The "Open" Method of Treating Amputations—Importance of Perfect Rest for the Stump during the Healing Process—Splints—Sutures—Antiseptic Dressing—Theories of Pyæmia—The Germ Theory—Prevalence of Hospital Diseases in the Metropolis, and other Facts adverse to this Theory—Advantages (notwithstanding this Doubtfulness of the Theory) of Professor Lister's Method of Dressing—Predisposition to Pyæmia from previous General or Local Disease—Pyæmia caused by Careless Dressing.

I WAS speaking last week of the circumstances attending a somewhat interesting case of secondary amputation of the forearm for injury, and I promised to-day to give you the conclusions to which a tolerably extensive experience of amputation in my own and others' practice has led me as to the details of the operation, its dangers, and the best way of avoiding them. In the time at my disposal I can do little more than state these conclusions somewhat dogmatically. So much difference of opinion and of practice exists on almost every one of the details that I should require a volume instead of a lecture to discuss them adequately. I can say nothing as to the indications for operation. I shall assume that the surgeon has made up his mind to amputate. The first question which occurs is, whether any preparation is necessary, either of the patient or of his surroundings. With all deference to the many eminent surgeons who think otherwise, I cannot see that there is any proved and incontestable advantage in the isolation of patients into separate "operation wards"; in keeping them in bed for some days before (unless confinement to bed is necessary on other accounts); in putting them into special beds, or keeping them in particular attitudes, during the few days preceding the operation. A nervous patient must be very unfavourably impressed by all these precautions. Those who are of equable temperament, probably, are unaffected by them either way. The best plan seems to be to represent the operation as hopefully as we can to the patient, and give him as short a time as possible to brood over its fancied horrors and dangers. The old plan of purging and starving a patient in preparation for a severe operation is now given up; but a moderate purgation beforehand is useful in saving the patient disturbance for the next day or two. And if the disease or injury be not of too urgent a nature, any obvious irregularity of health, habits, or diet should be, as far as possible, corrected; but this is better done before the patient is made aware of the necessity for amputation.

In the performance of the operation itself, I shall notice the following particulars:—1. The advantages or otherwise of using the spray of carbolic acid lotion during the operation. You have seen me use this spray in most operations during the last year or two, and certainly most of them have done very well. For reasons which I shall presently state, I cannot satisfy myself of the basis on which the "germ theory" rests; but I find it difficult to resist the testimony of the numerous surgeons of experience who attach importance to the fact of operating in an atmosphere of carbolic acid; and as in an amputation there is no inconvenience in it, whatever may be the case in a dissecting-operation, I think it better to use it.

Next as to cutting flaps. All the methods in use have their advantages in appropriate cases. When the surgeon can do as he likes, it seems to me that the best stump in the thigh or arm is formed by separating skin-flaps on the anterior and posterior aspects of the limb, making one (usually the anterior) much longer than the other; then making a circular incision through the superficial muscles; then another down to the bone; and, finally, dividing the bone about an inch higher up. Thus the end of the bone is well covered with muscular tissue, and the scar is fairly away from pressure. In the leg and forearm, Teale's method, or some modification of it, seems to give the best results—*i.e.*, the bones should be covered by a good cushion of muscular tissue, and the skin-wound should be placed away from the face of the stump. It is true that the muscular tissue of the stump will probably become atrophied, and ultimately disappear, but in the meanwhile the cut ends of the bones will have become covered with new tissue, and will not adhere to the face of the stump. The objection to the old circular method is, that the scar necessarily crosses, and almost always adheres to, the ends of the bones; while the objection to all those methods in which the scar is placed out of the way of pressure (including Teale's and Carden's) is, that the length of the flaps renders some amount of gangrene probable in weakened or unhealthy persons, and must in all cases render rapid union less likely. You have seen, in the case which gave rise to these remarks, one of the disadvantages which sometimes is noticed when the flap is entirely musculo-cutaneous—*i.e.*, when the skin is not separated from the muscles at all,—or when, as in that case, there is no flap at all on one side. Being anxious to have a short stump in the forearm, which I thought would be more movable and more useful than one formed by amputating through the elbow-joint, I was obliged to cut perpendicularly down to the bones in front, since the laceration extended to within a short distance of the bend of the elbow, so that the whole covering of the bones was taken from behind. This covering was formed from both muscles and skin, and looked at first too exuberant; but as union has advanced, the contraction of the muscular tissue in front has drawn it so tightly over the end of the radius, that the latter would have made its way through the skin had we not contrived to relax the parts by the application of a splint and strips of plaster.

Next with regard to the stoppage of bleeding. Finger-pressure, the tourniquet, and Esmarch's elastic bandage, are all perfectly adequate to guard against any alarming hæmorrhage in ordinary cases; in fact, alarming hæmorrhage is very rare. In looking over the notes of 500 completed cases of amputation at this hospital, I find a few cases in which death occurred on the table immediately after the completion of the amputation, but in none of them was there any unusual hæmorrhage; and hæmorrhage so copious as perceptibly to affect the progress of the case is, I think, very seldom observed. It seems to me, however, that, with ever so steady and experienced an assistant, the patient generally loses more blood with finger-pressure than with the tourniquet, and especially in amputation of the leg. The recently introduced bandage of Esmarch is a most

convenient apparatus for dissecting-operations in the limbs, and is, I think, an improvement in many cases of amputation. You saw me amputate a child's thigh, two or three weeks ago, after this "bloodless" method, and you could see how well in that instance it deserved its name—for hardly a spoonful of blood was shed. It is true that this is not always the case. The vessels will ooze for a time after the removal of the bandage; and this oozing sometimes causes about as much loss of blood as would have occurred with the tourniquet. The main utility of Esmarch's bandage is in cases of excision, of operations on bones, and of removal of tumours, particularly when deep-seated—cases in which it may be of the most vital importance that the surgeon may be able to see all the tissues as clearly in the living as in the dead subject. The disadvantages which have been attributed to the use of this apparatus I have never seen—having had a tolerably extensive experience of its use. I have never met with recurrent hæmorrhage afterwards; and this I attribute to free exposure of the surface of the wound to cold (by means of carbolised lotion) till all tendency to hæmorrhage is over. Nor have we ever seen the least tendency to gangrene, though some of our operations have been protracted. The idea that pus may be diffused over "the cellular spaces" of the limb by the pressure, is, I think, wholly theoretical—at least, I know of no case which supports it; and it is improbable, since there are no cellular "spaces" in reality. What we are in the habit of calling "the cellular tissue" is more properly described by the older name of the "cellular membrane"; it is a continuous membrane, the fibres of which can indeed be distended into cellular spaces, but no such spaces exist in the natural condition. Nor do I believe that the pressure of the bandage is at all sufficient to inject pus into its interstices, for we must remember that the pressure need not be at all severe. It is its constant, gentle action which empties the limb of blood. The attempt which was made on the first introduction of Esmarch's proposition to represent it as identical with the old plan of applying a bandage before putting on the tourniquet showed a complete misapprehension of the matter. A tourniquet always detains the blood in the limb, and though a little less may be detained if the limb has been previously raised and bandaged, still the limb will always be found tolerably full of blood. The pressure of Esmarch's circular elastic cord, on the contrary, is sufficient to prevent any supply of blood to the limb, while the capillaries and veins have been previously emptied by the gentle continuous pressure of the bandage, so that all the tissues are bloodless, while with the tourniquet they are loaded with blood. I have nothing but good to report of Esmarch's plan, though I do not think amputations are the operations best adapted to display all its advantages.

Next of the vexed question of ligature or torsion. We have ceased at this hospital to use acupressure, because, after a satisfactory trial, we thought it decidedly inferior to the old plan of the silk ligature, and some of my colleagues still use the latter. I have, as a general rule, abandoned it for the carbolised catgut ligatures, which I have found equally efficient against primary and secondary hæmorrhage, and which offer (I am again speaking only generally) no obstacle to the rapid union of the wound. You saw this illustrated in the case of the little child whose thigh was amputated. The wound was healed almost entirely, and the patient out of bed, on the fourteenth day after the amputation, no trace of the ligatures having been seen. I prefer this plan to torsion (though quite admitting the efficacy and safety of torsion in skilful hands), inasmuch as it is very much easier to apply, and involves much less handling and contusion of the parts. In an amputation in which torsion is used, though the larger and more obvious vessels may be easily and quickly secured, we often see much difficulty in dealing with those which come less distinctly into view; and this difficulty is greater if the tissues are unhealthy. In such cases either the parts are left long exposed and are much handled—which cannot but retard union—or the smaller vessels are left to bleed; and even if this bleeding ceases without any serious damage to the patient, yet the blood must distend the flaps, some of it must remain as clot, even in spite of drainage, and it must in that way again retard union. With the carbolised ligature each vessel can be permanently secured in a moment; and the small knots of gut left in the wound do not seem in any way to affect the rapidity of its union. It is for these reasons that I prefer this form of ligature in amputation. I have used torsion occasionally, and, I repeat, am perfectly convinced of its efficacy; nor have I myself had any ill-consequences in the few cases so treated. In one instance of forearm-amputation in the practice of one of my colleagues, severe secondary hæmorrhage occurred on the seventh day, from one of the main arteries, but this would probably have occurred also if the ligature had been used. It forms, to my mind, no argument against torsion, and it may be balanced by a case of my own, in which fatal secondary hæmorrhage occurred from the femoral artery on the eighth day after ligature with carbolised gut—the only case of secondary hæmorrhage(a) I have had or know to have occurred with this form of ligature. And here, again, there can be little doubt that the bleeding would have occurred in whatever way the vessel had been secured. It was a case of secondary amputation, performed on account of abscess in the knee-joint from injury. The patient had high fever before and after the amputation. Five days afterwards he had convulsion-fits, in which he nearly died; and on the eighth day suddenly fatal hæmorrhage came on. The carbolised catgut ligature had entirely disappeared, and the artery was perfectly empty and open. Now, it is quite clear that if the pressure of an acupressure-needle for forty-eight hours is sufficient to close the popliteal artery so firmly that, under ordinary circumstances, no hæmorrhage is to be apprehended, the pressure of the carbolised gut during the whole time that its knot remains firm (a period which can hardly be estimated at less than five days) must be more than enough if the blood have its usual tendency to coagulate. But the unhealthy state of the blood in this instance was shown by the fever before operation, and the convulsions afterwards. Now, in cases where the blood will not coagulate in the vessels, hæmorrhage will probably ensue after either torsion or acupressure, and is still more certain to come on after the ulceration by which the silk ligature is cast off.

The arteries having been secured, and all oozing from minute vessels commanded by the affusion of cold carbolised lotion, the wound is closed. No part of the "antiseptic" method seems to me so important as its insistance on thorough drainage. And I am sure that the rapid union of the greater part of the stump may generally be secured, and the patient thus rescued from much of the subsequent danger, if, by means of a drainage-tube introduced at the bottom of the cavity, and brought out at either end, a drain is established, by which all painful tension of the stump is obviated. All the rest of the wound may be united by sutures; and the greater part of it, at any rate, will often heal by first intention. I always use silver sutures, as I am in the habit of leaving them untouched for many days—in some cases even till the patient is ready to leave his bed; whilst carbolised sutures dissolve and break after a few days.

(To be continued.)

Amongst a large number of legacies, the late Mr. George Moore has left £3000 to the Royal Free Hospital, Gray's-inn-road; £2000 each to the British Home for Incurables, the Royal Hospital for Incurables (Putney), King's College Hospital, University College Hospital, Middlesex Hospital, St. George's Hospital, Charing-cross Hospital, St. Mary's Hospital, and the London Hospital; £1500 each to the City of London Hospital for Diseases of the Chest and the Brompton Hospital; and £1000 to the Ventnor Hospital for Consumption.

Malahide Graveyard, County Dublin.—No less than three inquiries have from time to time been held before an Inspector of the Local Government Board, Ireland, as to the propriety or otherwise of closing this ancient burial-ground. On the two former occasions, it will be remembered, the Local Government Board made an order to close the graveyard. Both orders, however, were revoked or quashed on technical grounds. The third inquiry was held on September 30 and October 2, 1876, and on December 30 an order was made by the Local Government Board prohibiting interments in the graveyard from January 1, 1877, but excepting from the operation of the order Lord Talbot de Malahide and the members of his lordship's family, and all persons who may die possessed of a right by usage of burial in the graveyard. It seems rather inconsistent on Lord Talbot's part to retain his right of sepulture in the ground, for it is he who has throughout complained of its condition, and in the attempt to close it he has always borne the foremost part.

(a) In one case under the care of a colleague formidable recurrent hæmorrhage took place four hours after the operation in consequence of the popliteal artery having been imperfectly secured.

ORIGINAL COMMUNICATIONS.

CROUP AND DIPHTHERIA: A CONTRAST.(a)

By A. ERNEST SANSOM, M.D. Lond., M.R.C.P.,
Assistant-Physician to the London Hospital, and Physician to the North-Eastern Hospital for Children.

It is seldom that an opportunity offers of observing and comparing the clinical phenomena of croup and diphtheria in the same place and at the same time. The following two cases were in one ward of the North-Eastern Hospital for Children—the first under my own care, the second under the care of my colleague, Dr. Cayley, who has very kindly allowed me the use of his notes.

Case 1.—*Tracheal Croup—Tracheotomy—Copious Evacuation of False Membrane from Wound in Trachea—Recovery.*

Emily D., a healthy-looking, well-developed, well-nourished child, aged three years and a half, was brought to the out-patient department of the North-Eastern Hospital on August 9, 1876. The mother gave the following history:—The child had been in her usual good health till within two days, when she suddenly lost her appetite, became peevish and fretful, and complained of sore throat. She had a slight cough, and her voice was hoarse. During the last twelve hours the child had been gradually getting worse. She was now suffering from great dyspnœa; her lips and finger-nails were blue; the face dusky; pupils somewhat contracted. She was using all her muscles of extraordinary respiration. The inspiratory sounds were of a whistling character, and much prolonged. An examination of the throat did not reveal any sign other than slight redness of the fauces. No membrane could be seen. There were no enlarged submaxillary glands. A physical examination of the chest merely showed that there was obstruction to the entrance of air into the lungs. Temperature 100·4°; pulse 120; respirations 56.

The child was admitted into the hospital, and the symptoms becoming so urgent within an hour, tracheotomy was deemed necessary.

The operation was performed under chloroform; there was some troublesome hæmorrhage, controlled by application of lumps of ice, which ceased on the introduction of the tube. A Durham's right-angle tracheal tube was inserted into the trachea, and fastened in the wound. The symptoms were relieved immediately, and the lividity disappeared after a few inspirations. The child was placed in bed, and half an ounce of brandy with milk administered; flannels wrung out of boiling water were applied to a cradle arranged over the neck, in such a manner that the air passing to the opening in the trachea was rendered moist and warm. The following mixture was ordered:—Sodæ sulpho-carbol. gr. x., tinct. hyoscy. ℥x., vin. ipecac. ℥iv., aquæ ad ℥ij., t.d.s.

August 10.—Patient passed a good night, and appears to be doing well; has taken plenty of fluid food; temperature 99·4° this morning.

12th.—During the night a considerable quantity of false membrane was removed from the trachea by means of feathers, catheters, and tube-cleaners. On two or three occasions the patient was placed in great jeopardy in consequence of the false membrane becoming partially detached from the trachea, and efforts to expectorate it being unavailing because of its tracheal attachments.

15th.—Patient is progressing. The temperature is rather higher this morning; she has some dry râles scattered over both lungs; the false membrane gives great trouble. The following mixture ordered:—Ammon. bicarb. gr. iij., vin. ipecac. ℥iv., sp. chloroform. ℥v., glycerin. ʒj., aquæ ad ℥ss., 4tis horis.

16th.—The patient is not so well this morning. Moist râles over both lungs; temperature 103°. Cataplasma lini ordered to chest. One ounce of brandy daily. She is rather restless; once during the night she became perfectly livid, respiration was so impeded by the membrane. Neither catheters nor feathers were able to remove the membrane and relieve her distress, and as a last resource a hot solution of liquor potassæ, about 10 per cent., was sprayed by hot air down the tracheal tube. Relief soon followed this treatment; after a lapse of five minutes large pieces of false membrane became loosened, and some were ejected, others easily extracted from the trachea by means of feathers.

17th.—The patient passed a quiet night. The spray was resorted to on three occasions during yesterday, with marked relief each time.

18th.—Patient still improving; lung symptoms clearing away.

19th.—The tracheal tube was removed this morning. The wound looks healthy. Breathing unembarrassed; she has a slight cough.

22nd.—Patient rapidly recovering; she takes great interest in her play. Wound closing up.

25th.—Patient allowed to get up. Fish diet ordered.

September 8.—Full diet ordered. Child quite well. No albumen in urine throughout the illness.

Case 2.—*Pharyngo-laryngeal Diphtheria—Tracheotomy—False Membrane appearing on Wounded Surfaces, with Sloughing of Subjacent Tissues—Profound Adynamia—Death—Autopsy.*

Sarah E., a sickly, emaciated child, aged four years and a half, was brought to the out-patient department of the Children's Hospital, on August 15, 1876. The mother stated that the child had not had good health for some time, but had complained of no definite pain till within the last two days: she then said her throat was sore. Both mother and father had suffered from sore throat about this time. Within the last twelve hours the breathing had become difficult, the child was very feverish, had refused food, vomited, and was very drowsy. Two days ago she had fallen and cut her lower lip. On examining the fauces some white patches were seen on the right tonsil and in the pharynx; there was considerable redness around these patches. The tonsils and the sublingual and the submaxillary glands were slightly enlarged, and there was tenderness at the angles of the jaws; tongue dry and brown. There was considerable dyspnœa; the child was extremely restless and would not tolerate a very minute inspection. The chest-examination revealed nothing more than deficiency of air entering the lungs, the epigastrium sinking in during inspiration, accompanied by a long-drawn whistling noise. Pulse quiet and feeble. Urine loaded with albumen, specific gravity 1015 (it remained in like condition throughout). The child was admitted to the hospital under Dr. Cayley, and tracheotomy was performed under chloroform, Durham's right-angled tracheal tube being employed. This was fixed in the wound with tape passed round the neck in the usual manner. After the operation an ounce of brandy was administered, and hot damp flannels kept over the tube by the means described in the croup case. Diet to consist of milk, strong beef-tea, and eggs. Following mixture ordered:—Sodæ sulpho-carbolatis gr. x., tinct. hyoscyami ℥x., glycerini ʒj., aquæ ad ℥ss., 4tis horis.

August 16.—The patient appears to be doing fairly well. She slept at intervals during the night, but altogether was rather restless.

17th.—This morning the edges of the wound in the neck were found covered with a whitish-looking material, which could be removed with the forceps, leaving a bleeding surface. All the sutures were withdrawn. The wound had not healed in the least, but was covered with the membranous exudation. The wound in the lip was also coated with white material. Both were mopped with glycerini acidi carbolici.

18th.—The wound still looks very unhealthy; there seems to be some ulceration on the right side. Solid nitrate of silver well rubbed over the wound, and nitric acid applied to the ulcerations.

19th.—Patient seems very low. Mixture changed to decoct. cinchon. ℥ss., sp. ammon. co. ℥xv., t.d.s. The wounds look more healthy; well cleansed with carbolic glycerine. She had a small wound on the palmar surface of the distal extremity of the right ring-finger. This is now covered with false membrane; later on ulceration set in, and proceeded with remarkable rapidity up the finger to the hand.

22nd.—Tracheal tube removed. Patient breathes easily, and appears much better.

26th.—Patient has been improving till this morning. The wound had been healing up and looked quite healthy, but in dressing it this morning a sloughy patch was discovered on the left margin, with induration around; this patch was cleansed, and then mopped with nitric acid. The patient's general appearance seemed rather worse. She had now a troublesome cough; dry râles detected on auscultation. The following mixture ordered:—Vin. ipecac. ℥iij., sp. ammon. co.

(a) Paper read before the Medical Society of London.

℥xv., tinct. camph. co. ℥v., glycerini ʒ j., aquæ ad ℥ss., t.d.s. Poultices to chest.

27th.—The ulceration, in spite of treatment with nitric acid, has rapidly spread since yesterday; as much slough as possible removed, and the edges again touched with the acid. Fluids pass the glottis and escape through the wound in the trachea. Ordered: ℞. Quiniæ disulph. gr. v. t.d.s.

28th.—The patient vomited several times during the day and took very little food. Ordered nutrient enemata every four hours. She was able to retain these.

31st.—Patient has been gradually sinking since the last notes were taken. The ulceration has spread with such rapidity that the left side of the neck to the middle of the lower third of the sterno-cleido-mastoid is laid bare from the chin to the sternum. She rejects all food, and ceases to retain the enemata. There are patches of dulness over both lungs posteriorly, and crepitation is audible, and some tubular breathing. General mucous râles.

She died during the night.

At the post-mortem examination the larynx was found covered with false membrane, the soft parts of the trachea were sloughing, and the superficial tissues about the very extensive wound infiltrated. The bronchi were injected and filled with muco-purulent exudation, and the lungs showed scattered patches of broncho-pneumonic consolidation. The kidneys were in the condition of acute nephritis. All the other organs anæmic.

These cases present considerable interest at a time when the attention of the profession is called to the question of the unity or duality of the two diseases, croup and diphtheria. An impartial observer could not fail, in my opinion, to come to the conclusion that, in the two cases just under observation, we have wide differences of course and phenomena. Yet they agree in one pathological sign—the presence of false membrane. It is a pity that in this relation we have two questions which naturally complicate each other—the question of *names*, and that of *things*. As regards the first, it is really surprising how a term should become so changed from its original signification. The word "croup," existing in all northern tongues, originally denoted a disease attended with cough and dyspnœa, accompanied by sounds of which the term was a vocal expression. Then, the progress of pathological inquiry having demonstrated the presence in those cases of false membrane lining the trachea, the adjective "croupal," derived from the first term, was applied to such morbid products. On the Continent, however, there was a further extension, which involved a divorce from the clinical relations of the affection. The adjective "croupal" came to be applied to any disease which was attended by fibrinous or plastic exudation. So we have the terms "croupal" pneumonia, "croupal" bronchitis (plastic bronchitis), "croupal" enteritis, etc. This extension has imported much confusion into the question: pathologists and clinical observers do not mean the same thing, though they use the same word. The important point is, whether there exists between croup and diphtheria such essential differences as to render them nosologically distinct. My own experience is decidedly to the effect that they *are* distinct diseases.

I have had under my care at various times more than twenty cases of which I had no doubt that the diagnosis of *true croup* was correct. In all these the phenomena appeared to me wholly dissimilar from those in the more numerous diphtheritic cases, both epidemic and sporadic, which I have seen. In the cases which I have designated "croup" the subjects were well nourished, the onset of symptoms was like that of catarrh, and the preliminary *malaise* was of not more than two or three days' duration. There were no signs of profound depression, at least in the earlier stages, and the signs of danger seemed to deepen strictly *pari passu* with the obstruction in the trachea. In six cases tracheotomy was performed; in two death occurred very shortly after the operation, in the others recovery appeared to be prompt. But, unfortunately, all succumbed subsequently, signs of broncho-pneumonia being the precursors of death. In one case, rescued when *in extremis* by tracheotomy, the child appeared, after the lapse of five or six days, perfectly well, and was playing happily with her toys. Nevertheless, in this case broncho-pneumonia supervened, and the child died. In no case of diphtheria have I ever seen such manifestations of apparent health.

The committee appointed by the Royal Medical and Chirurgical Society to inquire into the relations of membranous croup and diphtheria, state in their circular, which solicits the experience of practitioners, that "No case is to be spoken of as an example of croup in which false membranes were not observed either during life or after death." This will have the effect, in my opinion, of excluding some cases of true and undoubted croup. In several of my cases no false membranes were observed during life (in only a small minority were post-mortem examinations permitted). In the case immediately preceding the two here related, no membranes whatever were observed during life; nevertheless, we found after death that the trachea was choked by them. Of course, I admit readily that an essential point in the inquiry is the exclusion of the cases of spasm and of paralysis of the vocal cords known as "spurious croup"; but I think that clinical observation is adequate in the great majority of cases to effect the diagnosis. It must be evident that if the definition of the committee be rigidly adhered to, some cases of true croup will be excluded from the inquiry.

The crucial questions have been fairly propounded by Sir John Rose Cormack, in his interesting papers on this subject. Is a false membrane ever met with as the result of a simple local inflammation? "Is a false membrane ever formed on the mucous surface of the larynx or trachea in any affection which is not diphtheria?"(b) For my part, I consider that analogy is in favour of an affirmative answer. We know that in non-specific tissue-inflammations a membranous boundary is not uncommon. The membraneiform material covering the pleura in some cases of pleuritis acknowledges no specific cause. Again, as regards the mucous surface of the bowel—it is far from uncommon in the diarrhœa of children to discover in the evacuations complete membranous tubes, shed from the surface of the intestinal mucous membrane. Surely, seeing the evidence, clinical and analogical, the *onus probandi* is on those who assert a specific cause for the false membrane observed in the trachea, in the absence of faucial diphtheria with its accompanying general symptoms.

One must admit that instances of true inflammatory non-diphtheritic croup resembling the first case recorded in this communication have not been recorded by the most competent French observers. Sir John Rose Cormack, whose critical capacity and large experience everyone must acknowledge, is entirely in favour of the prevalent French view, that croup is diphtheria. Is it probable that true croup, such as I have described, is not observed in some regions and climates, of which France is one? I think there is great probability in this view. True croup is, happily, very rare in England. At the North-Eastern Hospital for Children during 1875, out of a total of nearly 14,000 cases, two only were admitted with inflammatory croup. It appears to me probable, therefore, that those observers who assert the identity of croup and diphtheria may have failed to meet with a typical case of the former.

As regards the question of treatment when false membranes are blocking the trachea, and so impeding respiration, the advisability of tracheotomy has been often discussed. The way the question presents itself to the physician appears to me to be not so much "Shall I counsel tracheotomy?" as "Shall I refrain from counselling tracheotomy?" It is only in a minute minority that the false membranes are so small in quantity, so easily detached, and so sparingly reproduced that medicinal treatment is of any avail, and in these the skilled observer would refrain from the operation. In the majority, even though in the greater number of instances the improvement is but temporary, the success in the minority abundantly justifies the treatment. I have no doubt whatever that the operation would be far more successful if only the subsequent treatment of the cases were more assiduous and careful. I have no hesitation in saying that the recovery in the first case was due to the unremitting personal attention of Mr. Needham, our excellent House-Surgeon. To keep the trachea clear of the membranous material so frequently reproduced is no light matter, and requires skilled interference day and night. The method of using a warm spray of solution of potash to facilitate the removal of the membranes seems well worthy of further trial.

Dr. Buzzard has been elected one of the Physicians to the Artists' Annuity Fund in the vacancy occasioned by Dr. Sibson's death.

(b) Vide *Edinburgh Medical Journal*, September, 1876. "Clinical Studies," by Sir John Rose Cormack, K.B., F.R.S.E., M.D. Vol. ii. page 307.

HISTORY OF A CASE OF PEMPHIGUS,

EXTENDING OVER SEVEN YEARS,
THE ERUPTION INTERMIXED WITH ATTACKS OF ERYSIPELAS;
APPEARANCE OF EPILEPSY IN THE LATER PERIOD OF THE CASE.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

I HAVE given full details of this case in continuation of the history formerly published, because they present a complete life-history of the singular malady to which they relate. The varied aspect which the case presented is well worthy of notice. First, the intermixture of erythema with the paroxysms of pemphigus, or rather the erythema preceding the bullæ, as compared with the repeated attacks of erysipelas at a later date without bullæ; then the steady persistence of the bronchial catarrh through so long a period, without evidence of serious invasion of pulmonary tissue; and more noteworthy still is the engrafting of epileptic fits upon the other symptoms, and the prominence which the epilepsy came to acquire in connexion with the neurosal origin of pemphigus. The evident influence exerted by arsenic in controlling the outbreaks of the disease, and the length of time during which that remedy was administered, are also features of interest.

I have only to supplement my former statement as to the family history by saying that the father has suffered from severe hypochondriasis for the last two years; and that of nine brothers and sisters of the patient four have died from accidental disease, and the other five are living and free from all disease.

The history of the first three years of this patient's illness is narrated in the *Medical Times and Gazette*, vol. i. 1872, page 253. The patient was then six years of age. She had suffered from the eruption for two years when admitted into the Birmingham General Hospital, April 10, 1871, most of that time having been passed in the Children's and the Queen's Hospitals. The eruption had occurred in rapidly succeeding paroxysms, lately so closely joining one another as to be practically continuous. It was confined to the lower extremities for the first twelve months, and then became general. The outbreaks of bullæ were preceded by considerable constitutional disturbance, followed by erythema. An attack of this kind in the hospital began with vomiting, followed by erythema of the lower extremities, which in three days extended over the entire body, observing markedly a symmetrical arrangement. The tongue was coated, the urine thick; and the temperature rose to 104·6°, and continued at or near this point for five evenings. Some fresh bullæ were then added to the crust of those belonging to the preceding crop, which were but just healing. During her stay in the hospital—at that period of eight months' duration—abortive attempts at eruption occurred, but came to nothing, the disease having been kept under effectually, to all appearance, by the continued administration of the liquor arsenicalis, gradually raised to doses of five minims ter die, with oil, and the employment of the bran bath. She left in apparently good health, and with soft skin, the site of former bullæ being indicated by patches rather whiter than the surrounding cuticle. I have thus brought her case down to the middle of December, 1871.

She came back July 23, 1872. A part of the interval had been passed at a convalescent institution, and during the first part she had continued the arsenic. Her whole body, limbs, and face were then covered with the remnants of an expiring eruption of pemphigus. Her evening temperature on the 25th was 101°, but for the three following days was 103°, falling then abruptly to 100°. The arsenic and the bran bath were at once resumed, and the eruption rapidly subsided.

The next date worthy of note is August 24, 1873, when she was still residing in the hospital in the enjoyment of excellent health. The eruption, as stated to have occurred in the former narrative, never completely left her, but lingered in the shape of a few vesicles around the mouth, sometimes containing puriform fluid. The oil and arsenic had been continued, the dose of the latter having finally reached six minims. At the date I now mention a change in her symptoms took place, which marked the whole after part of her case with a complexion different from the preceding portion. She had begun to lose flesh, and a cough, which at first closely resembled whooping-cough, accompanied by semi-transparent greenish expectoration, had now lost its spasmodic character and become fixed; the left lung manifesting the physical signs of catarrh. Moreover, on September 21, and again on October 1, she had an epileptic fit with bilateral convulsions. At this time (August 24) the arsenic was intermitted, under the impression that it had to do with the development of the catarrhal symptoms; but a violent general outburst of the eruption necessitated the renewal of the arsenic three weeks after, in doses of three minims three times in the day—a dose, however, which was raised gradually to eight minims by October 14, before fresh bullæ ceased to appear; the oil was also restored. Nutrition at once improved, and it was observed that growth seemed to go on uninterruptedly during her residence in the hospital; she was well, and in good spirits. Her weight at this period was forty-five pounds. On November 27 a large suppurating blister showed itself on the right calf, and some solitary bullæ on the corresponding part of the opposite leg, and the arsenic was raised to nine minims for a dose. She left the hospital January 23, 1874, having had three more epileptic fits.

She again made her appearance on March 26 following, considerably emaciated, though without eruption; she had continued the arsenic and the oil. It was always observed that she lost her condition when she left the hospital. The skin of the entire trunk was then thickly mottled with a blackish-brown, as if very dirty, and the cuticle was branny. The arsenic was again discontinued, the oil being retained, and again, in eleven days, a paroxysm of the eruption was threatened, the temperature running up to 103°; five minims were prescribed, and the eruption, though it occurred, was very limited in the number of bullæ. The temperature fell in the course of three days; but expectoration had considerably increased, though, when examined microscopically, it did not present any but the ordinary characters of catarrh; it became afterwards very copious, and sometimes was streaked with blood. A fresh suspension of the arsenic in May, on account of some redness of the eyes, was again followed by a reappearance of eruption. I should state here that a continuous current had been passed down the spine from fifteen cells of a Becker-Muirhead battery for eleven weeks daily without any apparent change in the symptoms.

In August of this year (1874) erysipelas attacked the surface, and crept gradually over the entire body, face, and limbs, but no bullæ made their appearance; this form of eruption recurred more than once in later stages of her history, and was the more interesting from the occurrence of erythema before the earlier development of the characteristic eruption of pemphigus. This attack was treated with tincture of steel; it ended in what must, I presume, have been purulent infection, for large bags of matter formed in succession in different parts of the upper and lower extremities, and had to be emptied, at first by the aspirator, but afterwards by free incision. They had not ceased to discharge till near the end of October. On four occasions during this period of suppuration the evening temperature reached 104°, falling 5° during the night on each occasion. The entire cuticle of body and limbs peeled off in large flakes; the patient emaciated to the last degree, and no one had the smallest expectation of her recovering; but we had not rightly estimated the great amount of vitality she possessed, and to our surprise she perfectly recovered health and flesh. The catarrh continued all the time; large quantities of greenish mucus, even to the amount of half a pint, were expectorated, but without the physical signs of condensation of the lung in any part. She returned home in the middle of July.

I saw little of my patient through the remaining part of 1875, but afterwards learned that she remained in very good health, and had little trouble from the eruption. She continued a dose (three minims) of the liquor arsenicalis three times in the day. She again entered the hospital, on January 19 of the present year, for the results of a renewed attack of erythema over the entire body. The pigmentation of the skin then presented a very singular appearance: the entire trunk, hips, axillæ, and the inside of the thighs presented a mottled surface exactly like granite; a deep tawny groundwork of colour was abundantly spotted with pure white; the cuticle was harsh and dry; there was a spare scattering of small bistre-coloured spots on the arms; the skin of the neck had a dirty tinge, but the face was clear. The chest symptoms were unchanged, but there was a shade of dulness over the region of the upper lobe of the left lung. Again we failed in discovering by the microscope any evidence of breaking up of pulmonary tissue, but the extended cardiac dulness appeared to indicate that the left lung had partially uncovered the heart.

The last I saw of her was in the middle of last March, when

she left the hospital with no important eruption. During the month preceding her discharge she had been taking a phosphorus capsule (one thirty-second of a grain) three times in the day. This was the second occasion on which I had endeavoured to substitute phosphorus for arsenic, but I am not able to report positively as to the result on either occasion.

Not having heard of her for some time, I called at her home on November 6, and found she had died ten days before. She had suffered from a limited attack of erysipelas of the head, accompanied by profuse diarrhœa. She was recovering from this attack when she had a severe epileptic fit, and seems, from the mother's account, to have gradually sunk. Up to this last illness she had enjoyed good health, and had not taken any medicine. She had had one severe outbreak of pemphigus since leaving the hospital, which her mother cured by "smothering her in flour." The epileptic fits had become very frequent, consisting chiefly of slight attacks, but occasionally a severe fit would occur.

SUBCUTANEOUS INJECTION OF MORPHIA OF COLD WATER, & OF ATROPIA, IN THE TREATMENT OF SCIATICA, ETC.

By HENRY LAWSON, M.D.,
Assistant-Physician to St. Mary's Hospital, W.

(*Continued from page 673 of last volume.*)

At other periods half an hour or an hour will terminate the sensation. On some occasions it will render him practically blind of one eye, for he cannot read a line of the newspaper with the affected organ. At other times the effect produced is but slight; and I am bound to confess that I do not yet clearly understand the reason of this singular phenomenon, though I am at the present moment making further experiments on the subject. But of one thing I am sure, and that is, that von Graefe has not worked out the question thoroughly. And this leads me to consider another subject—the influence of atropia in curing sciatica,—because the action of atropia was found by von Graefe to be antidotal to the influence of morphia.

In considering the action of atropia, I must first say a word or two on Dr. J. Harley's experience of this drug. I consider, from the record he has given of his experiments, that they were most thoroughly conducted, and as they were made in a vast number of cases, there is no doubt we must regard them as tolerably conclusive. In this respect it may be remarked that Dr. Harley's conclusions differ in the most decided manner from those of Drs. Mitchell, Moorehouse, and Keen (*American Jour.*, vol. i. page 74), and also from those recorded by M. Erlenmeyer (*Archives de Méd.*, 1866). These gentlemen have all studied the effects of morphia and atropia when given simultaneously, and they have arrived at a conclusion which in Great Britain is still pretty generally believed in—that the two drugs are absolutely antagonistic. Dr. Harley comes to a conclusion vastly different. Those who are interested in the subject will do well to take up his book, and read the voluminous evidence it affords of the truth of his doctrine that these drugs are not antagonistic. For myself, I may state that I have tried but a few experiments on the subject, but they were conducted on men who knew they were being experimented on. The result of these trials was to convince me of the truth of the view entertained by Dr. Harley, that they are not in the least way antagonistic drugs in their general effects on the body. They may differ in their effects on the pupil; and this, it appears to me, is dependent on which of the drugs has first been engaged in action—that is, if morphia is first injected, you will have contraction of the pupil; and if atropia is first, you will have dilatation produced. In other respects there is no opposition between the drugs—at least, no such antagonism as would justify their being regarded as antidotes one for the other.

But in regard to the sciatic patient, it will be asked, What is your experience of atropia? Is it beneficial? and, if so, how does it compare with morphia? And in answering these queries I must distinctly state at the outset that my experience of atropia is distinctly against its use in cases of sciatica, lumbago, etc. I have tried it in a certain number of cases, and the consequence has oftentimes been painful to witness, whilst in the most favourable instances of its action the result has been far from satisfactory as compared with morphia. In the first place, morphia produces disagreeable effects in an exceedingly small proportion of patients; it generally stimulates the person to whom it is given, so that he absolutely hungers for his ordinary dose. Atropia always produces unpleasant sensations in the head, and a sense of fulness and giddiness. And it also accelerates the action of the heart. This is a fact which I think Dr. Harley merits the credit of having pointed out distinctly. Then as to its action in relieving pain. Who that has had any experience in sciatica can think for a moment of comparing the effects of the two drugs? The one (morphia), save in a remarkably few cases, produces extreme ease where before there was pain; at the same time it promotes the appetite, and it may induce comfortable sleep in a few hours. Does atropia act likewise? Far from it. It does certainly give some relief, but, as compared with morphia, not one-tenth of the amount. Then, again, it disturbs vision, acts on the brain in an unpleasant manner, and produces a feeling of thirst which is the "thirst of the Israelites" compared with the slight dryness of the mouth produced by morphia. There is not observed in the patient who has been injected with atropia any desire for food; indeed, it is generally the opposite. The kidneys are affected, too, by atropia—which, as Dr. Harley has proved, is passed out *entirely*, curiously enough, by the secretion of these glands—whilst it is very seldom indeed that they are influenced by morphia when introduced by the skin.

The only difference that would count in favour of the atropia is the fact that it does not appear to affect the bowels. Morphia we know, in many cases, does do so. This is the only respect in which we would prefer atropia to morphia. But when it is remembered that a compound colocynth pill, with one-eighth of a grain of podophyllin, given at night, will in all cases remove any constipation that may have been produced, this at once removes from the morphia every objection that could be raised against its use.

As to the quantity of morphia that may be endured, in some cases it is certainly extreme. But these are not cases of sciatica, they are cases of cancer, in one of which I have given as much as fifteen grains a day in a series of five injections. And I have heard of another somewhat similar instance, under the care of a professional brother, in which as many as twelve grains of the hydrochlorate of morphia were injected at once; and this was kept up for many months, with the great blessing of nearly perfect daily ease for the poor sufferer. In sciatica, however, it is better to give frequent injections (two, three, or four per diem in extreme cases) and small doses, than large doses and few injections. The object of the practitioner must be merely the removal of pain, and not the production of heavy sleep. I have rarely to give more than a grain of morphia, even in cases which have gone on for months before coming under treatment.

Here a word must be said on the subject of death from subcutaneous injection of morphia. It is an extremely rare occurrence; and, so far as I have been able to gather the cases, there is not a single one which has occurred where my precaution is employed—*i.e.*, never to give an injection to a patient *for the first time* save and except he or she has taken a good meal at least half an hour or an hour previously, and never to exceed in such instances one-sixth of a grain. There have been cases in which a foolish practitioner has given a grain, or even more, of morphia in the first injection, with fatal results; and there have been some instances in which patients who inject themselves(a) have occasionally—either intentionally or not—committed suicide. Then there is an instance (published in the *Lancet* of December, 1876) of a woman who, through self-injection, produced sores upon her body, which resulted in bringing on traumatic tetanus, of which she died. But surely this is not an argument against the method, whilst it enforces the necessity of the medical attendant insisting in every instance on performing the operation of injection either himself or by one of his assistants.

With reference to the general treatment of sciatica I can hardly say more than I have elsewhere urged pretty strongly on the reader. I may, however, here repeat that it is essential in all cases to look to the state of the health generally: to keep the bowels open; to see that the patient takes abundance of exercise without producing increase of pain; that he or she is kept thoroughly warm, avoids all excesses, and limits him

(a) And here I must most urgently entreat general practitioners never to allow patients to perform injection on themselves. If they be too poor to afford the medical man's fee, let them go to a hospital. In no case should they be permitted to inject themselves.

or her self to cocoa, or chocolate, or milk, instead of tea or coffee, and to spirituous liquors instead of malt or vinous ones. And in concluding this part of my subject I must say a word on the question of diet. It will be remembered that I laid great stress on the necessity of eating. Here I may say that it is one of the remedies next to subcutaneous injection that I consider of most value. The only objection to it is the difficulty in many cases of carrying it out; and, indeed, this difficulty amounts in some instances to absolute impossibility; and it is therefore with much satisfaction that I observe that a German medical man, Herr Dr. Preltz, of a town in Bohemia (Sutinskv), who, like myself, had suffered from the malady of sciatica for some six months, states that he obtained the best results from keeping the stomach continually at work. He had observed—what, of course, every sufferer from this class of disease has noticed—that immediately after a meal the pain was less. Therefore he thought that by taking a small meal every two hours, night and day, he should find a considerable reduction of pain; and he did so, and was immensely relieved, and the result was a completc cure of his disease in the course of a couple of months, though he suffered afterwards from a chronic gastritis, which he supposes was brought about by the treatment. I also learn from the *Wiener Med. Presse* that he has since had two or three cases which have been similarly successful.

I have not learnt whether Dr. Preltz used cod-liver oil and iron, but I have little doubt that he employed either or both. As a *matter of course* I recommend the two, and *insist* on the use of the liquor ferri perchloridi in from twenty-minim to thirty-minim doses ter die. But on this point enough has been said already.

And now, in conclusion, I must make a few remarks on the treatment of sciatica and lumbago by injections simply of ordinary cold water. In this mode of operation I have not the smallest faith—firstly, because I have never seen an instance of it myself, though I have attempted it in various cases; secondly, because I have tried it upon myself without the least effect. Possibly the reader will say that the reason in the latter case was that "you knew the difference between the two cases [viz., that in which morphia had been administered, and that in which it had not been given], and thus that the mental effect was prevented." But this was not so. I specially took care that the syringe was filled by a second person, who completely concealed from me whether mere warm water or water containing morphia had been employed. Yet in each case I was enabled to tell exactly, in the course of from five to eight minutes, whether the morphia or simply water had been used. Indeed, I could detect the difference at once, before the syringe had been well withdrawn, but I waited after each injection in order to be certain of the actual state of the case; and in no instance did I fail in my judgment.

It has been the same with patients who have been accustomed to the use of morphia subcutaneously, all of whom can tell in the course of a few minutes whether the injection has been morphia or water—nay, they can soon tell you whether you have given them the ordinary or a larger dose. An instance of this which bears on the case occurs to me. It was that of a hospital patient, whom, in the hurry of work, I had had injected at about 1 p.m. by one of my clinical assistants. He had been in the habit of receiving daily injections, but on this occasion he came back to me at 3 p.m., and complained that, though the injection had produced a good deal of pain, it had given him no relief whatever. On this statement being made, I asked the assistant who had operated how he had performed the injection, to which he replied that he had done it perfectly well. However, being a little sceptical, I examined the syringe, and found that it leaked badly; so that, in fact, the two or three drops employed did not go into the patient at all, but went out through the side of the syringe. I then injected him myself with my own instrument, and he thanked me warmly, saying five minutes after the injection that he felt the effect of the morphia. Now, this is a fair example, and I could quote many others.

Still, Dr. Lebert, a French physician, and Dr. S. H. Dessau, an American practitioner, state that they have found wonderful results from the subcutaneous injection of pure cold water. And this has been not only in neuralgic cases, but—most extraordinary—in those of bad articular rheumatism. In one case, which is recorded as occurring on March 9, 1876,(b) the patient was one suffering from rheumatic gout, and this disease, which he had had before, was now in a very severe form. "He complained of great pain, both when the joints were moved and at rest." Yet, most strange to tell—especially to those who have had experience of rheumatic gout cases—the physician "injected several syringefuls of cold water" in the immediate neighbourhood of *the joints of the phalanges*. Well, and with what result? Why, simply "*to make the patient feel quite comfortable in about five minutes*"!

As a matter of course, it would be extremely unfair of me to express a belief that this case never had any real existence such as the author makes out. To say such a thing would be extremely discourteous—nay, more, it would be absolutely wrong. But as one who is extremely sceptical as to such results, it will not astonish my readers if I say I have a disbelief in its existence. These two conditions are totally opposite—in the one I should have a definite faith; in the other I have no faith, either for or against. And with these few remarks I may now leave the subject of sciatica and its congenors, trusting that I shall find a greater faith in the employment of morphia subcutaneously than I have yet found, although it must in fairness be admitted that the hypodermic injection of morphia is vastly more popular than it was some seven years since.

40, Weymouth-street, Portland-place, W.

(b) *New York Medical Journal*, 1876, page 605.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF RHEUMATIC FEVER TREATED BY SALICIN.

(Under the care of Dr. RINGER.)

[For the notes of these cases and the valuable analysis of them we are indebted to Mr. Judson Bury, Physician's Assistant.]

Case 1.—S. B., a general servant, aged seventeen, admitted June 29. Slept in a damp bed on 23rd; felt ill on 24th, and had pain and swelling in joints of lower limbs. Has not had rheumatism before; no family history of the disease.

Present Condition.—June 29.—A well-nourished girl. Skin hot and perspiring freely. She complains of great pain in ankles, knees, and elbows; these joints are moderately swollen, and skin over them is slightly reddened. Chest resonant. Loose cough; aërated mucoid expectoration tinged with blood; breathing harsh; sonorous râles. Heart: Apex-beat in fourth space, half an inch inside nipple-line; no increase of dulness; impulse weak; sounds muffled; no murmur; faint friction at base. Abdomen normal. Tongue coated with yellow fur. Much thirst; anorexiá. Temperature 104°; pulse 118; respirations 36. Ordered thirty grains of salicin every other hour.

July 1.—All joints painful, those of lower limbs also swollen. Profuse sweating. Loud to-and-fro pericardial friction. Temperature 103·4°; pulse 120; respirations 50.

2nd.—Pain about dorsal vertebræ; other joints free. Profuse sweating. Temperature 104°; pulse 120; respirations 52.

3rd.—No joint-pain; a little soreness down back. Deficient resonance at right basc; high-pitched breathing and liquid râles; vocal fremitus and resonance increased. Superficial cardiac dulness extends to upper border of third rib. Pericardial friction as before. Abundant sudamina over trunk. Temperature 103°; pulse 120; respirations 60.

4th.—Slight pain in left wrist; other joints normal. Dulness at right base; liquid râles; obscure breath-sounds. Temperature 103·8°; pulse 120; respirations 60.

5th.—No joint-pain. Constipation. Numerous sonorous râles over front of chest. Temperature 102°; pulse 120; respirations 56.

6th.—Right base nearly as resonant as left; breath-sounds healthy. Temperature 101·4°; pulse 116; respirations 40.

8th.—Sonorous râles at right; slight pleuritic friction at left base; pericardial much less. Bowels open. Temperature 99·8°; pulse 92; respirations 40.

8th to 13th.—Temperature between 99·8° and 98·2° each day. On the 12th salicin was discontinued and liq. ferri perchloridi ℥xv. ordered three times a day.

14th.—Patient got up the last two days. The wrists are now stiff. There is profuse sweating. Temperature 100°; pulse 92; respirations 32.

17th.—No pericardial friction. Faint, low-pitched systolic murmur at apex; louder in axilla. Temperature gradually come down since 14th; is now 98·6°; pulse 100; respirations 28.

20th.—Apex-murmur well marked; breathing healthy over both lungs. Temperature normal, and continued so till discharge on 25th; pulse 84.

Summary.—Patient came under observation on June 29, and this was probably the sixth day of her illness. The following morning she began to take thirty grains of salicin every two hours. On July 3, the tenth day, the morning note records a little soreness in the back as the only pain present: this after taking 360 grains of salicin every twenty-four hours for three days—that is, 1080 grains. On July 5 absolute freedom from pain; and, with exception of a slight return in wrists on 14th, pain was absent up to discharge. Temperature kept high till July 5; it then gradually fell, and, on the 8th, the highest was 99·8°. This was the fifteenth day of illness, eighth of treatment, and after taking 2880 grains of salicin. The temperature subsequently varied between 98·2° and 99·8°, till July 14, when it temporarily rose to 100°, becoming quite normal on the 17th, and continued so till patient's discharge.

Remarks.—There was pericardial friction when admitted, but only slight effusion followed. No cardiac murmur whilst taking salicin. It is worth noticing that, two days after leaving off salicin, the wrist-joints became affected; and, three days after this, a systolic apex-murmur was heard, which, from its good conduction and persistency, was probably organic. Thus there was a return of disease to two joints, followed by endocarditis, soon after the discontinuance of the drug. On July 3 the physical signs indicate some exudation into pulmonary tissue at right base; this pneumonia was nearly resolved by July 6. During these three or four days the pulse-respiration ratio was 1 to 2, and there was much dyspnœa. The temperature fell on the 6th to 101·4°, and this was the day when the right base became resonant. Temperature subsequently gradually fell. In connexion with this, note that joints were almost free from pain on the 3rd. May we not therefore reasonably conclude that, as the rheumatic inflammation had left the joints, and as cerebral symptoms were also absent, the temperature was kept up by a complication—namely, pneumonia? Over this salicin had no direct influence; and it seems probable that, if the pneumonia had not occurred, the fever would have left the patient, as the pain did, three or four days after beginning to take the drug.

Case 2.—B. L., housewife, aged twenty-three, admitted July 10. Awoke on morning of June 30 with a bad frontal headache, and pain in ankles, knees, and wrists; these joints were swollen and tender. Since then various joints have been affected. Headache left her a few days before admission. Can give no cause for onset of joint-trouble. She had rheumatic fever nine years ago, when she was ill for seven weeks. Father had rheumatic fever.

Present Condition.—July 10.—A strong, healthy-looking woman; no expression of pain. Skin hot, covered with alkaline sweat. Anæmia. Pain in the following joints: Upper limbs—shoulders, right wrist, fingers; lower limbs—knees and ankles. These joints swollen, tender; skin slightly red. Chest resonant, except at left base, where some slight dulness and bronchial breathing; no cough. Heart: Apex-beat in fifth space, nipple-line; impulse diffused over mamma, not felt in epigastrium or to right of sternum. A soft blowing murmur accompanies the first sound at the left apex; it is conducted well into axilla, but is not heard at ensiform cartilage. Abdomen normal. Tongue pale; creamy fur on dorsum. Temperature 102°; pulse 108; respirations 28. Ordered thirty grains of salicin every other hour.

July 11.—Pain in right shoulder, right wrist, right knee, and right ankle. Less sweating than on admission. Slight cough and expectoration during the night. Temperature 101°; pulse 88; respirations 28.

12th.—Slight pain in right knee and left shoulder. No sweating. Bowels open for first time since admission. Slight cough and muco-purulent expectoration, but no rhonchus to be heard. Heart's apex-beat in normal position; murmur less distinct. Temperature 100°.

13th.—All joints free from pain except the left shoulder. Murmur fainter. Temperature 98·8°; pulse 80; respirations 28.

14th.—Trifling pain in left shoulder. Murmur inaudible. Temperature normal, and remained so till her discharge on the 21st; pulse 80; respirations 24. Salicin discontinued and liquor ferri perchloridi ordered three times a day.

Summary.—Patient began to take salicin on July 10, the eleventh day of her illness. The doses were thirty grains each, and the first one was taken at 10 p.m. The note at 10 a.m. on July 14 records only trifling pain in the left shoulder. This was just three days and a half after taking the first dose. During this time, therefore, 1260 grains was the total amount taken. The temperature gradually fell, and was normal on the 13th (10 a.m.), after 900 grains had been taken, and continued normal till discharge on 21st.

Remarks.—A well-conducted systolic apex-murmur was heard at the first examination of the patient; it was less distinct on the 12th, and on the 14th could not be heard. This was perhaps exceptional, but by no means unique. Distinct endocardial murmurs have developed under the auscultator's ear, have diminished after the attack, and finally disappeared. The quality of the murmur in the present case evidently points to its recent origin, and its duration may therefore be said to be unusually short. Sweating, which was profuse on admission, had gone two days afterwards.

Case 3.—A. S., a girl, aged sixteen, was admitted July 14. She was cleaning a door-step on July 8, when she felt a sudden pain in both ankles: the next day had pain in the knees, but not in the ankles, and also slight frontal headache. Was laid up four years ago with rheumatic fever. No family history of the disease.

Present Condition.—The face is slightly flushed, the skin is sweating profusely, and the odour is characteristic. Both knees and both ankles are painful and tender; the former joints are also much swollen, and there is a distinct sense of fluctuation. She is unable to move her legs. No evidence of hypertrophy. Soft systolic apex-murmur and (?) hæmic murmur at left base of heart. Tongue covered with thin yellow fur. Temperature 103°; pulse 132, soft; respirations 40. Ordered thirty grains of salicin every two hours; the first dose was taken at 7 p.m.

July 15.—The right knee is the only painful joint. Tongue cleaner. Bowels open. Temperature 101°; pulse 104; respirations 38.

16th.—No joint-pain. No sweating. Appetite good. Yesterday afternoon the supply of salicin ran short. Salicylic acid in ten-grain doses was substituted. Temperature 98·4° since eight last night. The acid discontinued and fifteen minims of liquor ferri perchloridi ordered three times a day.

18th.—No pain. Apex-murmur distinct. Basic murmur gone. Temperature 99°; pulse 78; respirations 28.

21st.—Systolic apex-murmur as before. Double friction at base. The girl feels well; her temperature is, however, 100°; pulse 90.

22nd.—Much less friction at base, and it is quite localised. Temperature 99·6°; pulse 80.

26th.—Patient got up to-day for the first time, and temperature subsequently remained normal.

Summary.—There was apparently a sudden onset to the present attack. When seen on the seventh day of illness, two of her joints (the knees) were badly affected, and her temperature was 103°. After taking salicin for forty-eight hours—that is, 720 grains—she had a normal temperature, was free from pain and sweating. At this time—that is, on July 16, the ninth day of illness—she began to take iron; this was followed by slight pericardial friction and a temporary rise of temperature. Both, however, eventually disappeared.

Case 4.—L. W., aged twenty-eight, admitted July 10. A man of steady habits; prior to present illness has enjoyed good health. On June 28 he felt languid; had headache and general pains; also shivered several times, both on this day and the next. On July 1 ankles became stiff, swollen, and tender; subsequently the knees were affected. Took to his bed on the 5th. No family history of rheumatism.

Present Condition.—A muscular man, but face pasty, and mucous membranes almost colourless. Skin hot, perspiring freely. He complains of pain in ankles, knees, lower part of spine, right elbow, and shoulder; pain most severe in the ankles. All the joints are tender and a little swollen, and the skin over them is red. Heart: At the apex the first sound is muffled and distant, but there is no murmur; the second sound is very faint. At the base the second is sharp and accentuated.

Tongue dentate; covered with thick creamy fur. Constipated. Temperature 101·6°; pulse 100; respirations 28.

July 11.—Temperature at 10 a.m. 102°. Ordered thirty grains of salicin every two hours; first dose taken at 10 a.m.

12th.—Joints of left upper limb are now affected; others free. Temperature 102·6°; pulse 100; respirations 32.

14th.—Slight swelling and redness of right wrist; other joints free. Temperature 102°; pulse 88; respirations 40.

15th.—Slight pain and stiffness in shoulders. Faint localised systolic apex-murmur for the first time. Tongue furred; bowels confined. Temperature 101·6°; pulse 76; respirations 36. Ordered ten grains of salicylic acid every two hours (begun this afternoon at four, as salicin could not be got).

16th.—Slight pain in right shoulder; systolic apex-murmur more distinct. Temperature 100·4°.

19th.—No joint-pain. Murmur indistinct.

22nd.—Temperature normal for the first time. No murmur to be heard, except after exertion. Is now taking salicin again.

26th.—Salicin discontinued, and liq. ferri perchlor. ♏. xv. ordered t. d. s. Temperature still normal.

31st.—A return of pain in knees and ankles. Skin dry. Heart's impulse almost imperceptible; sounds indistinct at apex. Temperature 101·4° (it was 100° yesterday, and 99° the day before). Iron to be discontinued, and thirty grains of salicin to be taken every two hours, first dose probably at 7 p.m.

August 2.—Knees and ankles easier. Hips very painful and tender. Salicin to be taken every hour, beginning in the afternoon. Temperature 102°; pulse 92; respirations 24.

3rd.—No joint-pain. Bowels much constipated lately; opened to-day by simple enema. Decided nausea, therefore salicin ordered every two hours instead of every hour. Temperature 101°.

4th.—Temperature normal, and remained so subsequently.

13th.—Discharged.

Summary.—Patient admitted twelve days after onset. The next morning began to take salicin, and after 1500 grains of salicin and ninety of salicylic acid he was practically free from all joint-pain. This was on July 16—that is, the nineteenth day of illness and sixth of treatment. Temperature first became normal on the twenty-third day of illness. On July 26 iron was substituted for salicin. On July 29 the temperature was 99°. On July 31 the temperature was 101·4°, and four joints again became painful; salicin begun again at 7 p.m. The temperature on August 2 being 102°, the daily dose was doubled. No joint-pain on the 3rd; salicin every two hours. Temperature normal on the 4th, and remained so till discharge.

Remarks.—A mitral murmur developed and disappeared during the administration of salicin. It is interesting to note that a muffling of the first sound preceded it, and also that the cardiac sounds became indistinct at the beginning of the relapse. This I have noticed in some other cases—namely, that at the beginning of the fever the heart-sounds are muffled and soft, or barely audible, and that this condition is maintained throughout the attack, or that a murmur is soon developed.

Case 5.—E. R., general servant, aged seventeen, admitted September 16. Has been subject for the last two years to headaches and indigestion, but never had rheumatic fever. Shivered on September 12; on the 13th the joints felt stiff; on the 14th had "pain in all the joints," the right knee being the most painful. No family history of rheumatism.

Present Condition.—A stout, healthy-looking girl. Checks flushed; no anæmia. Skin hot and very moist. Complains of great pain in both knees and left ankle, and of stiffness in elbows. There is no œdema or redness over the joints. Heart: Impulse well felt; no abnormal sounds heard. Tongue foul; great thirst; constipation. Temperature 102·2°; pulse 100.

September 17.—Passed a restless night. Has pain in ankles, elbows, and shoulders; there is also great pain along the spine, and a little down the sternum. Heart's action tumultuous; systolic pericardial friction general; also a soft blow with first sound at apex. Complains of some pain in swallowing. Temperature 102·6°; pulse 112.

18th.—Skin pits over left ankle; much pain in joints; mitral murmur more distinct and conducted into axilla. There is both superficial and deep tenderness in abdomen. Temperature 103·2°; pulse 112.

19th.—There is spontaneous pain and tenderness in all the joints except those of the fingers. The lower limbs are more painful than the upper, and the pain in the ankles is very sharp and cutting. There is an aching pain along the dorsal and cervical spines, and a feeling of weight on the top of the head. Skin moist; sweats profusely at times. Began yesterday to take thirty grains of salicin every two hours—first dose probably taken at 5 p.m. Temperature 103·4°; pulse 108. Heart-sounds weak; faint systolic apex-murmur, and pericardial friction; but although impulse weak, there is no positive proof of effusion. Abdomen resonant; so tender that pressure of bedclothes cannot be borne.

20th.—Joint-pain everywhere less, but not absent in any of above joints. Much itching around neck. Neck, chest, and forearms are very red and covered with miliaria. The temperature was 98·2° at 3 a.m., and continued normal until discharge. Pulse 96.

24th.—Various joints have been more or less painful since last note. At present the left ankle, knee, and shoulder are the seats of pain; the hips and left elbow to a less degree. Chest: Second space gives a higher-pitched note on left than on right side. Third left space almost dull. The deficient resonance pyramidal in shape. Heart-sounds weaker at apex than at base; impulse a little wavy. First sound is accompanied at apex by a low-pitched murmur, and also by short rough friction; the latter heard best in third space. Slight bulging of cardiac region; this first noticed yesterday. Abdomen less tender, resonant. Temperature having been normal since the 20th, salicin was discontinued yesterday—last dose taken at 3 p.m.,—but urine this morning gives marked reaction with perchloride of iron. Now ordered perchloride of iron.

25th.—The right ankle, left shoulder and hip are painful. Abdomen less tender; a little sharp spontaneous pain present. Chest: Bulging of left front more marked; cardiac region tender, and the seat of an occasional sharp pain; slight systolic friction at base; slight cough; a few sibilant râles over right front. Urine still gives reaction for salicin.

26th.—In addition to joints affected yesterday, the knees are very painful. Cardiac region as before. Abdomen more tender; a little dulness in right flank removed by patient lying on left side.

27th.—The iron mixture discontinued. Bowels require aperients and occasional enemata.

October 2.—Joint-pain continues; temperature still normal. Abdomen still tender; slight dulness on left side. Chest: Left front still deficient in resonance, though dulness is less marked; the mitral murmur is fainter.

10th.—Joints free from pain. Good resonance in left front down to third rib; sounds louder and almost healthy at apex; no murmur. Abdomen quite resonant, but tender.

13th.—Left the hospital free from joint-pain, but abdomen still a little tender. Temperature normal; pulse 72.

Summary.—The joint-pain was apparently less whilst taking salicin, but was not got rid of till a few days before discharge. Temperature became normal about thirty-eight hours after the first dose of salicin—that is, after taking about 570 grains. Reckoning September 12 as the day of onset, the temperature became normal on the ninth day of illness.

Remarks.—The physical signs point to inflammation of the pericardium beginning on September 17. I think there was distinct evidence of slight peritonitis. In spite of these two complications the temperature became normal within two days. We know that pericarditis developing in rheumatic fever does not elevate the previously high temperature; but is it not exceptional for it to exist with a normal temperature? The joint-pain was unusually severe and persistent, lasting long after the temperature had become normal. Salicin was detected in the urine forty-eight hours after the last dose had been taken.

(*To be continued.*)

Compulsory Vaccination in Bombay.—At a meeting of the Bombay Legislative Council, on the 4th ult., the principal business transacted was the first reading of a Bill to make vaccination of children in the city of Bombay compulsory. The native community have supported the Bill.

Death of von Baer.—This celebrated investigator, whose name is indissolubly connected with the study of the development of the embryo, died on November 28, at Dorpat, in Russia, at the advanced age of eighty-five years. An excellent obituary, containing many interesting details of his life and works, by Professor E. Ray Lankester, will be found in the *Academy* of December 23, 1876.

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SATURDAY, JANUARY 6, 1877.

1877.

We have long since ceased to feel it necessary or advisable to give to our readers—to all of whom we hope that the year 1877 may prove a happy and prosperous one—anything like a programme of the work of the journal for the coming year. We feel confident that the reputation of the *Medical Times and Gazette* is much too well assured to make it at all necessary to publish beforehand any list of the names of the eminent and well-known men who have promised us Lectures and Original Communications; or of all who will help us, in various ways, to make our pages as valuable and instructive as usual. But we may state that we shall, in the department of Medicine, give some clinical lectures by Dr. Moxon, of Guy's Hospital; some lectures on "Slight Ailments: their Nature and Treatment," by Dr. Lionel Beale, Professor of Principles and Practice of Medicine in King's College; and clinical lectures by Dr. Clifford Allbutt, of Leeds; while, in the department of Surgery, we shall publish clinical lectures by Mr. Holmes, of St. George's Hospital, and by Mr. Jonathan Hutchinson, of the London Hospital; and six clinical lectures by Mr. Hulke, of Middlesex Hospital. And we shall continue the series of select lectures on special points in Medical Jurisprudence, by Professor Ogston, of Aberdeen.

We shall give translations and abstracts of valuable lectures and papers from the principal Continental journals and periodicals; and among such translations some more of Jaccoud's clinical lectures, and of Volkmann's series of select lectures. In this way we shall keep our readers acquainted with all the best and most useful work that is being done to advance the science and art of our profession by our Continental, and we may add also by our American brethren.

We need not now tell our readers that our pages are open to all good and earnest workers in all departments of medicine and surgery, and especially to those who can contribute carefully observed clinical facts having any practical or therapeutical bearing. But it may be well to remind them that the journal is the recognised organ of the Association of Medical Officers of Health, and that therefore all matters referring to hygiene will receive special attention from us.

We are happy in being still able to count on the help of many of the old friends who have worked with us so successfully hitherto; and new contributors and allies are ever ready to give us their aid. We have a full trust that all our new and old allies, readers, and contributors will continue their trust and confidence in us. We, on our part, can assure them that the same principles of independence, impartial justice, appreciation of whatever is useful and good in medical science, and readiness to work for the advance of truth and knowledge, that have ever governed former Editors of the *Medical Times and Gazette*, will continue to guide and animate us in the future also.

THE FRENCH GOVERNMENT AND FOREIGN MEDICAL MEN.

As public attention has been called by our contemporary the *Pall-mall Gazette*, in an article, which we reproduce elsewhere —entitled "English Patients and French Doctors,"—to the new Bill regulating the practice of medicine and surgery by foreigners in France, it may be well to say a few words on the subject, and endeavour to clear up certain misconceptions which appear to prevail with regard to it. Hitherto there have been two ways open to a foreign medical man—say an Englishman,—not possessing a French degree, who wished to settle in a French town or French colony, and lay himself out for practice: he could either obtain a dispensation from the Minister of Public Instruction on the strength of his English diplomas, giving him the right to practise "*sans examen*"; or else he could obtain leave to pass the final examination, or examinations, for the diploma of Officier de Santé, by which he acquired the right to settle and practise in any department of France which he might select, though precluded from practising legally in any other. The right to practise at pleasure *in any part* of France has been, and remains, the exclusive privilege of doctors of medicine of a French university. Now, the new Bill which was brought before the Chamber of Deputies on May 29, 1876, and which is on the eve of becoming law, will do away entirely with dispensations, and oblige every foreigner who desires to practise in France to undergo an examination or examinations, in order to convince the French authorities that he really possesses the medical knowledge which his foreign diplomas assert that he possesses. But a foreigner who has already graduated abroad will not be required to spend his time over again in studying in the French hospitals; the Minister of Public Instruction will be able, on the strength of his diplomas, to grant him "*la dispense de la scolarité*," *i.e.*, to let him undergo his examination straight off; and, further, there can be little doubt, from the tenor of the preamble of the Bill, which says that "the examinations could only be a simple formality for foreigners already graduated in their own country," and from the general character of the words of the new Bill—"A foreigner cannot be authorised to practise medicine or surgery in the territory of the Republic until he has passed the test-examinations" (*les examens probatoires*) "prescribed by the French law"—that the examinations will not be conducted with the same severity as in the case of French students. It is quite certain that the French Government has no intention of excluding foreign doctors absolutely from its territory in future, for otherwise it would not allow foreign medical men to present themselves for examination, *as it continues to do*. We have the best authority for stating that at the present time the right to pass the last—that is to say, the practical and clinical—examination for the diploma of Officier de

Santé has been quite recently conceded to several foreign physicians, who are compelled by health or other considerations to settle in France. On the other hand, we can assure anyone who wishes to practise in France that he will be unable, even though he "move heaven and earth," to obtain a dispensation to practise *without passing some examination*. On this point the French Government is absolutely inflexible. We consider the Government perfectly justified in requiring some test of a man's capabilities, for not only must it make sure that the lives and health of its own subjects shall not suffer from the foreigner's incompetence, should they be entrusted to his medical care, but it must also protect the interests of French medical men. In England we require a foreigner to pass the College of Surgeons or the College of Physicians, or to get a British diploma of some sort, if he wishes to settle among us as a recognised and registrable practitioner; and we presume that if he shows himself at all competent his examination is made as easy for him as possible. No more than we can assume the existence of an animus among our own examiners, tending to throw difficulties in the way of a foreign doctor, can we imagine that French examiners would be actuated by a *mauvaise volonté*, and seek to pluck the foreigner who submitted himself to them. We do not in the least believe, therefore, that competent medical men—English, German, or of whatever nation they be—will be excluded from French practice in the future any more than they have hitherto been. As a fact, the number of foreign medical men who have hitherto received "free passes" into practice in France is, we believe, small compared with the number of those who either hold a French degree or have undergone the examination of an Officier de Santé.

From what we have said it will be seen that we do not take such a pessimist view of the situation as does the writer of the article in the *Pall-mall Gazette*, and that we do not consider the supply of English doctors for English patients as likely to be arrested by the present action of the French Government. There are prudential reasons why the idea of absolutely excluding foreign, and especially English and German, physicians from France could not long be entertained. To the English, more than to any other nation, is undoubtedly due the merit of having (so to speak) discovered, and then elevated to their present position, the health-resorts of the South of France, from Pau to Mentone; and these towns owe a large part of their existence to the English invalids and the friends who accompany them, and who, winter by winter, flock to the shores of the Mediterranean. Since 1872 the German element has been also largely represented, especially at Mentone; and Russia, Sweden, Norway, not to mention America, all send their contingent.

Now, as a rule, an invalid likes to be attended by a doctor of his own country. An Englishman understands the ways and feelings of an English patient much better than any foreigner, no matter how clever he may be, ever can. A sick man must not be burdened with the need of expressing himself in a language which both he and the doctor (if a foreigner) imperfectly understand; and which, for want of comprehension, may, besides worrying the patient, give rise to serious errors in treatment. Similarly, there are certain traditional ways of nursing, etc., peculiar to each nation, which make the sick-room of one nation different from that of another. The ideas of one nation as to diet and ventilation may, also, be quite at variance with those of another. Hence it follows that where there are English, German, Russian, or other invalids, there should be English, German, and Russian doctors. If the latter are excluded, the patients will unwillingly seek shelter elsewhere; but, nevertheless, they will go where their own medical men can look after them.

The exclusion of foreign medical men from French health-resorts must, therefore, be more or less disastrous to their inhabitants, to the shop-keepers, hotel-keepers, and others whose prosperity depends on the influx of visitors, and whose means of subsistence would disappear if they removed elsewhere. The reasons we have advanced in support of our argument in no way affect the skill and the reputation of French medical men; and if the difficulties inseparable from differences of language and national prejudice could be swept away, the need for foreign physicians on French soil would disappear. Since, however, this need, as we have shown above, does and must exist, we feel convinced that things will go on in future much in the old way, and that the French Government will see the wisdom of not making unduly stringent the examinations which English and other foreign physicians have to undergo in France, especially when the examinee brings good and reliable testimony of his competency from his own country. We do not believe that the interests of French medical men suffer materially, if at all, by the present arrangement; and they would be certainly worse off than before if foreign invalids were compelled, for the reasons we have mentioned, to choose Italy rather than France.

PROFESSIONAL REMUNERATION.

There is no subject which at any time more directly concerns us, as a body, than that of professional remuneration. Expenses of all kinds have nearly or more than doubled of late years, the value of money has diminished by one-half at least, and yet professional fees remain what they were generations ago. Nay, more, in these latter days we have seen arise a class of men who are willing to give services, pretending to be professional, for sums of money which would be despised by a respectable crossing-sweeper. At one extremity of the chain of professional standing the fees are undoubtedly too low, but at the other the remuneration accepted is disgraceful to him that accepts it. We have often pointed out that the fees charged by those at the head of our profession might with great advantage be largely increased. In this way both physicians and surgeons would benefit. Equal or larger incomes would be realised with one-half of that wear and tear which in these days makes men prematurely old. It is hard work, we have known a physician say, to make £6000 a year; it would not be so if those men who nowadays can make £6000 a year charged the fees they might charge. The injury thus inflicted falls mainly on the younger members of the consulting body; but indirectly it affects the whole profession, from one end to the other, even to its poorest members. And it is chiefly with the lower end of the chain that we now desire to deal. Among the heads of our profession we are glad to say that there is a tendency in the right direction. Many of them nowadays, when making a careful examination, such as the use of all modern means of diagnosis implies; when seeing a patient for the first time, and entering into the history of the case at length—perhaps entering it in a book for future reference; or when seeing a patient along with a medical practitioner at the physician's or surgeon's own house, now charge a fee of two guineas. It is useless to deal with the question from the honorarium point of view, for the honorarium may just as well be five guineas as one. Unfortunately the fate of the practitioner in the poorer neighbourhoods, and in certain country districts, seems to present aspects which are not so soothing. What between illegal practitioners, chemists, mock provident dispensaries, and clubs, he has a hard time of it. For certain of these evils the profession—or rather, perhaps, that part of the profession which possesses the best means of making itself heard—is itself to blame. For a good many years now the process of levelling up has been persistently going on. It has been laid down as a kind of axiom that the medical profession and the trade in drugs should be kept apart as having nothing to do with

each other. We consequently encounter, only too frequently of late, medical practitioners who know nothing of drugs, and dealers in drugs who know nothing of medicine. But where there is not knowledge there is too often assumption of knowledge, and the illiterate chemist regularly and publicly practising medicine is at the present moment a common enough combination. So far is this true, indeed, that there has been, we understand, a kind of trade's union formed to defend the system of counter-prescribing on the part of druggists, so extensively practised, should it be seriously attacked by the Medical Defence Association. In the endeavour, therefore, to separate the dealing in drugs from the practice of medicine there has been no reciprocity on the part of the medical and pharmaceutical bodies. The dealers in drugs have taken all they could get, in which, we confess, they were quite right. They procured for themselves a charter conferring many important privileges, but they have not as a body denounced the practice carried on by so many of their number, of treating disease as well as dispensing medicines. In many parts it is now the regular practice among a certain class of society to consult the chemist before applying to a regular practitioner of medicine, and this practice is on the increase rather than on the decline. In the days of genuine apothecaries a more or less, and as we come near present days a decidedly more, perfect training in medicine was insisted on; and in such matters even a little real knowledge is surely better than no knowledge at all.

Of the mock provident dispensaries and their proprietors we have recently had only too much to say. The whole subject is unpleasing to the last degree. They are unsightly excrescences from a system which has been so much belauded that it is not wonderful that colourable imitations have freely sprung up. The system of provident dispensaries has its good side, and it has its bad side. It is good to encourage in the poor that feeling of independence which is so slowly acquired and so easily lost; but it is not good that with this any elecmosynary element whatever should mingle. There should be absolute independence. Again, a provident dispensary is likely to be the cause of great injustice and of much mischief if due care be not taken as to the conditions of membership. This amount of care is easily possible in the country and in certain towns, but in a place like London it is far from being so.

The system of clubs, properly worked, is free from most of these objections, but not, as recent revelations have shown us, from all of them. The club system is perfectly independent, sometimes only too much so; but we fear that the objections we have just raised as regards the so-called provident system, relative to the qualifications for membership, are in clubs liable to as much abuse as in provident dispensaries. As is well known, clubs are so independent that they may be formed and carried on in the most reckless manner, without anyone having the power to interfere. But in a well-conducted club or friendly society (of which, fortunately, there are some left), the objects commonly had in view are a mutual insurance system against sickness or accident, coupled with what by itself is sometimes called a burial club—a life insurance for a certain amount. For admission to such societies the physical examination of the would-be member ought to be as strict as in any good insurance office, but unfortunately it is not. The number of members is by many looked upon as the sign of strength, whereas it is too often the source of weakness. Were such bodies wise they would give a good practitioner an annual fee worth having to examine all recruits to the society; but that they do not. However, this is a matter which only indirectly concerns our profession. Much more important to us is the fact that with such clubs are usually combined not only an insurance against sickness, but also the provision of medical attendance during sickness. Theoretically, no better arrangement could be made; but practically, in many parts of the country, this resolves itself into a robbery of the medical practitioner. It is perfectly competent for any man to insure against accident and sickness. So also is it to contract, if we may so say, with any medical practitioner for attendance during any or every illness which may befall him or his family during a given period; and in many districts this is done. But here the contract is made directly with the medical practitioner himself, who can stipulate for his own reward. He would not, for instance, be likely to undertake to attend and supply with medical necessaries anyone in the possession of a fair income, and gifted with a young and rapidly increasing family for a few shillings a year. But if he attaches himself to a club, the club authorities may do this for him; in short, it may be so arranged that the practice of a whole district may be conducted for the most part through clubs, and the unfortunate practitioner, induced by the apparent value of the practice to settle in such a neighbourhood, may be completely ruined. Such instances have been known, and are still known, to occur. It behoves us, therefore, as a body, determinedly to set our faces against any such system. The benefits of clubs and of reduced rates of medical attendance should be limited to the class for which they are and were intended. By all means let those in a better position in life form such clubs if they like among themselves, but let them also pay their medical attendant properly, and not, by connecting themselves with a class to which they do not belong, do their best to defraud the hard-working medical practitioner of what is justly his due.

THE WEEK.

TOPICS OF THE DAY.

The Irish authorities have applied to the Home Office to suspend, if possible, orders for the removal of paupers from Lancashire to Ireland until the small-pox epidemic ceases. The Home Office having no power to make such an order, the matter was left for the consideration of the various boards of guardians. The Manchester Board has now resolved to suspend several orders for the removal of Irish paupers, and to communicate with the Township Overseers on the subject, although, as the chairman pointed out, small-pox is not at the present time epidemic in Manchester. Liverpool would appear to be the chief centre of danger to Ireland just now. Twenty-seven deaths from small-pox were reported at the weekly meeting of the Liverpool Health Committee held on the 28th ult. The *Liverpool Post* says the doctors of the town are in despair. Arrangements have been made within and without the borough for the revaccination of the public generally, but in this matter it would seem that the public displays an unaccountable disregard for its own welfare, and the applicants for the benefit are anything but numerous, the consequence, according to Dr. Taylor, being "that matters really look very bad in the future."

We understand that Dr. Alexander Williams, who has been Secretary of the Veterinary Department of the Privy Council since its establishment, has now resigned that appointment in consequence of continued ill-health. Dr. Williams was for some time private secretary to the late Sir Arthur Helps, and was formerly Professor of Chemistry at the Royal Agricultural College. The appointment, which is worth £1000 a year, will, it is rumoured, not be filled up, as a reorganisation of the Department is in contemplation, which will bring it into closer relation with the parent office.

A Royal Warrant has just been issued, which directs that for the future Surgeons-General and Deputy Surgeons-General of the Indian Medical Service are to rank as Majors-General and Colonels respectively, according to the dates of their commissions. This step was, of course, rendered necessary by the increase of relative rank which the last Army Medical Warrant

conferred upon Surgeons-General and Deputy Surgeons-General of H.M.'s British Troops.

At the Lambeth Police-court, last week, a woman was summoned by the inspector of nuisances for transmitting, without disinfection, two blankets which had been recently exposed to a person suffering from small-pox. The evidence showed that the defendant's child had been suffering from the disease, and she had taken the blankets to a neighbouring pawnbroker, where the inspector deposed to finding them in the dust-hole of the yard. Defendant at first stated that she had pledged them to obtain food, and refused to give up the tickets, recommending the inspector to get the blankets as best he could. In answer to the charge, the woman stated to the magistrate that what the inspector had said was true. She had done it to get food. While washing the clothes which had been used by the sick child, she asked her husband to give her some money to purchase a small drop of brandy or half a pint of beer, but he refused; and she was then without food. Mr. Ellison remarked that if her statement about her husband was true, he pitied her, but that was no excuse for spreading the infection in the district. He should not be doing his duty to the public if he did not visit the offence with the full penalty allowed—£5, or, in default of payment, imprisonment for two months. Offences of this description baffle the exertions of medical officers of health and sanitary inspectors to keep infection from spreading, and they must be severely punished, however much we may pity individual offenders for the difficulties that beset them. No inquiry appears, however, to have been made why the pawned blankets had been stowed away in a dust-hole. The pawnbroker must have had some special motive for so treating goods he had thought worth lending money on; and some light should have been thrown on such a proceeding.

Coroners' juries are sometimes in the habit of returning eccentric verdicts, and the following is rather a choice specimen:—Mr. Donaldson concluded an inquest in Hackney-road, last week, respecting the death of a labourer. On the 6th ult., while placing a boiler, the man was hurled into the coal-cellar by the breaking of a plank, but several men had been on this plank for the past three months. He was taken to St. Bartholomew's Hospital, and, it is alleged, was told to go home. Dr. Fowler deposed that death resulted on the 16th ult. from a fracture of the inner plate of the skull. Mr. Herbert Weiss, House-Surgeon at the Hospital, and Mr. Clarke, dresser, said all was done for the deceased that could be. He was asked to remain, but he refused. Gideon Goliby, a bricklayer, who accompanied the deceased to the Hospital, stated in evidence that both the dresser and the surgeon asked the deceased to remain. The jury returned a verdict that deceased had died from injuries received by the breaking of a plank, and they likewise considered that the Hospital people should attend better to their patients!

We had thought that the case of the Keighley Guardians was finally settled, but it is now announced that the Local Government Board has declined to accept the resignation of the nine anti-vaccination members, on the ground that the alleged "cause" is not a "reasonable" one within the meaning of the statute. If this announcement be correct, it will have the unfortunate effect of making them martyrs. Surely the statute might be interpreted in a manner to meet this peculiar case. If a person accept a post, and finds on entering upon the duties that he has scruples in carrying them out, there would not seem to be anything very unreasonable in his tendering his resignation.

On Saturday last, in dealing with a charge of drunkenness, Mr. Bridge, the magistrate at Hammersmith Police-court, felt constrained to remark that it was really shocking to see women brought before him for this offence every day. In connexion with this subject, our attention has been called to some statistics which have with much labour been prepared by Mr. E. B. Whitcombe, Assistant Medical Officer of the Birmingham Borough Lunatic Asylum, on the influence of intemperance in producing insanity. Mr. Whitcombe has gone through the reports and tables of the Birmingham Asylum for the last quarter of a century, ending December 31 last, and he finds that, out of 3800 pauper patients admitted into that institution, in 525, or about one-seventh, the malady had been caused by drink. In the same period, out of 764 private patients admitted, 142, or about one-fifth, were attributable to the same cause. In making these calculations those cases only have been strictly adhered to which were acknowledged by the friends and relatives to have been the result of intemperance, all cases of a doubtful character being excluded. The occupations of the foregoing persons varied considerably, and included 169 different employments. Among the females two-thirds were either unoccupied or only had home duties to attend to. Pursuing the subject still further, Mr. Whitcombe has sifted the annual reports of fifty-five asylums in this country for the past five years, and he finds that out of a total of 33,527 patients admitted, 3172, or about one-eleventh, had their malady ascribed to drink. This, he observes, may be taken as a fair average of the whole, and shows that during the year 1875 no less than 1000 persons became insane through drunkenness. Such evidence is undoubtedly startling, and, if strictly or nearly correct, justifies Mr. Whitcombe's concluding remark, "that could it be possible by any means to bring within the pale of statistical evidence the vast amount of sickness, pauperism, crime, and misery which is the result of drink, we should have such a startling account that thousands would join that band of earnest philanthropic workers who are striving by legislation or other means to eradicate this growing national curse." But it does not seem quite clear to us that in making up these statistics it has been remembered with sufficient care that drinking to excess is not seldom one of the first symptoms or consequences of insanity, instead of the cause of it.

The New Year, it seems, is likely to bring with it a gleam of sunshine to Mr. Darwin and his followers, for the "missing link" is at last reported to have been found. The *Sydney Morning Herald* gravely asserts that the Rev. George Brown, a Wesleyan minister, lately returned to Sydney from a year's residence in the New Britain and New Ireland groups of islands on the east coast of New Guinea, has been told by the natives that a race of men with tails exists at a place called Kalili. These beings are certainly not monkeys, as they build, plant, fight, etc. The tail is hard and inflexible, and before the men can sit down they have to dig a hole in the sand, as they would die at once if the treasured appendage were broken. Tailless children are immediately destroyed, as they would grow up as objects of ridicule. The Rev. Mr. Brown has not yet seen one of these interesting mortals, but the natives have promised to capture a specimen for his inspection. The fortunes of half a dozen members of this tribe would be made if they could only be induced to visit the metropolis and exhibit their novel appendages.

The *Birmingham Post* states that proceedings are being taken against the principal quack doctors of Birmingham, numbering altogether between twenty and thirty. The cases will come on in the Birmingham County Court, the proceedings having been instituted under the Apothecaries Act for the recovery of the £20 penalties. Under this Act the penalty named is recoverable from any person, not being a surgeon or apothecary, prescribing and dispensing drugs. It was decided to proceed under this Act owing to the great difficulty there has always been in this town of obtaining a conviction under the Medical Registration Act. It is likely, however, that some of the quacks will also be proceeded against under the latter Act

before the magistrates. Voluminous evidence has already been obtained, and many of the leading surgeons of Birmingham will go into the witness-box; many of the patients will also be called to give evidence on subpœna.

We understand that the Admiralty have decided to appoint a Committee of Inquiry to investigate the causes of the outbreak of scurvy in the late Arctic Expedition. The members of the Committee have not yet been selected, but this selection will shortly be made, and the names officially announced.

We were able to state at the end of November last that the long-standing grievance of army medical officers respecting mess and band contributions would in a short time be settled in favour of the medical officers. The new General Order on the subject has just been published, and provides that in future army medical officers doing duty with regiments are not to be called upon to contribute to mess and band funds. Though rather long in appearing, this decision will be received with much satisfaction, as, although the new order of things entirely deprived the surgeon of all regimental status and privileges, up to the present time he has been called upon to pay these subscriptions as if he were a fully recognised regimental officer.

OSTEOTOMY IN "GENU VALGUM."

At the Congress of Naturalists recently held in Hamburg an interesting paper on this subject was read in the Surgical Section by Dr. Max Schede. Antiseptists will be pleased to know that the successful results, to which we will shortly refer, were considered in great measure as due to the antiseptic precautions and dressings which were adopted in the cases. Dr. Max Schede presented to the Congress a young man on whom he had performed cuneiform osteotomy of both tibiæ and both fibulæ. The man had been the subject of exaggerated *genu valgum*, which had resisted all previous treatment. The legs and thighs were at an angle of about eighty degrees. Antiseptic precautions were adopted at the operation (which was done in February), and Esmarch's bandage was applied. A wedge-shaped piece of bone, three-quarters of an inch wide, was excised from each tibia, and the fibula was cut across; the legs were then straightened. At the end of May, consolidation was complete, and the operation thoroughly successful. At the same time he reported other cases where the operation had been done with similar success either for rickets or knock-knees. He mentioned one case in which the tibia had been divided but not the fibula, but the cure was not so complete as in those cases where both bones had been cut. Mr. Howard Marsh recently read before the Royal Medical and Chirurgical Society a paper on Osteotomy of the Tibia for Deformities caused by Rickets; he referred to some successful cases in which he had performed this operation at the Children's Hospital in Great Ormond-street. When we consider how helpless the subjects of extensive rickets and severe knock-knees may become, it is a matter for congratulation to think that surgeons are now able to tackle these diseases with such good chances of success, and with so little risk to the patients.

THE MEDICAL COUNCIL AND THE DEFENCE ASSOCIATION.

On Friday, the 22nd ult., a deputation from the Medical Defence Association—consisting of Dr. B. W. Richardson, F.R.S., President of the Association; Mr. W. Spencer Watson, Treasurer; some members of the Council; Mr. Pridham, Solicitor; and Mr. George Brown, Hon. Secretary—waited on the Executive Committee of the Branch Council of Medical Education and Registration for England, in reference to the penalties recovered in the metropolitan police-courts under the Medical Act of 1858. Dr. Richardson, in a short speech to the President of the Medical Council, Dr. Acland, stated that the object of the deputation in waiting upon the Council was to explain to the Executive Committee some of the difficulties under which the Association laboured in carrying on prosecutions in London. When the Defence Association was formed, a letter was received from the Registrar of the first Medical Council, to the effect that the Council would not conduct prosecutions under the Medical Act, but in case the Act was put in force by the Association, the whole or a portion of the penalties recovered would be allowed towards the expenses of the prosecution. Several unqualified practitioners had been prosecuted in the metropolitan courts by the Association and its East-end Branch, but instead of the penalties being handed over to the Treasurer of the Medical Council, as provided by the 42nd section of the Medical Act, they had been retained by the Receiver of the Metropolitan Police-courts under the Act 2 and 3 Vict., cap. 71. The Council of the Defence Association had consulted Mr. Morgan Howard, Q.C., as to whether the Receiver of Police could be compelled to hand over the penalties to the Treasurer of the Medical Council, and he was of opinion that, in point of law, the Receiver of Police was right in retaining the penalties. Under those circumstances the Council of the Defence Association, having incurred considerable expense in enforcing the Medical Act, appealed to the Medical Council to take action with a view to the penaltics being applied to the expenses of carrying out the Act. The Association, and especially the East-end Branch, complained that, although it was known to the Registrar of the Medical Council so long ago as 1859 that the penalties recovered in the metropolis were claimed on behalf of the Treasury, the fact was not communicated to the Association until after heavy law expenses had been incurred. The Council of the Defence Association trusted that the Medical Council would give this matter their most serious consideration, as it was one that deeply concerned not only the individual members of the Association, but the whole body of the medical profession. Mr. G. Brown and some other gentlemen also addressed the Committee, after which Dr. Acland stated that it gave him and the Committee much pleasure to meet the deputation, and to hear their views on this question, which he might say had already occupied their attention. They had consulted their legal advisers, whose opinion agreed with that of Mr. Howard; hence it was evident that little could be gained by going to law with the Treasury. The only other courses open to them were to appeal to the Government to amend the Act, so that it would not be affected by the clauses of the Metropolitan Police Act; or to apply to the Lords of the Treasury, asking them to give instructions to the Receiver of Police to hand over the penalties recovered under the Act to the Medical Council. He (Dr. Acland) had been requested by the Council to address the Treasury in this sense, but had delayed doing so until after he had had an opportunity of hearing the views of the deputation. Dr. Richardson having thanked the Executive Committee for receiving them so courteously, the deputation retired.

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 50, 75, and 97 in the three preceding weeks, declined again in the week ending December 30, 1876, to 75; 31 were certified as unvaccinated, 22 as vaccinated, and in the remaining 22 cases the medical certificates did not furnish any information as to vaccination. The 75 fatal cases included 36 in the Metropolitan Asylums Hospitals at Homerton, Stockwell, and Hampstead, one in the Highgate Hospital, and one in the North-street Infirmary, Poplar; the remaining 37, or 49 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 14 of the deceased small-pox patients had resided in Hackney, 12 in Lambeth, 6 in Camberwell, 5 in Poplar, and 3 in Bow; in all (excluding one case of

which the previous residence was unknown) 6 belonged to the West, 22 to the North, 18 to the East, 28 to the South, and not one to the Central group of districts. The Metropolitan Asylums Hospitals contained 823 small-pox patients on Saturday last, against numbers increasing steadily from 185 to 737 in the nine preceding weeks. During the fifty-two weeks of 1876, 735 deaths from small-pox were registered within "Registration" London, of which 7, 26, 110, and 592 were, respectively, returned in the four quarters of the year. During the thirty-one years 1840-70 the annual number of deaths from small-pox in London averaged 808, and ranged from 154 in 1857, to 1804 in 1844, and 2012 in 1863. The fatal cases in the epidemic year 1871 rose to 7876, and in 1872 they were 1781; in 1873-4-5 they declined to 115, 56, and 75, whereas in the year just completed they rose again to 735.

LISTER'S ANTISEPTIC METHOD IN OVARIOTOMY.

Dr. Marion Sims reports to the *New York Medical Record* a successful ovariotomy which he performed, using Lister's antiseptic precautions. The patient was forty-seven years of age. The operation and subsequent dressing lasted forty minutes. There were no adhesions, but the peritoneal cavity contained six or eight ounces of reddish serum, and the peritoneum was everywhere deeply congested. The pedicle was short, and at least three inches broad. It was tied in three sections with strong twine, and drawn out and fixed in the lower angle of the wound. The external incision was closed by sutures, and a carbolised dressing applied. Convalescence was fully assured in forty-eight hours, and the patient was quite well when the case was reported. Dr. Marion Sims anticipates the same favourable results in ovariotomy as are obtained in other surgical operations by this method of dressing.

PATHOLOGICAL SOCIETY.

The annual meeting of this Society took place on Tuesday, the 2nd inst. The greater part of the time was occupied with formal business: the old rules were considerably modified, and some important new ones added. Mr. Pollock's term of office as President has closed, and although he will be succeeded by a well-known and earnest pathologist, Dr. Murchison, the manner in which the vote of thanks, usually accorded to retiring Presidents, was carried by acclamation obviously indicated the regret which the Society felt at his resignation, and testified to the great esteem which Mr. Pollock has inspired as a courteous, judicious, and skilful President. Indeed, few surgeons could have brought to bear such special qualities as Mr. Pollock; and hence the success which has attended the Society while under his direction. The Society, too, loses the services of Dr. Henry Green as Medical Secretary: he is succeeded by Dr. Douglas Powell. We doubt not that Dr. Murchison will make an excellent President; and we hope that, like his predecessor, he will keep speakers strictly to their subject and text. There is, unfortunately, a tendency in some exhibitors to enter too much into the clinical bearing of cases; in others, to theorise vaguely. The Pathological Society, however, has for its main object the discussion of pathological facts, as opposed to pathological fancies; and it is one of the President's duties to remind gentlemen when they begin to wander too much outside this domain. After the completion of this business a few specimens were exhibited, and the meeting then adjourned. The President once more reminded members that January 16 has been set apart for the exhibition of specimens of visceral syphilis. Gentlemen intending to take part in the discussion should forward notice to the secretaries without delay.

The following gentlemen were elected as Officers and Council for the following year. Those gentlemen whose names are marked with an asterisk were not on the Council or did not hold the same office during the preceding year: —*President:* *Charles Murchison, M.D., LL.D., F.R.S. *Vice-Presidents:* Wilson Fox, M.D., F.R.S.; *Edward Headlam Greenhow, M.D., F.R.S.; Charles John Hare, M.D.; Walter Moxon, M.D.; *Thomas Bryant; *George W. Callender, F.R.S.; *Thomas Smith; Thomas Spencer Wells. *Treasurer:* *John Whitaker Hulke, F.R.S. *Honorary Secretaries:* *R. Douglas Powell, M.D.; William Warwick Wagstaffe. *Council:* William Cayley, M.D.; *Dyce Duckworth, M.D.; Robert Farquharson, M.D.; James Frederick Goodhart, M.D.; *T. Henry Green, M.D.; *William Smith Greenfield, M.D.; *Charles Henry Ralfe, M.D.; Philip Henry Pye-Smith, M.D.; John Charles Thorowgood, M.D.; Charles Theodore Williams, M.D.; *William Adams; Marcus Beck; Edward Bellamy; Henry Trentham Butlin; *Rickman John Godlee; Thomas Carr Jackson; F. Howard Marsh; *Henry Morris; *Arthur Treherne Norton; Henry Power.

A CATALOGUE OF WORKS ON NAVAL AND MILITARY MEDICINE.

Dr. Friedrich Fraenkel, of Glogau, a German army surgeon, is issuing a systematic catalogue of every work which deals with the relations of medicine to the requirements of soldiers and seamen, in the hope that it may be of service to those who are engaged in literary work connected with these subjects. It appears under the title of "Bibliotheca Medicinæ Militaris et Navalis: contributions to the literature of military and naval medicine," and is published by Gutmann, of Berlin. It is appearing in parts, in which the works are arranged (*a*) alphabetically according to the authors' names, and (*b*) according to subjects. Dr. Fraenkel desires the co-operation of all writers on military hygiene, etc., librarians, societies, and others, in completing the catalogue; and any works which may be forwarded to him will be returned within a short period.

THE DEFENCE ASSOCIATION IN SUNDERLAND.

On the 15th inst. the Sunderland Branch of the Medical Defence Association brought an action under the Apothecaries' Act in the local County Court against an unqualified practitioner named John Coul, for acting as an apothecary without being duly licensed. It appears that the defendant has been practising in Sunderland for some years past, and several witnesses proved that he had attended them for illnesses and received payment for the same. The defendant's solicitor raised several technical objections, all of which were overruled by the judge, who made an order for the full penalty of £20. This is the first case prosecuted by the Sunderland Branch of the Association.

MEDICAL OFFICERS OF HEALTH AND THE MORTALITY RETURNS.

We some time ago reported that thirty-five of the thirty-nine vestries or district boards which constitute the sanitary authorities within "Registration" London had arranged that their health officers should be supplied weekly with the registered particulars of all deaths recorded in their respective districts; only the Whitechapel and Holborn Districts Boards, and Vestries of Clerkenwell and of St. George's, Hanover-square, still then declining, or neglecting, to make any such provision. We are glad to learn from the Registrar-General that the Whitechapel District Board have since then resolved that their medical officer shall be provided with these returns from the commencement of 1877; and the Vestry of St. George's, Hanover-square, have made arrangements with the local registrars to supply their medical officer with immediate information of all registered deaths from infectious diseases, but still appear to think it unnecessary to obtain for him the particulars of all the deaths. Only the District Board of Holborn and the Vestry of Clerkenwell, of all the thirty-nine metropolitan sanitary authorities, allow their medical officers of health to remain unprovided with regular mortality returns, which at a time like the present are more than usually necessary to the due performance of their sanitary duties. Since

the 28th section of the Births and Deaths Registration Act of 1874 authorised sanitary authorities to require registrars to furnish mortality returns, and fixed the rate of payment to which registrars are entitled for this service, medical officers of health throughout England and Wales have, with few exceptions, been supplied with these returns.

THE COMBINED METHOD OF UTERINE EXAMINATION.

Professor Hegar, of Freiburg (*Volkmann's Sammlung Klinische Vorträge*, No. 105), gives some excellent hints for simultaneously examining the uterus and its appendages by one hand placed on the abdominal wall, and by the forefinger and thumb of the other in the rectum and vagina respectively. The thumb is first to be passed into the vagina, and placed on the cervix uteri, if it can be reached; then the finger is passed into the rectum, and up over the sacro-uterine ligaments (which form a good regional guide), to the posterior surface of the uterus. The hand on the abdomen is now pressed back towards the sacrum, and so the uterus is held between the fingers of the two hands. In the same way the thumb can be placed on the front of the cervix and corpus uteri; and so, with the help of the hand outside, fix and draw down the organ so as, to a certain extent, to palpate it. In this way Professor Hegar has almost invariably succeeded in replacing a retroflexed uterus by the hand alone, "even under the most difficult conditions."

The patient must, for this method to succeed, be placed on a table or high couch, and the bladder and rectum must be previously evacuated. There are a few special difficulties in its application:—

(1.) *The abdominal walls may be very tense*, especially during the first examination, owing to the patient holding her breath, and resisting the physician, from fear and modesty. Much of the trouble from this cause passes off at the second visit. Position will help much. Professor Hegar prefers the horizontal dorsal posture, the head but slightly raised by a thin cushion, and the thighs well drawn up. The external hand can often be pressed deeper down during the deep jerking expirations of sobbing and crying than at other times. To imitate the relaxed condition of the parts which is found in women soon after confinement, Professor Hegar recommends that the patient shall drink as much fluid as possible, and retain her water as long as possible just before examination; or, better still, as much water as possible should be injected into the rectum and bladder, and kept there as long as the patient can retain it. If all these means fail, she must have ether or chloroform.

(2.) Another difficulty may arise from the *narrowness and shortness of the vagina, and the tough and unyielding state of its* wall. This is best remedied by distending the upper part of the vagina with an indiarubber air-pessary, or plugging it with wool twenty-four hours before examining, taking account, of course, afterwards of the possible artificial dislocation of the organs thereby produced.

(3.) The last difficulty may arise from the most important parts being situated so high that the fingers cannot reach them; or from everything in the pelvis—tumours, organs, inflammatory exudations, etc.—being so pressed together that the special limits of each cannot be made out. Here Professor Hegar, who rejects Simon's plan of introducing the whole hand into the rectum as dangerous, fixes the cervix uteri with a blunt-pointed forceps fixed into one or other lip, or even into both, and then gently draws it down to find out what amount of displacement it can bear. With one or two fingers of the other hand in the rectum he explores the posterior surface of the uterus and its lateral angles. To reach the fundus the handle of the forceps is given to an assistant to hold firmly, and the hand thus set free is made to press the uterus, through the abdominal wall, downwards and backwards, and so bring it within reach of the rectal finger. Slight lateral movements of the handle of the forceps aid somewhat. This method gives specially good results in cases of anomalous development of the uterus (uterus bicornis, etc.), as well as in all kinds of tumours of the uterus. If a tumour, for example, lies entirely or in part in the pelvis, so as to press closely on the uterus, or even to be wedged in between it and the pelvic wall,—by drawing the uterus down somewhat, or moving it to one side or the other, the rectal finger can generally make out the limits of the uterus and the tumour, and decide on their connexions with each other. In this way, says Professor Hegar, a growth which seemed indivisibly united with the organ is proved to have a separate existence. Other advantages of this method are insisted on by the author, but gynæcologists cannot do better than study the whole essay for themselves.

ANDERSON UNIVERSITY MEDICAL SOCIETY.

Dr. Cameron, M.P., on taking his seat as Honorary President of this Society, addressed the members in an able speech. He first spoke at some length on the question of medical qualifications to practise. He thinks that the only solution to this problem lies in having a one-portal system, which ought to be guarded by a board of examiners, appointed not by any of the existing corporations, but by the State. He then spoke on the subject of vivisection. He considers the Act of Parliament as a *placebo*, the result of an agitation got up by weak, ill-informed, not to say ignorant outsiders, whom the Government sought to quiet by the administration of this *placebo*. In attacking medical men, who were acquitted of wilful cruelty by the evidence brought before the Royal Commission, these agitators were blinded to the enormities which an uneducated populace are daily inflicting, and thus nothing was done to check the cruelties which really are avoidable, because they are both wanton and purposeless. In advocating scientific vivisection, he mentioned the fact that many thousands of human lives in warm climates succumb annually to snake-bites, and asked the cogent questions, How are we to know the exact action of this poison? and How are we to obtain an antidote to the deadly juice, unless by scientific trials on animals? His address was listened to throughout with great attention; we can only regret that our space does not allow us to make further abstracts.

THE BEATTY MEMORIAL.

We are requested by Mr. Joliffe Tufnell, the Honorary Secretary to the Beatty Memorial Committee, to publish the following letter:—

"Dear Mr. Tufnell,—On behalf of the members of the family of the late Dr. Thomas Edward Beatty, I write to express our deepest thanks for the compliment paid to his memory by the erection of the tablet which has recently been unveiled in St. Patrick's Cathedral by the Right Honourable the Lord Mayor of Dublin; and we would ask you (as honorary secretary) to be pleased to communicate, in whatever way you deem most appropriate, this, our expression of gratitude, to the members of his profession for their kind remembrance of him.

"Believe me, dear Mr. Tufnell, faithfully yours,

"William C. Beatty, M.D.

"To Joliffe Tufnell, Esq., M.D."

INOCULATION OF CANCER IN DOGS.

Dr. Nowinsky, of St. Petersburg, announces (*Centralblatt Med. Wiss.*, November 5, 1876) two successful cases in which a small piece of medullary cancer taken from the nose of one dog, and implanted on a healthy wound (which was afterwards cured) on the back of another dog, produced nodules at the seat of inoculation, whose structure resembled that of the primary cancer. The examination was made in one case five months, in the other six weeks, after the inoculation. A number of inoculations on *inflamed* skin all failed; out of fifteen on healthy skin, two succeeded. These results must be accepted with all reserve.

OBSTETRICAL SOCIETY OF LONDON.

At a meeting of this Society held on Wednesday, January 3, the following gentlemen were elected office-bearers for the ensuing year:—*Honorary President:* Arthur Farre, M.D., F.R.S. *President:* *Charles West, M.D. *Vice-Presidents:* *James H. Aveling, M.D.; *James Braithwaite, M.D. (Leeds); William Frederick Cleveland, M.D.; William Newman, M.D. (Stamford); William Squire, M.D.; *Alfred Wiltshire, M.D. *Treasurer:* Gustavus C. P. Murray, M.D. *Honorary Secretaries:* Arthur W. Edis, M.D.; *John Williams, M.D. *Honorary Librarian:* *John Baptiste Potter, M.D. *Other Members of Council:* *John S. Bartrum, F.R.C.S. (Bath); William Frederick Butt, L.R.C.P.; *Frederick Henry Daly, M.D.; Alfred Lewis Galabin, M.A., M.D.; *Frederick Heudebourck Gervis; Clement Godson, M.D.; William Chapman Grigg, M.D.; Thomas Crawford Hayes, M.D; *William Carter Hoffmeister, M.D. (Cowes); *William Hope, M.D.; William Nicholson Price, M.R.C.S. (Leeds); *John Randall, M.D.; George Roper, M.D.; Henry Cooper Rose, M.D.; Thomas Taylor, F.R.C.S. (Birmingham); *John Ashburton Thompson, M.D.; John Thorburn, M.D. (Manchester); J. Lucas Worship (Sevenoaks). Those gentlemen to whose names an asterisk is prefixed were not on the Council, or did not fill the same office last.

IRISH WAKES AND CONTAGIOUS DISEASES.

Dr. Goldie, the Medical Officer of Health for Leeds, in his report to the Local Authority, states that every one of thirty people who attended the wake of an Irish girl, who recently died in that town from typhus fever, have been attacked by the same disease, and no fewer than nine of the cases have already ended fatally. These wakes can hardly be seriously defended on any ground, but in cases of death from infectious disease it is high time they were authoritatively forbidden and prevented.

TYPHOID FEVER IN SALFORD.

An outbreak of typhoid fever in Salford is reported. Several cases have occurred in the Crescent and its immediate neighbourhood. It is stated that nearly all the families in which there have been cases of the disease are supplied with milk from the same dairy-farm, and the supposition is that the milk is contaminated. An investigation into the matter by the Medica Officer of Health is going on.

ENGLISH INVALIDS AND FRENCH DOCTORS.

An occasional correspondent writes to the *Pall-mall Gazette* from Paris the following remarks on a Bill now before the French Chambers, and almost certain to become law:—

"A measure is now in progress here which very much interests the travelling English public, and especially those who, from motives of health or other reasons, propose to themselves from time to time to sojourn in France. It is no less than a law which will in its effect prove, and is really by its professional promoters intended to prove, prohibitive of the practice of medicine in France by British or foreign physicians, however eminent or capable. Existing rights of practitioners already in possession of practice at health-resorts and in Paris will be respected, but after a certain date no British physician will be allowed to take up his residence in France, as such, not even if he desire and intend to limit his practice to his own sick countrymen and countrywomen. The 'privileges' of practice are henceforth to be the exclusive possession of graduates of French universities, and if Jenner or Paget desire to come here and see an English patient whom they have sent to recruit at Cannes or Pau they must first pass five examinations, several of them of an elementary character, and must 'justify' their preliminary education. It is needless to say that such a proposition could emanate only from the narrow officialism of university circles; it is certainly not any more in the real interests of the country than in the broad spirit of professional fraternity. An early result must be to diminish very much the popularity of French health-resorts for foreign invalids, and to limit everywhere in France the number of foreign residents. It is not too much to say that many of the French towns are under the deepest obligations to British physicians for the vogue which they have given to them; and that neither Paris, Cannes, Hyères, nor Tours can afford to neglect that consideration, any more than Mentone or Nice. It is, however, eminently characteristic of the singularly narrow and almost blind egotism of the university officials here. An illustration of the extremity of this spirit was this week mentioned to me with indignation by one of the professors of the Faculty of Medicine in Paris, who observed truly that he supposed that in no other country could such a thing be possible. An English student here, who has passed satisfactorily the first two years of studies and examinations for the degree of medicine, applied lately to be allowed to take part of the necessary hospital instruction in London, not omitting any of the formalities of 'inscription,' or in the least degree evading or abating a jot of the strictness of the successive examinations. This is so ordinary, simple, and reasonable a request,—there is even for students of one faculty and country so much of advantage in seeing something of the practice of foreign hospitals,—that it might be expected that such a request would be very cheerfully and as a matter of course approved. Under the deanship of M. Würtz such permission was readily granted. It has, however, been flatly refused; and so much is the present Minister, M. Waddington, under the rod of official convention that when the request was carried to him, backed by the recommendation of high medical and official personages here, he contented himself with simply registering the egotistical decree that only in French hospitals can disease be seen or studied, that knowledge is of no avail which is acquired elsewhere than under his administration, and that not even the advantage of French examinations can compensate for the original sin of the acquisition of medical skill elsewhere than under the rule of M. Waddington and M. Vulpian. Such a decision is probably unique in the history of universities, and illustrates remarkably the spirit which has dictated the law by which English invalids in France are in future prohibited from dying or from recovering except under the care of French graduates of medicine."

As the matter is one of great interest and importance, we publish this account, which the *Times* has helped to make more public; and we have elsewhere dealt with the subject.

FROM ABROAD.

Results of Cold-Bath Treatment of Typhoid.

M. Féréol has given a valuable *résumé* of the results of cold-bath treatment of typhoid at the Maison Municipale de Santé at Paris. He states that he was driven to the use of cold baths by the severe mortality of 27 per cent. of cases of typhoid under his care, treated by ordinary methods, in the year 1873. M. Féréol considers as indications for cold-bath treatment, at first, hyperpyrexia, with the concurrence of grave general signs; then ataxic phenomena, continuous delirium, convulsive movements, carphology, etc.; finally, extreme frequency of pulse. He does not regard hæmorrhages as a formal contra-indication.

As to adynamia, pulmonary congestions, and the specially thoracic forms of typhoid, he is determined not to allow them to deter him from the use of this method. In the years '74, '75, '76, M. Féréol has had 153 patients suffering from typhoid. The mortality was 29—*i.e.*, 18·95 per cent.—as compared with 27 in 1873, when the cold-bath treatment was not adopted. It is obvious that, to form a proper estimate of the use of cold baths, only severe cases must be compared. By a further analysis, M. Féréol shows that of 38 severe cases treated by bathing, 26 recovered and 12 died—*i.e.*, there was a mortality of 31·6 per cent. whilst ten died out of twenty-four serious cases treated by ordinary methods—*i.e.*, there was a mortality of 41·66 per cent. M. Féréol anticipates an objection which might be made that he could not be sure that all his cold-bath patients would not have recovered if treated by any other method. He has never prescribed

cold baths except where he had reason to fear that cold affusions would be insufficient, and where there was an assemblage of grave symptoms, but he makes no pretence to an absolute prognosis. M. Féréol discusses in detail the limitations which have been put on this method of treatment—first with regard to hæmoptysis. One patient who was not subjected to cold baths had hæmoptysis, and two had commenced to spit blood before being so subjected. MM. Labbé and Raynaud state that in the present epidemic they have observed this complication in several patients not treated by cold baths. The two patients who had previously spat blood, and who, notwithstanding, were subjected to cold baths, succumbed to broncho-pneumonia and asphyxial coma. One of them after a single bath (at 82·5° Fahr.) had an immediate recurrence of hæmoptysis. These two patients would undoubtedly have succumbed if the baths had not been given. On the other hand, two patients who had hæmoptysis in the course of cold-bath treatment recovered. In these cases M. Féréol is convinced that the baths had no influence in determining the hæmoptysis, because they had been discontinued five days before the blood-spitting appeared. M. Féréol considered the hæmoptysis in one of these cases as beneficial rather than otherwise; and, in the other case, though abundant and persistent, he did not look upon it as of grave import. To sum up—there were seven cases of hæmoptysis, of whom five recovered, and two died. One patient had hæmoptysis, and was not treated by cold baths; he recovered. Of the six others, four recovered, two died (but they had both spat blood before the baths were given). With regard to other pulmonary complications, many bad cases of broncho-pneumonia recovered. In a tuberculous patient, who was also the subject of alcoholism, and who was exceedingly delirious, M. Féréol resorted to cold baths with the best result as regards the delirium, and without any obvious evil influence on the tuberculosis. As to *late* epistaxis, one patient so suffering recovered under cold-bath treatment; the other case (in whom the epistaxis was very severe, and had commenced before the baths were tried) was fatal. With regard to intestinal hæmorrhages, there were two recoveries and one death amongst those treated by cold baths. M. Féréol had not a single case of perforation amongst his "cold-bath patients." This complication caused death in three patients treated by other methods. It would appear that cold-bath treatment was attended with little benefit in cases where there was great frequency of the pulse. M. Féréol, after a conscientious examination, is unable to recall a single case in which the fatal issue could be attributed without doubt to the cold-bath treatment.

Exfoliation of Mucous Membrane of Stomach after Swallowing Sulphuric Acid.

M. Laboulbène has communicated to the Paris Academy of Medicine (*Gazette des Hôpitaux*, December 21) the record of a case in which he asserts that the mucous membrane of the stomach, and part of the mucous membrane of the œsophagus, have been expelled a fortnight after a poisonous dose of sulphuric acid had been swallowed. The patient was a man of fifty-nine, who, through inadvertence, swallowed two or three mouthfuls of oil of vitriol. He immediately experienced a sense of burning along the gullet and at the pit of the stomach; he had colicky pains all over the belly, and his body became bathed with perspiration. In less than ten minutes some milk was given to the man. This was followed by vomiting; then, for the first time, the patient felt some pain and tightness in the throat, and it was probable that the rejected liquid led to the charring of the inside of the cheeks subsequently found. The important point to notice is that the acid was in contact with the gastric mucous membrane five or six minutes. When admitted to the Necker Hospital, the day after the accident, the pain in the throat, along the gullet, between the shoulders, still continued; the colic had ceased, but there was frequent vomiting and continual expectoration. On examining the mouth, the lips and anterior two-thirds of the tongue were found natural; the posterior one-third of the tongue was covered with a closely adherent stucco-like plâque; so also were the uvula, the tonsils, and the pillars of the fauces. On part of the palatine arch there was a large bulla, and the mucous membrane of the cheeks was in some places swollen up, in others peeling off in shreds. The mouth gradually improved, but deglutition continued very painful. Four days after the accident he had excessive hiccough, which lasted three days and then entirely ceased. Fourteen days after the accident he was seized with repeated attacks of severe cough; he felt something in his throat choking him; he vomited some mucus streaked with blood; and after several minutes of great distress he drew out with his fingers some blackened shreds, which, when placed in water, were found, as asserted by M. Laboulbène, to be *débris* of œsophageal mucous membrane. The following evening he had again this choking sensation, worse than before. After about twenty minutes of distress he pulled out with his fingers a pulpy black mass. This, when floated out, was found oval in shape and curved; its width equivalent to two hand-breadths. In one spot near the middle there was a fibrinous clot adherent to it, and at one end there was a prolongation of a tubular form, and measuring one inch and a half. After the expulsion of these membranes the patient was much relieved, and his breathing became easy; the day after, the swallowing of liquids also was accomplished with less trouble. By the thirty-seventh day he had so much improved that he was able to swallow slowly some well-masticated solid food; he was still extremely emaciated, and it was difficult yet to make a prognosis. The membrane, examined microscopically, showed fibres of connective tissue, elastic fibres, and vessels filled with blood, which appeared as if it had been charred.

In the discussion which followed, M. Gubler declined to accept the view that this was the mucous membrane of the stomach, on the ground that no peptic glands could be discovered. He thought the material produced was allied rather to the pseudo-membrane of diphtheria, or that produced by the contact of irritants. M. Villemin pointed out, with respect to the peptic-glands objection, that as these glands have a very thin wall, and are, in fact, only recognised by their epithelium, the contact of the acid might easily destroy or disturb the epithelium, and thus render them indistinguishable.

Anomalous Cases of Typhoid.

M. Dreyfus has recorded, at the Anatomical Society of Paris (*Progrès Médical*, December 9), the case of a man aged eighteen, who, during the course of an attack of typhoid of moderate severity, began, on the eighteenth day of his illness, to complain of sharp pain in the right iliac fossa; he also suffered from abdominal distension and from repeated vomiting. The patient died on the twentieth day. On opening the abdominal cavity, there was a gush from a hole about one-fifth of an inch in diameter, of a considerable quantity of yellow material. This proceeded from the neighbourhood of the right iliac fossa. The intestines were glued together by recent lymph. On opening them up, the orifice whence the fæcal material had escaped was found to be at the summit of a diverticulum, which was situated about six inches from the cæcum. This diverticulum did not appear to possess either a Peyer's patch or solitary glands. *Throughout the intestine no lesion was found in Peyer's patches* till the patch just above the cæcum was examined, where a minute ulcer about one line broad was seen. Nothing was found in the cæcum or colon. The mesenteric glands were large and soft; the spleen also was large and soft. M. Charcot, in the subsequent discussion, recorded the case of a young man who succumbed to an intestinal perforation after having presented symptoms of typhoid fever, and in whom also the lesions in Peyer's patches were insignificant.

Case 2.—M. Millard showed, at the Société Médicale des Hôpitaux (*Gazette des Hôpitaux*, December 12) specimens from a case of typhoid. A youth of fifteen and a half on the twenty-first day was seized with a sharp pain in the whole of the abdomen. There was no vomiting at first, but the temperature went down to 98·2°. Two days after, the patient had vomiting, and was expected to sink, but this expectation was not verified; he survived several days. His abdomen became extremely retracted, and he became excessively emaciated. On the thirty-second day he vomited some pure blood, and on the thirty-third day this was repeated. On the thirty-fourth day there were black stools. On the thirty-fifth day the patient died. At the post-mortem some ulceration was found, extensive both as to length and depth, on the anterior wall of the stomach; and on the posterior wall a veritable round ulcer. There were the ordinary lesions of typhoid fever, and general peritonitis, with pus and adhesions. Besides this, there was evidence of some old ulceration of the appendix, probably anterior to the typhoid. The cause of the peritonitis was not clearly accounted for. In Sir William Jenner's cases the occurrence of ulceration of the stomach is noted only once, and then there were

numerous minute losses of substance—quite a different condition from M. Millard's case, of which we could have wished for a little more detailed account.

REVIEWS.

On Rest and Pain. By John Hilton, F.R.S., F.R.C.S. Edited by W. H. A. Jacobson, F.R.C.S. Second edition. George Bell and Sons. 1877. Pp. 478.

We are glad to welcome this long-promised edition of a book which has become so deservedly popular. Like many other works, it remained unknown for some time after its publication—perhaps because it was published by a firm whose medical connexion is not very extensive,—and it was only when the work had been some time before the public that its real merits began to be acknowledged. It has long been out of print, and the few copies which have from time to time come into the hands of the second-hand booksellers have been sold at a considerable advance on the published price. Mr. Hilton has rightly decided to publish his second edition in a cheaper form, and it now comes within the means of any and every student of medicine. It ought to form part of every student's library; indeed, we think that a careful study of this work would do more to reconcile a first year's man to the dry details of his anatomy than any plan he could pursue, for here he will learn the importance of an accurate knowledge of his anatomy, and see the immense use which this knowledge will be to him in actual practice. There is a great deal of human nature about a medical student, and it is astonishing how early in his career he begins to ask himself whether this or that knowledge will be of any use to him when he has once passed his examinations. If the answer be an affirmative one, well and good; if otherwise, he troubles himself but little about it. Anatomy is exactly one of these subjects. Very few surgeons—including those on our hospital staffs—could pass the first fellowship examination without considerable preparation, from which we may judge that minute anatomy is no necessary accomplishment for a practical surgeon. There are, however, certain broad facts, such as the distribution of nerves and vessels, the topographical anatomy of regions, etc., which we all ought to have at our fingers' ends and in our mind's eye during the examination of every patient who consults us. The book before us exactly contains this kind of knowledge, and points out its general application in the diagnosis, prognosis, and treatment of disease. We can only regret that Mr. Hilton was unable to carry out his original intention "to have enlarged the volume by additional matter derived from other and different surgical diseases."

But now to the work itself—"a course of lectures on the influence of mechanical and physiological rest in the treatment of accidents and surgical diseases, and the diagnostic value of pain." The book opens with a general exposition of the value of rest to the vegetable as well as to the animal kingdom, and the author graphically describes the immense boon which nature accords to fallen man, in allowing him to seek temporary oblivion and refreshment in sleep after the cares and fatigues of the day are passed. This necessity for rest applies to the body not only as a whole, but also to its individual organs: "All viscera require the alternate condition of activity and rest to keep them vigorous and in health. If this condition be not observed or attended to, structural changes or deterioration of function are sure to follow." "For example, the heart, overtasked by constant emotional influences, or excessive athletic exercises, and thus deprived of its appropriate rest, becomes prone to the various alterations in its structures which post-mortem examinations daily reveal. The liver, unduly stimulated by excessive potations, by an unnecessary amount of food, or by habitual irregularity of diet, glides into disorganisation for the same reason."

Rest, too, is necessary for the healthy action of an organ. Thus the cerebro-spinal fluid has the function—for the most part mechanical—of protecting the more important parts of the brain from vibratory communications from the bones of the skull, which might otherwise reach them; the brain, therefore, does not rest upon the bones, but upon this fluid." Furthermore it serves as a support to the internal parts of the brain. "I have already said that the thalamus nervi optici and the corpus striatum, which occupy the base of the lateral ventricles, superintend the movements and sensibility of the upper and lower extremities. I presume that when these functions are actively employed, these two parts especially are in a state of turgescence, and that if any were embedded in the solid brain it would be impossible for them to enlarge without encroaching upon some of the adjoining structures, and thus inflicting, at any rate, temporary injury. But the corpus striatum and thalamus nervi optici have a large extent of surface, which projects towards the interior of the lateral ventricles, and in proportion as they become enlarged by congestion, they displace the cerebro-spinal fluid through the foramina of Munro, through the third ventricle, *iter a tertio ad quartum ventrieulum*, into the fourth ventricle, and thence through the cerebro-spinal opening; and thus provision is made for the hyperæmia of the thalamus and corpus striatum."

Not only do we find the body thus provided with means for securing rest to healthy structures, but we find also that nature sets about the repair of diseased structures by enforcing this principle of rest: "If a serous membrane be wounded, coagulable lymph is poured out, and it forms a temporary splint until the original structures repair themselves." "The lymph which is poured (as the result of a wound, at least) keeps the parts in an accurate position, and maintains them so until Nature has healed up the wound, when the lymph is absorbed." "If inflamed serous surfaces are allowed constantly and freely to rub upon each other, it is obvious that the irritation must be increased. As soon as the lymph is poured out, the serous membrane (as far as it can be) is put in a state of rest, or freedom from friction." We think Mr. Hilton is less happy in his illustration of the principle of rest when speaking of mucus membranes: "When a mucous membrane is very much inflamed, coagulable lymph is poured out upon its free surface, and from that moment the membrane is defended from the influence of external agents. In the case of the larynx and trachea, it prevents the contact of the irritating external air passing over the inflamed surface, and in that way gives the mucous membrane rest." We venture to think that membranous exudations are the exception rather than the rule in acute inflammations of mucous membranes.

Having thus led up to the subject of rest, the author points out its value as a therapeutic agent, and shows how the real object of most of the graver operations of surgery is to secure rest to injured or diseased parts. He quotes a case of tracheotomy which was performed twenty-eight years ago, on account of syphilitic ulceration of the larynx. "In chronic laryngitis, cured by tracheotomy, the cure is not effected by opening the larynx, but by giving the larynx rest." As regards the larynx this is no doubt true, but how as regards the trachea, which has to submit to the presence of a foreign body within it for so long a period? Surely this would set up reflex irritation or referred pain somewhere, which would tend to interfere with the cure. We should judge so from what our author has written on this subject in the second half of his book.

In the treatment of hip-joint disease and of disease in the spinal column, rest is absolutely essential. A number of very interesting and suggestive cases are given.

Not less interesting are the remarks on the diagnostic value of pain. It is here, indeed, where we think that Mr. Hilton's book especially excels. We know of no other which can at all compare with it in this respect. He says:—"If the hidden cause of pain be in any one particular spot, it is only by tracing the nerves to and from that spot that we can hope to arrive logically at the real cause of the symptoms." Again, he says:—"Let me observe to the rising generation of anatomists (who will, I hope, excuse my referring to such points) that I have always found anatomical lectures very much increased in interest and utility by pointing out the functional association and the physiological relation of muscles by their nervous supply rather than by their mechanical relation to the bones." Here we have a double lesson—one to the teacher, how to teach; the other to the student, why he should learn. In illustration of these two statements, he points out the anatomical law, that "the same trunks of nerves, the branches of which supply the groups of muscles moving any joint, furnish also a distribution of nerves to the skin over the same muscles, and also to the interior of the joint itself." This is well shown in the nervous supply of the shoulder-joint and its muscles, as also in the elbow, the hip, and the knee joints, with their respective muscles. By this consentaneous and physiological harmony between the joint and its motor muscles we get an explanation of the rigidity of a joint when inflamed or injured, as also another example of the physiological rest which nature endeavours to impose on a diseased structure.

Not only in this respect is the knowledge of the nervous supply useful—nay, necessary,—but it helps also to explain many other apparent peculiarities. We well remember our perplexity when, at the "first college," Mr. Hilton asked us one of his favourite questions—why the recurrent laryngeal took such a peculiar course? Certainly, none of the anatomical text-books of that time gave any explanation of the fact, nor do the text-books of to-day adequately explain this and many other kindred subjects. We will give Mr. Hilton's own words in reply to this question:—"It is an essential thing that the muscles which are acting upon the air as it escapes outwards from the lungs, so as to make the voice, should be acting from within outwards—that is, from the lower part of the larynx to the upper. It is quite obvious that if the muscles acted in the other way, we should all be ventriloquists, talking inwardly to ourselves as it were, and having no external voice." It is clear to everyone that however rapidly the nervous influence passes, it must reach the nearest point first, and so the lowest muscle is first set in action, the others following in their respective order. This also explains why the superior laryngeal nerve, which is sensory, is accompanied by a motor branch to the crico-thyroid, the only muscle which is not supplied by the inferior laryngeal. The author says—"It has long been my habit to regard the crico-thyroidei as the muscles which are intended to tune the vocal instrument; and, as the instrument must be tuned before it can be played upon, so, this nervous influence first reaching the crico-thyroidei, the vocal cords are put into a due state of tension, preparatory to the more precise and accurate influence of the other muscles acting directly and indirectly upon the vocal cords."

The accuracy with which we diagnose the seat of disease by the presence of pain will obviously be in proportion as our knowledge of anatomy is exact, and the study of this book will more than convince the most sceptical of the great value which anatomy is, not only to the student, but to the practitioner. We hope that we have sufficiently drawn attention to the importance of the work before us. The chapters are so interesting and so suggestive that nothing short of actually transcribing them would do them full justice. The book ought to be entitled "Topographical Anatomy, and its bearing on the Practice of Medicine and Surgery." Its present title certainly is insufficient, and one little calculated to bring it within the cognisance of those for whom it is so essentially adapted.

Wood's Treatise on Therapeutics. Second Edition. Smith, Elder, and Co. 1876.

Those who have had experience of the comprehensive nature of "Wood's Treatise on Therapeutics" will welcome a second and extended edition of it. Though the American origin of the work sometimes causes doubt as to the reliability of the doses of remedies as stated in it, the fulness with which the physiological and therapeutic actions of drugs are discussed renders the book a most valuable one. The new edition contains articles on almost all the most recent drugs, and records of new observations on those which were fully discussed in the earlier issue. Mr. Wood has also done good service to such as are unable to devote attention to special treatises on the forces employed in medicine by summarising the useful part of our information about caloric and electricity. The volume will be eminently useful not only to those who confine themselves to the practice of medicine, but also to such as devote their attention to original observations regarding the actions and uses of drugs.

Science Manuals: Animal Physiology. By Dr. J. M'Kendrick, F.R.S.E. London and Edinburgh: W. and R. Chambers. 1876. Pp. 158.

We feel little short of envious of the many educational advantages which the rising generation now enjoys; as compared with those which we enjoyed in years gone by, the advantages of to-day are, indeed, many and manifold. We are constantly called on to welcome some new manual, written for the purpose of making science easy to understand, and its acquirement a labour of love rather than, as of old, a work of toil and trouble. Now, indeed, thanks to the many manuals which are published, subjects which were formerly studied by a special few can be taken up and taught almost universally. Messrs. Chambers have long been favourably known as publishers of an educational series. These works have enjoyed a large share of popular favour on account of their practical and scientific value. We have before us "Animal Physiology": it is an excellent little work, admirably adapted to the purpose it has in view. It treats of the physiology of everyday life—subjects which every boy and girl ought to master before leaving school. Such knowledge will assuredly teach them to live well and wisely, and, in explaining the mechanism of life, will teach them not only how to value it, but also how to preserve it. The plan of the work may be briefly put as follows:—Descriptive anatomy, histological anatomy, chemical constitution of the body, vital processes, functions, animal heat, life and death. The book concludes with a series of questions on the various subjects discussed; they are so arranged that, though an answer is contained in the body of the work, it is not always to be found ready given, but has to be thought out and compiled by the student for himself.

If all the other Manuals are as well arranged as this one, we can heartily recommend them as highly adapted to the requirements of young students, and the subjects as a most important addition to the elements of a sound education.

Letts's Diaries, etc.

We have again a selection of these well-known diaries before us. Large and small, special and general, are alike good. They are the result of many years' experience, and have assumed their present shape after such alterations from their original forms as the experience of past years seemed to render desirable. They are well bound, the paper is excellent, and they contain a variety of useful information, which makes them invaluable as books of reference, as well as diaries for the record of current events.

GENERAL CORRESPONDENCE.

FATAL CASE OF SECONDARY SMALL-POX.

Letter from Mr. J. Lucas Worship.

[To the Editor of the Medical Times and Gazette.]

Sir,—At page 689 of No. 1381 of the *Medical Times and Gazette* is the account of a fatal case of secondary small-pox. Should you consider the following case of sufficient interest, will you publish it? I am, &c.,

Riverhead, December 26. J. Lucas Worship.

E. C. was vaccinated at the age of six months, with three points on each arm. The operation was so successful that the mother was requested by the medical man who performed the vaccination to bring a friend's child to be done from him. He was never revaccinated.

At the age of twenty, when he was in Paris, he caught the small-pox (in 1845), and had it severely, but could never account for the source of his infection, as he had a great horror of the disease, and would never go near either place or person where it was supposed to be. In 1870, being abroad, he was begged by his family not to go near Metz, as was his intention, as they had heard that the disease was raging there; but he laughingly reminded them that he had already had the small-pox, and was therefore safe himself, but that he would run no risk of bringing it home. He had returned home a fortnight when he was seized with violent pain in the bowels (October 7), and the usual remedies having failed, he sent for his medical attendant. He had *no pain in his back or head.* On the ninth the eruption appeared, and was well developed, and there was no cause of alarm until the 11th, when it became confluent, and his throat was extremely bad. His colour became that of a negro, and he died on October 13, quite quietly and somewhat suddenly. He was unaware of having been near any case of small-pox; but as he was travelling home through France, he was turned out of his first-class carriage and was put into a third-class to make room for some Turco soldiers, and he remarked that they smelt as if they had come out of a hospital.

GLYCEROLE OF NITRATE OF BISMUTH.

Letter from Mr. Balmanno Squire.

[To the Editor of the Medical Times and Gazette.]

Sir,—In consequence of the experiments which led me to find out that nitrate of bismuth is soluble in glycerine, and that

the glycerole thus obtained is miscible in any quantity with water without precipitation, some further researches into the matter have just been made by the President of the Pharmaceutical Society, who had become interested in the question. He confirms my observations as to the miscibility of the glycerole in any proportions with water without the formation of a precipitate, but finds that this remarkable property holds good only of a glycerole which has been recently prepared, and prepared also without the aid of heat. If the glycerole be kept for two or three weeks, then a precipitate is formed on diluting it with water, and the same thing happens even when the glycerole is quite recent if heat has been employed in its manufacture. I think these necessary precautions in using the glycerole as an internal medicine ought to be stated as an appendix to my article in the *Medical Times and Gazette* of December 9.

The same gentleman finds that the clear mixture of the glycerole with water is precipitated by caustic potash; the precipitate being redissolved by an excess of potash. Now, this resolution of the precipitate (by potash) in an excess of the precipitant does not happen with an acidulous solution of the nitrate of bismuth in water, and he therefore concludes that the glycerole of nitrate of bismuth is not a mere solution of the nitrate in glycerine, "but is really a chemical combination," and "that the glycerine is playing a part somewhat similar to that taken by the citric acid in the liquor of the Pharmacopœia." He furthermore throws out the suggestion that the resolution of the glycerole in a slight excess of potash might "be employed medicinally as a substitute for the liquor bismuthi ammonio-citratis of the Pharmacopœia." This further contribution on his part to the means of procuring soluble preparations of bismuth is, I venture to think, a valuable one; I am glad, at any rate, to be able to communicate so authoritative a confirmation of my own experiments. It may now be considered as conclusively proved that we have henceforth at our command the means of employing bismuth, internally as well as externally, in a much more active form than has as yet been possible. I am, &c.,

London, December 11. Balmanno Squire.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, December 12.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

Hæmophilia complicated with Multiple Nævi.

Dr. J. Wickham Legg read a paper, in which he detailed a case of epistaxis since boyhood, with tendency to traumatic hæmorrhages in other parts, seen in a man whose kindred were subject in like manner to bleedings. The case was further complicated by the presence of numerous nævi on the skin. The author's theory of the pathology of hæmophilia was spoken of in connexion with these vascular affections; and the paper ended with a short account of another case of congenital epistaxis complicated with multiple nævi.

Mr. Sedgwick thought that the condition known as hæmophilia was due rather to a condition of the vessels than to the blood itself. And in this view he was confirmed by the bleedings being often strictly localised. This was most marked perhaps at the period of the fall of the umbilical cord, when the bleedings apt to ensue most frequently proved fatal. The only case in which he had seen recovery was that of a female child, in whom there was no recurrence of the bleeding.

Mr. Birkett considered that the combination of nævus and the hæmorrhagic diathesis could not be very common, as he had never seen them associated. Nævus, he thought, was hardly a vascular structure, but rather a fibrous one, and from one point of view might be regarded as analogous to the corpora cavernosa or spongiosa of the penis. Often, however, small vascular points were to be found near new growths, as cancer; but these were not nævi.

Dr. Legg could not agree as to the umbilical hæmorrhage being at all analogous to hæmophilia. When the subjects of such hæmorrhage do recover, there is no hæmophilia. He thought that, according to the views of recent histologists, there was little, if any, connective tissue in nævi.

General Teleangiectasis, with Abnormality of Blood-vessels.

Mr. Hulke read notes of a case of general teleangiectasis, most developed in the left half of the body, associated with abnormalities of the large bloodvessels of the left lower limb and in the neck. The case was chiefly remarkable for the extent of the nævoid disorder, and abnormalities in the largest bloodvessels. E. L., an infant of a few weeks old, was in 1866 brought to the Middlesex Hospital with intertrigo in the groins and crease of the thighs, which, and a few nævoid specks, disappeared under simple treatment. In 1870 she was again brought by her mother on account of painfulness of left leg, which was swollen; the left half of the body being mottled with dull-red nævoid spots (port-wine stains), running together in the foot, and on the face in larger blotches. The skin in the intervals was traversed by dilated veinlets, and in the left groin the nævoid tissue formed a prominent purplish spongy mass, covered by a thin epidermis. On the right side were also a few small nævoid marks. The left lower limb was considerably larger than the right. The mother said that in cold weather the child became blue, and suffered more. It was concluded that the left leg, from its vascularity, was warmer than the right; but in testing with the thermometer the opposite was proved to be the case. She was again admitted on January 3, 1871, having lost much blood the day before, as also in the previous summer of 1870, and early in December, which the mother had thought to be from the bowel. A fresh hæmorrhage occurring, the House-Surgeon traced it to rupture of small bunches of the large spongy mass. The nævoid condition of the surface continued to advance and become almost confluent, the intermediate veinlets to become more numerous and distended, and the enlargement of the left lower limb greater. The child was in much pain and very feverish, and in subsequent feverish attacks had obstinate retching. On February 5, 1871, when she went home, the girth of the right thigh was ten inches and one-eighth, and of the left eleven inches and five-eighths. In May the mother reported another hæmorrhage; and in October, 1872, she was readmitted with glandular abscesses in both groins, which closed slowly. In August, 1874, she had erysipelas of the left lower limb, and superficial ulcers on the thigh. When discharged convalescent in September, 1874, the girth of the right thigh was nine inches and a half, and the left eleven inches. In August, 1875, she was readmitted with intense vascular engorgement of left limb, attended with troublesome retching; the patches became gangrenous, and the eschars were very slowly thrown off. Three successive attacks of erysipelas followed in October and November, and on the last occasion screaming delirium set in, and death took place twenty-four hours after the beginning of the attack. Dr. Sydney Coupland, who made the post-mortem inspection, found that the abdominal aorta was much diminished below the cœliac and superior mesenteric branches, the left carotid and iliac arteries were smaller than those of the right side, and the external iliac and femoral veins were replaced by a plexus of veinlets, which, with others, formed a "rete mirabile" intercalated between the cava inferior and left common iliac above, and the pelvis and lower limb below. The left internal jugular vein was less than half the size of the right. The bulk of the left limb was greatly increased at top of the thigh to sixteen inches and a half, the right leg being ten inches and three-quarters only. The limb was very œdematous, and nævoid tissue was restricted to the skin and subcutaneous tissue, not invading the muscles. The microscope revealed a cavernous arrangement of the vessels, and an abundant cell-proliferation in, and thickening of, the connective tissues. The author did not consider the excessive vascularity due solely to inordinate dilatation of pre-existing vessels, but that no doubt there was a considerable evolution of new vascular tissue. A striking feature was the gradual spread of the vascular disorder over the whole surface, from a few specks in the left groin at birth. The inordinate development of peripheral vessels would be attended with a corresponding disproportionate increase of their collective sectional area over that of the feeding artery, and would favour the accumulation of blood in the capillaries, increased by the narrowness of the common iliac; the sluggishness of the current would favour the stagnation and clotting, and promote the retention of effete matters in the limb, and thus occasion plugging of vessels, and induce the repeated attacks of erysipelas; the overgrowth of the bones being an instance of the hypertrophy which is daily seen, wherever over-feeding is induced by an

increased afflux of blood, from any cause, as the presence of a sequestrum, etc.

Mr. Barwell had at one time under his care a case where the whole left side was one mass of nævus. On this side the lower limb was small; that on the right was large; yet on the left side the femoral artery seemed to be twice or thrice the ordinary size. The patient had never suffered from bleeding.

Spasmodic Contraction of Muscles treated by Excision of Nerves.

Mr. W. Spencer Watson read notes of the case of a young lady, aged nineteen years, who was the subject, when nine months old, of so-called infantile paralysis. The right arm and right leg had ever since been contracted at the wrist and ankle. The deformity of the foot, however, had been remedied by division of the tendo Achillis in infancy, and the patient had been able to walk with a limp ever since. The right arm, forearm, and hand had, besides the permanent contraction of the flexors, been more recently subject to violent spasmodic movements which had produced exhaustive debility and a tendency to hysterical paroxysms. After the failure of general remedies and of tenotomy of the more prominent flexors, Mr. Watson divided and excised a portion of the median nerve at the elbow. This relieved the muscular spasm to some extent, and somewhat reduced the previously heightened temperature of the limb. The deep flexors and adductors, however, continued to be subject to violent spasmodic movements, and the wrist continued permanently flexed. Mr. Watson, therefore, with Sir William Gull's sanction, excised a portion of the ulnar nerve behind the inner condyle of the humerus. The contracted muscles were at once released, and the forcibly adducted thumb and little finger set free. The total effect of all the operations has been decidedly beneficial to the patient, but she still complains of pain in those parts now paralysed as to sensation and motion. The operations of neurectomy and tenotomy were undertaken in this case on the hypothesis that the original central lesion was become secondarily aggravated by the constant peripheral irritation either associated with or caused by the convulsive muscular movements. The primary mischief was central; the peripheral irritation reacted upon the centre. A vicious circle of cumulative nerve-irritation was thus established. The object of the operations was to break the continuity of that circle.

Mr. T. Nunn had recently seen a lady the subject of continuous spasm in the flexors of the leg. This seemed to follow on a blow on the spine. Here division of the nerve would probably have been useless. In Mr. Spencer Watson's case he did not think so much of the nerve need have been removed, as temporary division might have sufficed, and the nerve would have grown again.

Mr. Hulke said that if temporary destruction of the conductivity of a nerve was all that was required, stretching would have been enough for the purpose.

Mr. Barwell spoke of a soldier, the subject of epilepsy, whose arm had been amputated, but at the extremity of the stump the nerves had formed swollen masses. These were removed, the nerves stretched, and no more epileptic fits ensued.

Mr. T. Smith said that if the pain was relieved by chloral and bromide of potassium, would it not have been better to trust to these for a time on the chance of the disease wearing itself out, especially as there seemed to be no permanent shortening of the muscles. Mental emotions had a strong influence in such cases, as was shown in one under his care, where the subcutaneous injection of water sufficed to cure the patient.

The President, who had seen Mr. Watson's case, was quite certain that no injection of water would have cured such a patient. Here there was absolute shortening of the muscles, which commonly ended in fixation. The spasm was undoubtedly mainly reflex in its character, and in such cases the division of nerves was of the highest importance; but often section of the nerves was not enough. In a case which had come under his notice there had been fracture of the radius; distortion followed, and finally almost fixation. Section of the nerve did good for a time, but the spasms began to return. Then followed fracture of the opposite radius, and the symptoms began to resemble those which had followed the accident on the other side; but forcible and really painful fixation on splints did much good. Here, too, section of the nerve was most useful.

EPIDEMIOLOGICAL SOCIETY.

Wednesday, December 13.

J. Netten Radcliffe, Esq., President, in the Chair.

On Dengue or Denguis.

Dr. Smart, R.N., read a paper on the above subject. The disease is defined in the latest Nomenclature authorised by the Royal College of Physicians as "occurring in the West Indies, but it has occurred in great epidemics consecutively over the tropical regions in both hemispheres, and in sub-tropical regions, as Senegal, Spain, and Egypt, and at other times as regional epidemics within those areas." The pandemic periods have been from 1780 to 1784, from 1824 to 1828, and lastly from 1870 to 1874. In the first two they were equally severe in both hemispheres; but the last was very extensive in the eastern, and less so in the western. Between these there was an approximate lapse of forty years or so. The earliest notice taken of it was in 1780 by Dr. Rush, of Philadelphia, who described it as bilious remittent or break-bone fever; and it has been recently discovered that at about the same period it prevailed epidemically over the shores of the Indian Ocean, where it has since reappeared in the two great periods of its diffusion, and likewise that it was present within the same period in Egypt and in Spain. The second pandemic commenced at Calcutta in 1824, and spread up the Ganges and to other parts of India in that and the following year. In 1826 it is reported to have shown itself in the United States, at Savannah, but it was not reported there until after its outburst in 1827 at St. Thomas, the emporium of the Antilles, from which it was carried south to the Spanish Main, and, appearing epidemically later in the Southern United States, it was there attributed to diffusion from the West Indies. According to Dr. Christie, of Zanzibar, the older people there were of opinion that the epidemic of 1870 was similar to a disease on the East Coast of Africa about forty years earlier, which leaves it probable that that coast was infected in the second tropical pandemic from 1824 to 1828. Allusion was made to remarkable coincidences of time or place displayed in the appearances of this disease in relation to epidemics of yellow fever in the West Indies, in the States bordering the Gulf of Mexico, in Bermuda, in Brazil, and in Peru; also in Spain, which is the only European region visited by both of these diseases epidemically, although there is no traceable pathological affinity between them. In the intervals of the greater epidemics, many regional epidemics have been observed (of which the dates were given) in the States bordering the Gulf of Mexico, the Antilles, Bermuda, Brazil, and Peru. On the eastern shores of the Atlantic, in Senegal, the Canaries, and in Spain, there had been epidemics of it, generally having some relation of time, but not always immediately so, with epidemics of the Western Atlantic. In Egypt and in Arabia there have been regional epidemics, which probably have held similar relations with those of the East Indies, where local epidemics of it have been repeatedly noticed; and according to Dr. Charles, of Calcutta, isolated cases are present every hot season, without giving rise to epidemic diffusions. Vauvray states the same thing concerning it at Port Saïd, in Egypt, where, he states, it is seen almost every date-harvest, and is called "date fever"; but if it be so, and really dependent on it, it might be looked for at the same season wherever the date-palm is cultivated. The statement is, however, an interesting one, as that is not the only locality in which this disease has been attributed to vegetable emanations. In the East, as in the West, it is as commonly known in insular as it is in continental positions. It has been recorded under various names in Zanzibar, Bourbon, Java, Tahiti, and the Sandwich Islands; and as Peru has been visited, it may be said to have encircled the globe in its tropical region. The last grand epidemic began in Zanzibar in the summer of 1870, and was at Aden in that of 1871, having been conveyed to it from Zanzibar; after which it extended to Arabia and Egypt. From Aden it was conveyed to India—possibly into various ports, but there is no positive evidence of any such introduction except to Bombay in the steam-trooper *Dalhousie*, early in December, 1871. But, according to Da Cunha, isolated cases had been present amidst the native population so early as August, although it did not become epidemic among the troops until after the arrival of the *Dalhousie* with an infected Lascar crew on board. Previous to that it had been reported prevalent in September at Muttrah in the Persian Gulf, to which it may have been taken

from Zanzibar direct, as it had been to Aden. The same vessel that had carried it to Bombay was also the medium of its introduction to Cannanore, far south of it, in January. Further south, at Cochin, it was epidemic in April, and spread from it to several stations at the point of the peninsula. From Bombay it took an inland south-west direction, through Poonah by railroad to Madras, where the first case was seen early in February, 1872, but it was not severely epidemic till June, lasting until the middle of October. From Madras it was sent among troops to Trichinopoly, where it was epidemic from the middle of August to the middle of October. It spread generally through the Presidency, and existed in it up to the end of 1873. From Bombay it travelled along the railroads Allahabad, Benares, Dinapore, and Calcutta, in which cases are reported in the Hastings Barracks late in November. Whether any of these troops had proceeded from Bombay is not stated; but it did not become widely epidemic until February. From Calcutta it spread up the Hooghly to Barrackpore, and into the Delta, being epidemic at Dacca in May. With equal rapidity it passed by steamers from Calcutta to Rangoon, where it was epidemic from the middle of April to that of July, and was conveyed from it into all our military posts in Burmah. Returning to India, we may trace it stage by stage from Allahabad to Cawnpore, to Agra, to Delhi, to Umballah in the far north-west, in the last quarter of the year; and from Benares to Faizabad, to Lucknow, into Oude, and to the foot of the Himalayas in 32° north latitude, in the preceding quarter of 1872. In the great cities on the railroad between Bombay and Calcutta—viz., Allahabad, Benares, and Dinapore—it was epidemic at the same time as in Calcutta itself in (March), taking up six months or nine months in reaching the Himalayas at different points. In a more westward direction it travelled from Bombay by railroad route to Ahmedabad and Deasa in June, and to Hyderabad and Kurachee in September, 1872,—everywhere proving its rate of progress to be in relation to that of the ordinary intercourse of the district, and, in very many instances, in connexion with that of infected troops from station to station, whether by ship or by road. Army statistics form the most reliable of authorities concerning its diffusion, as they are exact where everything else is diffuse and uncertain, for in a disease so free from fatal results the first isolated cases are forgotten before epidemic force and diffusion are attained, which is not without its shorter or longer period of incubation. Although we may be able to fix the date of an outburst, yet we may be unable to fix its starting point in the first case introduced from an infected region or locality. The epidemic commenced at Bombay subsequent to the arrival of the *Dalhousie*, as previously stated, with disease prevalent on board; but it is scarcely possible to have avoided its introduction from Aden in some more insidious and less patent form at any time during the previous six months of its endemic existence at Aden, with which Bombay holds much intercourse both officially and commercially. The statement of Da Cunha, of its isolated appearances in Bombay so early as August, seems to be quite consistent with the facts on both sides—viz., of its existence in Aden epidemically in June, and its presence in Calcutta in the Jews' quarter and in the Hastings Barracks in November, 1871, or even earlier than that. Beyond India it has been shown to have been taken to Rangoon, from which it spread through Burmah, and, as believed, from there into Siam and Cochin. At Singapore—the emporium of the Straits and Archipelago—it prevailed (dates unknown), and it may have been taken there either from India or direct from the Red Sea, if we regard its great western commerce; but, being once there, its diffusion would most probably be both rapid and wide, accounting for its appearance in Batavia in November, 1871, and at Amoy in the summer of 1872, to diffuse itself in South China, where it existed at Hong-Kong so late as November, 1874. In concluding his paper on the history of the diffusions of dengue, Dr. Smart regretted that time did not permit his entering on the pathologioal relations of a disease which, in some of its features, is *sui generis* and somewhat enigmatical, the study of which closely under well-directed observation might, he believes, elucidate many still obscure laws of epidemic growth and diffusion of infectious diseases.

We are requested to state that Mr. Pugin Thornton has tendered his immediate resignation of the post of Surgeon to the Hospital for Diseases of the Throat, Golden-square, W.

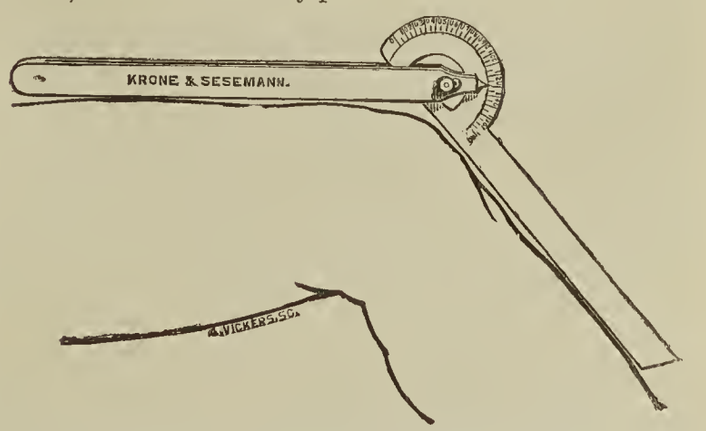
NEW INVENTIONS AND IMPROVEMENTS.

SELF-RETAINING EAR-SPECULUM.

Mr. J. Millikin, of St. Thomas's-street, Borough, has just brought out a somewhat ingenious and yet simple self-retaining ear-speculum. In form it is like the ordinary funnel-shaped speculum (Grüber's); but it is divided down the centre into equal halves (see diagram), which are connected by a piece of watch-spring. By this means its tubular extremity opens and closes, and thus adapts itself to any sized meatus. This is an obvious advantage, as it does away with the necessity of holding the speculum in position: thus the surgeon has both his hands free, and he can do what he has to do without loss of time, or the services of an assistant. Another advantage is that a single speculum is all a surgeon requires; it fits any sized ear. We would suggest as an improvement on this useful little instrument that the spring be silvered, in order to prevent its becoming rusty; and that the speculum be put into a nice portable little case. We doubt not that it will be extensively adopted.

KROHNE'S GONIOMETER.

We have received from Messrs. Krohne and Sesemann, of Duke-street, Manchester-square, an instrument of much use to surgeons in estimating the degree of anchylosis in cases of joint disease. By means of the goniometer the angle of deformity is readily and accurately ascertained, and comparison can with facility be made of one case with another, or of the same case in different stages. The instrument is very simply constructed, consisting, as may be seen from the subjoined engraving, of two plates of metal united together like the handle of a clasp-knife, which ensheathe, when not in use, a steel arm or blade. Towards one end of the flat sheath the metal plates composing it are evenly reduced in width, and are transfixed by a pivot, round which the blade rotates as it opens and shuts. To the extremity of one of the plates is fixed a finely-pointed index, and at the corresponding end of the steel arm is a semicircular registering scale of an inch and three-quarters diameter. This scale is divided into spaces of 5°. When the arm is closed completely within the sheath, the index points accurately to zero, and as it is gradually opened it indicates on the scale, which turns round it, the number of degrees of the angle which the arm makes with the sheath. When the arm is in a straight line with the sheath, the index accurately points to 180°.



We have taken the trouble to test the index and scale of this instrument by means of other instruments in general use for measuring angles, and can testify to their entire correctness.

The goniometer is of very convenient size, and can be easily carried in the breast-pocket. Besides its applicability in clinical practice, we have found it of value in anatomical demonstrations for illustrating the curves of bones and the angles formed between different parts of the skeleton. As a point of practical convenience, it may be stated that when employed in cases of anchylosis of the hip for ascertaining the amount of improvement made by apparatus, it will be sufficient to measure the angle formed by the knee when the spine and heel are fairly placed on the bed, as any variation at the hip-joint will produce an exactly corresponding change in the "alternate angle" at the knee. In comparing one case with

another, however, the measurement must, of course, be made at the hip-joint, as a difference in the relative length of the femur and leg-bones in the two cases would make a difference in the angle at the knee, even though the degree of anchylosis at the hip was the same in each case.

OBITUARY.

SAMUEL PARKER, F.R.C.S.

The profession in Sheffield has sustained a great loss through the death of Mr. Samuel Parker, one of the Surgeons to the Infirmary, and Consulting-Surgeon to the Public Hospital of the above town, which event took place on November 30, from congestion of the lungs, at the comparatively early age of fifty-seven.

He was the son of the late Mr. Samuel Parker, merchant, of Broomgrove, and was born in the year 1819. When quite young he was articled to a local surgeon, and after a short pupilage entered as a student at St. Bartholomew's Hospital. In 1840, having just completed his twenty-first year, he took the licence of the Apothecaries' Society, and in the following year was admitted to the membership of the Royal College of Surgeons. The same year he commenced general practice in Sheffield, and soon succeeded in getting a large connexion. In 1846 he was appointed Honorary Surgeon to the Public Hospital, which office he held till 1866, when he was appointed Honorary Surgeon to the Sheffield General Infirmary. In 1870 he was admitted to the Fellowship of the College of Surgeons, and shortly afterwards he gave up general for consulting practice.

As an operator he gained great local celebrity, and it is said that as a consultant he had an extensive and lucrative practice. Among other important posts held by Mr. Parker was that of Lecturer on Surgery at the Sheffield School of Medicine.

WILLIAM SWAYNE LITTLE, M.B. Dub., L.R.C.S. Ire.

It becomes our mournful duty to chronicle the death of one of the ablest and most respected members of the profession in Ireland. Dr. Little died on the 5th ult., aged sixty-five years. He had been in delicate health for more than a year, but a sudden attack of asthenic bronchitis was the immediate cause of his decease. Educated at the University of Dublin, where he graduated in Arts in 1832, Little commenced his professional studies at the Royal College of Surgeons, Ireland. In 1835 he obtained the licence of that corporation, and in 1837 he took the degree of Bachelor of Medicine in his *Alma Mater*.

Shortly afterwards he settled at Headford, county Galway, where he obtained a considerable reputation as a physician and surgeon of high abilities and skill. In 1849 he was appointed Surgeon to the County Infirmary and Gaol at Sligo, to which he removed from Headford; and in 1852 he received a further mark of public approbation in being appointed Visiting Physician to the Sligo and Leitrim District Lunatic Asylum. He was also Medical Officer in charge of her Majesty's Troops at Sligo, so long as the town remained a military station.

Dr. Little was not a prolific writer, but his contributions to medical literature were of undoubted merit. The principal appeared in the pages of the *Dublin Journal of Medical Science* —"Injuries of the Brain" in 1851, "Some Uncommon Forms of Tetanus" in 1854, and "Pneumothorax without Perforation" in 1863. He died universally regretted, beloved in his family circle and by a host of friends. His eldest son, Dr. Thomas Evelyn Little, is University Anatomist in the School of Physic in Ireland, and Surgeon to Sir P. Dun's Hospital, Dublin.

The Adulteration of Butter.—The Committee of the Pharmaceutical Society of Leipzig, entrusted with the examination of articles of food and other hygienic business, have offered a prize of 300 marks (about £15 sterling) for the best method of detecting the adulteration of butter with other fats. The essays of competitors must be sent in not later than September 30, 1877, addressed to Herr Apotheker Kohlmann at Leipzig-Reudnitz. Each essay must have a motto which corresponds to a similar motto on a sealed envelope containing the author's name.

MEDICAL NEWS.

University of London.—At the Winter Commencements, held in the Examination Hall of Trinity College on Wednesday, December 20, 1876, the following degrees and licences in Medicine and Surgery were conferred by the Right Hon. Montifort Longfield, Pro-Vice-Chancellor:—

Baccalaurei in Chirurgiâ.—Marshall, Joseph; Nelis, Jacobus Alexander; Pim, Gulielmus Joseph; Power, Eduardus Ricardus; Story, Johannes Benjamin (*stip. con.*).

Baccaleurei in Medicinâ.—Browne, Johannes St. George; Conolly, Gulielmus Rogers; Davison, Henricus Alexander; Flood, Johannes Wellesley; Fraser, Gulielmus Johannes; Houghton, Johannes Franciscus; Lynch, Gilbertus; M'Cartie, Fredericus Fitzgerald; MacDermott, Radolfus; Malone, Jonathan Hill; Marshall, Joseph; Nelis, Jacobus Alexander; Pim, Gulielmus Joseph; Story, Johannes Benjamin; Thompson, Jacobus Eduardus.

Magistri in Chirurgiâ.—Fitzgerald, Dudleius Loftus; Pim, Gulielmus Joseph.

Doctores in Medicinâ.—Greene, Gulielmus Thomas; Maunsell, Henricus Widenham.

Licentiatus in Medicinâ.—Duckworth, Ricardus Henricus d'Olier.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise on Thursday, December 28, 1876:—

Benthall, Alfred, Trafalgar-square, Twickenham.
Jakins, Percy Septimus, Osnaburgh-street, Regent's-park.
Jones, Arthur Henry, Hanover-street, Peckham.
Lang, Henry Charles, 41, Berners-street, W.
Mason, Alfred, Thornhill, Dewsbury.
Merton, Richard John, Aylsham, Norfolk.
Scriven, John Swaine, Goldney-road, W.

The following gentlemen also on the same day passed their primary professional examinations:—

Aldrich, Arthur W., Westminster Hospital.
Lloyd, George J., Queen's Hospital, Birmingham.
Warliker, Damodar P., University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Brown, J.—House-Surgeon to the Western Ophthalmic Hospital, 153-155, Marylebone-road, W., *vice* W. W. Edwardes, M.B., resigned.

Sutton, Fredk., M.R.C.S. Eng., L.S.A. Lond.—Medical Officer of Health to the Rural Sanitary Authority, Gainsborough Union, *vice* Eminson.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—The undermentioned surgeons have been promoted to the rank of Staff-Surgeon in her Majesty's Fleet with seniority of 22nd inst.: —Thomas Travers Riordan, Thomas Browne, M.D., William Bainbrigge Fletcher, John Shields, Brien Patrick Sarsfield McDermott. In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet-Surgeon John Turner Cuddy, M.D., has been placed on the retired list, with permission to assume the rank and title of Deputy Inspector-General of Hospitals and Fleets in her Majesty's Fleet.

War Office.—Surgeon-Major John Irvine, M.D., to be Deputy Surgeon-General, *vice* Stanhope Hunter Fasson, M.D., retired upon temporary half-pay; Surgeon-Major Walter Crisp retires upon temporary half-pay.

BIRTHS.

Carter.—On December 31, at 2, Leyburn-villas, Godwyn-road, Dover, the wife of Surgeon-Major R. W. Carter, M.R.C.S. Eng., of a daughter.

Drew.—On December 28, at Ospringe-road, Tufnell-park, the wife of Walter H. Drew, M.R.C.P., L.S.A., of a son.

Galabin.—On December 27, at 14, St. Thomas's-street, the wife of A. L. Galabin, M.D., of a daughter.

Kidd.—On December 28, at Brooklands, Blackheath-park, the wife of Joseph Kidd, M.D., of a daughter.

Turner.—On December 29, at St. Andrew's Lodge, Watford, the wife of T. B. Turner, M.R.C.S., of a son.

MARRIAGES.

Debenham—Scott.—On December 28, at the parish church, Whitby, Robert Debenham, M.R.C.S., of Heath House, Stepney, to Jane, daughter of the late Archibald Scott, of Langholm, Dumfries, N.B.

Rean—Depper.—On December 27, at the parish church, Clifton, William Henry Rean, M.R.C.S., only surviving son of Walter Rean, Esq., of Poplar, to Elizabeth Beatrice May, eldest daughter of George Depper, Esq., of Chaddesley, Worcestershire.

Robinson—Limnell.—On November 28, at St. John's Church, Trichinopoly, Madras Presidency, Mark Robinson, L.R.C.P. Lond., M.R.C.S. Eng., to Elizabeth, youngest daughter of the late C. A. Limnell, Esq., C.E.

DEATHS.

Bayard, Susan Maria, wife of William Bayard, M.D., at St. John's, New Brunswick, on December 9.

Bell, Henry, M.D., at Cockermouth, on December 26, aged 65.

Harley, Ann, the wife of Thomas Harley, M.R.C.S. Eng., at The Lawn Haverstock-hill, on December 27.

HULME, EDWARD, M.D., at Dunedin, Otago, New Zealand, on November 28.

JAMES, HENRY NORTHAGE LAND, M.D., F.R.C.S. Edin., only son of Henry James, M.D., of Ireton-wood, Derbyshire, at Secunderabad, on December 21, aged 33.

PHILP, ELEANOR, the wife of F. R. Philp, M.D. Cantab., F.R.C.P., late of Colby House, Kensington, on December 20.

ROBINSON, JOHN D., L.R.C.P. Edin., at Dorchester, on December 20, aged 27.

TAYLOR, HERBERT, M.D., at Uttoxeter, on December 24, in his 87th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

HOSPITAL FOR WOMEN AND CHILDREN AND LYING-IN INSTITUTION, 76, WEST-STREET, BRIGHTON.—Honorary Surgeon. Candidates must be Fellows or Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and duly registered under the Medical Act 21 and 22 Vict., c. 90. Applications and testimonials to the Chairman of the Committee of Management, 76, West-street, Brighton, on or before January 17.

ST. THOMAS'S HOSPITAL MEDICAL AND SURGICAL COLLEGE.—Surgical Registrar. Applications to Dr. Ord, No. 7, Crook-street, Grosvenor-square, or to Mr. Whitfield at the Hospital, on or before January 19.

THE GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, LONDON, N.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons. Applications, with copies of testimonials, to the Secretary on or before January 22.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Clifton Union.—Mr. James M'Bride has resigned the Second (North and South) District; area 725; population 42,287; salary £140 per annum. Mr. John Moir has resigned the Sixth District; area 1831; population 16,209; salary £70 per annum.

Henley Union.—Mr. Henry H. Phillips has resigned the Caversham District; area 7876; population 3210; salary £75 per annum.

Holbeach Union.—Mr. Robert Harper has resigned the Workhouse; salary £40 per annum. Also, the Holbeach North District; area 18,150; population 3932; salary £55 per annum.

APPOINTMENTS.

Bedminster Union.—Arthur H. Boys, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A. Lond., to the Eighth District.

Chippenham Union.—Wm. T. Briscoe, B.M. and M.C. Dub., to the Pewsham District.

Depwade Union.—Richard J. Hare, L.F.P.&S. Glasg., L.R.C.P. Edin., to the Fourth District.

Orsett Union.—Mortimer John de Bent, M.R.C.S. Eng., L.S.A., to the Aveley District.

HIS EXCELLENCY LORD NAPIER OF MAGDALA, Governor of Gibraltar, recently entertained at a special dinner the Sanitary Commissioners of Gibraltar, and Dr. Horatio Stokes, Health Officer, as an appreciative mark of the manner in which they have carried out the important duties entrusted to them.

THE Under-Secretary of State for War has contradicted the statement that the illness of Lord Eustace Cecil is attributable to defective sanitary arrangements in the War Office building. The building was some time since carefully examined, and the drains put in thorough order, by the Board of Works. The statement that "there has recently been much sickness amongst the officials in this office" is devoid of fact.

A TESTIMONIAL.—A testimonial (in the form of a large handsome embossed silver bowl, mounted on an ebony stand) has been lately presented to Thomas Arnold Rogers, Esq., M.R.C.S. and L.D.S.R.C.S., by the past and present students of the Dental Hospital of London, in appreciation of his untiring energy on their behalf during the period of his Deanship at the London School of Dental Surgery.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

*** Received with thanks—Professor Vanzetti, Dr. W. Steventon, Mr. Joseph Adolphus, Dr. De Voogt, Dr. C. C. Dey.

Mr. Johnson.—In 1854 the three dressers, curiously enough, were Messrs. Brake, Slaughter, and Wrench.

M.D., Clapham.—It is useless sending the disgusting pamphlet of the notorious Dr. David Griffith Jones to the College of Surgeons, as immediately after his conviction his name was struck off the list of members of that institution, and also removed from the Register.

H. F. S.—It is a common superstition in Devonshire and Cornwall to request anyone riding on a piebald horse to mention a remedy for the hooping-cough, and whatever is named is regarded as an infallible specific.

Mr. Pullin.—In the "Letters of the Earl of Malmesbury," his mother writes:—"We shall certainly go every autumn to Bath, as Dr. Woodward says *'it is the milk for old age.'*"

F. M.—The late Dr. Scott, of Southsea, was the first person in this country who successfully performed the operation of œsophagotomy.

Senex.—The story of the Earl of Carnarvon and the physician is told in Lloyd's "State Worthies," 1670, thus:—"A physician at his father-in-law's table gave him the lie; which put the company to admire, on the one hand the man's impudence, and on the other my Lord's mildness, until he said, "I'll take the lie from him, but I'll never take physic of him."

Studens.—The number of matriculated students for the present winter season at the University of Berlin is 2490, or 513 more than last year, and the largest number which the University ever had. Of the 161 matriculated foreign students nine are English.

Anglicanus.—The Académie de Médecine was a resuscitation, so to speak, after a lapse of some time, of the famous Académie de Chirurgie, and the Société Royale de Médecine, both suppressed during the troublous times of 1792. It was founded by Royal Charter in 1820, and opened in 1824, since which period it has undergone little change, except altering its title from "Royale" to "Nationale," and then again to "Impériale." The Academy has two forms of publication—its "Bulletins" and its "Mémoires." The "Bulletins" commenced in 1836, and the first volume of the "Mémoires" or "Transactions" appeared in 1828. The Academy is a body supported by the State, and has certain public functions to perform.

Good Templar.—The motion of which Mr. Alderman Chamberlain, M.P., has given notice to the Birmingham Town Council, is to the following effect:—"That in the opinion of this Council it is desirable the local representative authorities should be empowered to acquire, on payment of fair compensation, on a principle to be fixed by Parliament, all existing interests in the retail sale of intoxicating drinks within their respective districts; and thereafter, if they think fit, to carry on the trade for the convenience and on behalf of the inhabitants, but so that no individual shall have any pecuniary interest in, or derive any profit from, the sale."

A Collector, Belgravia.—The fine collection of medical portraits made by Dr Young was presented some years ago to the College of Surgeons by his brother, the late Sir George Young, Garter King-at-Arms. The large collection of the late Mr. Squibb, of Orchard-street, was presented to the Royal Medical and Chirurgical Society. The collection of Fauntleroy, the banker, who was hanged at the Old Bailey for forgery, "in the good old days, when George the Third was King," was presented by him to Mr. Wadd, who greatly increased it, and at his death most of them, together with the collection of the late Dr. Merriman, were added to the collections of the College of Surgeons, and of Mr. T. M. Stone, of that institution. The history of these collections would make a very interesting chapter.

Archæologist.—Consult Wadd's "Nugæ Chirurgica." An old bill, *sine* date, now before us states that "Elizabeth Beynon, daughter of the late Griffith Griffiths, the celebrated and well-known Water Doctor, of Rhydwilliam, in the County of Pembroke, begs leave to inform the afflicted that for years previous to her father's death he took all possible Pains to instruct her in his Art of healing Diseases by casting the Morning Urine; and, having got Possession of all his valuable Books and Recipes, she is fully persuaded that she can, by the help of God, cure all Complaints incident to Man, Woman, or Child. Cancers, Wounds, and Bruises cured in a short time.—Brawdy Parish, near Solfa."

St. Bartholomew's.—Saturday, the 30th ult., was the last day for sending in essays for the Jacksonian Prize of the College of Surgeons, and only one has been received by the Secretary. The subject is "The Treatment of Cancer of the Rectum, particularly as regards the possibility of curing or relieving the patient by Excision of the affected part." The last award for this prize was in 1873, when Mr. H. T. Butlin, of your Hospital, carried it off for "Ununited Fractures."

SELF-SUPPORTING DISPENSARIES.

Two correspondents have forwarded us a handbill of which the following is a copy:—"Self-supporting Dispensary, 72, Worship-street.—Mr. Timothy, L.R.C.P. Lond., L.M.R.C.S. Eng., M.R.C.S., and L.S.A.—Charge fourpence in the morning and sixpence in the evening. A visit to any dispensary patient, within a radius of a mile, before 3 o'clock in the afternoon *one shilling*." On referring to the "Medical Directory" we find that P. Vincent Timothy really possesses the qualifications mentioned, and, curiously enough, is the author of "Advertising Propensities of the Medical Fraternity," and "On Self-supporting Dispensaries."

CHINESE MEDICAL REMEDIES.

The following announcement of a new disease, known as the "crushing epidemic," has, it appears, lately been prevalent in Hangchow, Shanghai, and neighbouring districts of China. The *Celestial Empire* reports that it was "a terrible form of nightmare, and most undoubtedly resulted in the deaths of many persons." Touching this disease the *Celestial Empire* cites the following advice from Mr. Giles's translation of the Chinese manual, "Instructions to Coroners":—"In case of nightmare do not at once bring a light, or, going near, call out loudly to the sleeper, but bite his heel or his big toe, and gently utter his name; also spit in his face, and give him some ginger-tea to drink,—he will then come round; or blow into the patient's ears through small tubes, pull out fourteen hairs from his head, make them into a twist, and thrust them into his nose."

Erudite.—It has been said that "Medicine in its true sense is a triad of sciences, of which two parts—physiology and pathology—are only partially developed, and the third—therapeutics—can only approach a scientific form when the two former are more matured; yet the three component parts exist together, each reacting upon the other, the more complex often aiding the development of the more simple."

COMMUNICATIONS have been received from—

Dr. Newth, Hayward's Heath; Messrs. Corbyn and Co., London; Dr. Wm. Woodward, Worcester; Dr. C. Bell Taylor, Nottingham; Mr. Lewis, Cardiff; Mr. Nettleship, London; Dr. Cayley, London; Mr. H. Cartwright, London; Dr. Julio Andrada, Lisbon; Dr. Sparks, Mentone; Dr. Joliffe Tufnell, Dublin; Dr. James Barr, Liverpool; Dr. Abbath, Sunderland; Mr. Richard Foster, Brighton; Dr. Greenhill, Hastings; Dr. C. M. Tidy, London; Mr. Jas. Merson, London; Dr. Edis, London; Mr. W. E. Poole, London; Mr. B. R. Wheatley, London; Dr. Squire, London; Dr. Robert Lawson, Wakefield, Yorkshire; Dr. E. Headlam Greenhow, London; Mr. T. Holmes, London; Dr. Henry Lawson, London; Dr. Bruce, London; Dr. Barlow, London.

BOOKS AND PAMPHLETS RECEIVED—

Twenty-third Annual Report of the County and City of Worcester Pauper Lunatic Asylum—Smellie's Treatise on the Theory and Practice of Midwifery, edited, with Annotations, by Alfred H. McClintock—Gilbert W. Child, A Third Report on the Sanitary Condition of the Combined Districts of Oxfordshire—Cassell's History of India, part 13—Manchester Royal Infirmary: Report of the General Committee, etc.—George Macilwain, F.R.C.S., Vivisection—Edward Albert Schäfer, A Course of Practical Histology—Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases—B. St. J. Ackers, Deaf, not Dumb: a Lecture—Transactions of the Odontological Society of Great Britain.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Medical Temperance Journal—Gazeta Medica da Bahia—The Australasian—National Anti-Compulsory Vaccination Reporter—Journal of the Scottish Meteorological Society—Sunday at Home—Leisure Hour—American Practitioner, December—Veterinarian—Edinburgh Medical Journal—Science Gossip—Monthly Microscopical Journal—Monthly Homœopathic Review—Hampshire Telegraph and Sussex Chronicle.

APPOINTMENTS FOR THE WEEK.

January 6. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

8. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. First Lettsomian Lecture—Dr. Alfred Wiltshire, "On Vascular Rhythm as exemplified in Periodical Hæmorrhages, General and Local, and on the Treatment of Hæmorrhages from the Female Generative Organs."

9. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Gladstone, "On the Chemistry of Fire."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. E. L. Hussey, "Case of Large Pendulous Tumour from the Cheek removed by Operation." Mr. Gaskoin, "Case of Sclerema Adultorum." Dr. John Harley, "Case of Sclerema Adultorum."

10. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8½ p.m. Meeting.

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

12. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. Brodhurst, "Cases of Subcutaneous Section of the Neck of the Thigh-Bone." Dr. Hermann Weber, "Cases illustrating the Treatment of Rheumatic Fever and other Febrile Diseases by Salicylic Acid and its Congeners." Dr. Cavafy, "Case of Acute Rheumatism treated by Salicylate of Soda; intercurrent Scarlatina and peculiar Skin Eruption."

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 30, 1876.

BIRTHS.

Births of Boys, 984; Girls, 994; Total, 1978.
Average of 10 corresponding years 1866-75, 2031·0

DEATHS.

	Males.	Females.	Total.
Deaths during the week	776	734	1510
Average of the ten years 1866-75	824·2	832·7	1656·9
Average corrected to increased population ...	...	...	1773
Deaths of people aged 80 and upwards ...	...	...	60

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Popnlation, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	3	1	...	7	1	4	1	7
North	751729	33	8	3	1	7	1	4	...	5
Central ...	334369	...	8	...	2	4	1	...	...	...
East	639111	14	7	9	2	10	2	4	4	4
South	967692	25	14	16	4	6	...	4	1	
Total	3254260	75	40	29	9	34	5	16	6	

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·542 in.
Mean temperature	43·3°
Highest point of thermometer	55·2°
Lowest point of thermometer	30·7°
Mean dew-point temperature	41·0°
General direction of wind	S.W.
Whole amount of rain in the week...	1·23 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 30, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Dec. 30.	Deaths Registered during the week ending Dec. 30.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	1978	1510	55·2	30·7	43·3	6·28	1·23	3·12
Brighton	100632	42·7	38	43	53·7	31·8	42·4	5·78	1·20	3·05
Portsmouth ...	124867	27·8	53	42	54·6	31·0	42·9	6·06	1·32	3·35
Norwich	83430	11·2	41	33	56·8	30·0	41·9	5·50	1·14	2·90
Plymouth	72230	51·8	33	27	55·0	30·0	45·0	7·22	2·72	6·91
Bristol	199539	44·8	133	71	56·5	24·7	42·8	6·00	2·26	5·74
Wolverhampton ...	72549	21·4	50	31	55·6	24·5	37·6	3·12	0·98	2·49
Birmingham ...	371839	44·3	267	132	...	...	...	...	...	...
Leicester	113581	35·5	87	59	...	...	...	...	...	...
Nottingham ...	93627	46·9	59	32	56·8	26·5	38·4	3·55	1·04	2·64
Liverpool	521544	100·1	304	297	54·3	29·3	41·5	5·28	1·09	2·77
Manchester ...	357917	83·4	225	189	...	...	...	...	...	...
Salford	138425	26·8	112	73	54·5	26·9	39·9	4·39	1·60	4·06
Oldham	88609	19·0	55	52	...	...	...	...	...	...
Bradford	173723	24·1	93	79	54·0	27·4	38·0	3·33	1·36	3·45
Leeds	291580	13·5	209	153	56·0	30·0	39·6	4·23	1·49	3·78
Sheffield	274914	14·0	205	114	56·0	26·7	39·2	4·00	1·85	4·70
Hull	136933	37·7	88	48	55·0	27·0	38·5	3·61	1·59	4·04
Sunderland ...	108343	32·8	64	68	51·0	28·0	38·8	3·78	1·64	4·17
Newcastle-on-Tyne	139929	26·1	112	75	...	...	...	...	...	...
Edinburgh	215146	51·3	129	91	...	...	...	...	...	...
Glasgow	545144	90·4	398	280	...	...	...	...	...	...
Dublin	314666	31·3	161	169	56·0	34·6	44·4	6·89	1·58	4·01
Total of 23 Towns in United Kingdm	8028595	37·7	4894	3668	56·8	24·5	40·9	4·94	1·51	3·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·54 in. The highest reading was 30·01 in. on Tuesday morning, and the lowest 29·18 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON AMPUTATION.

By T. HOLMES, F.R.C.S., etc.,
Surgeon to, and Lecturer on Surgery at, St. George's Hospital.

(*Concluded from page* 3.)

THE operation being over, the wound has to be dressed, and in my opinion that form of dressing is the best which necessitates the least handling of the parts, and insures the greatest amount of quiet, thorough drainage being always understood. But though these general principles would be admitted by most surgeons, the methods of dressing are endless. I should like to call your attention to a very interesting paper, "On the Treatment of Amputations by the Open Method," published by Dr. Dennis, House-Surgeon of the Bellevue Hospital, New York, in the *New York Medical Journal*, January, 1876, in which he details fourteen successive unselected amputations of all kinds in the practice of Dr. James Wood of that city, which all recovered. In that method "the flaps are not even approximated, but left entirely open," the stump being supported on a pillow of oakum—the discharge removed by frequent irrigation with carbolised lotion, and balsam of Peru poured over the granulating surface. When suppuration has nearly subsided the flaps are gradually approximated by plaster. The advantages claimed for this method are the thorough drainage which it necessitates, and the absence of any putrefiable material between the flaps, to the retention of which the author ascribes most of the disasters of amputation. As a consequence of this, the degree of consecutive fever is said to be much lower than after amputations treated by closing the flaps, and its duration less. The method must be allowed to be a good one, as shown by so long a series of successful cases, which, however, Dr. Dennis is in error in calling "unprecedented," for many longer series have been recorded under different methods of treatment—notably Mr. Callender's. Still we must allow the merit of the method if compared (as the author compares it) with that by total occlusion of the flaps, drainage being entirely neglected. But if compared with any form of dressing in which the flaps are brought together, but effectual drainage is established, I cannot say that I see any proved advantage in this over methods which aim at more rapid union. Dr. Dennis says—"In all the cases operated upon for amputation, and treated by the closed method, in this hospital within the past year, there can scarcely be found a patient whose [maximum ?] temperature was as low as 103° Fahr. In the major amputations the thermometer has shown a record of 104° Fahr., and, in many cases that have been carefully examined, even about 105° Fahr., and in quite a number even as high as 106° Fahr." This is totally opposed to our experience of the method I have recommended, in which, as far as I remember, I have never noted the temperature higher than 103°, even after thigh amputations, except in cases of pyæmia, on which subject I will speak presently. I conclude that if due provision for drainage is made, the approximation of the rest of the flaps accelerates healing, and improves the shape of the stump. The best stumps, as far as I have seen, are those in which the edges unite most rapidly. As one of the essentials of success in amputation, I would specify rest of the stump. It is most important, not only for the comfort of the patient, but for his safety also, as I believe, to protect him from those spasms which indubitably disturb the parts and distress the patients, and probably aid in setting up fatal inflammatory action. To this end the gentle, equable support of a splint evenly bandaged on to the stump seems to me most useful.

Acting on these general ideas, I always use sutures to support the flaps, and leave them in for a time which is practically unlimited. Even when they act, if only to a slight extent, I see no object in withdrawing them; for if they still afford moderate support to the flaps, they will avoid the use of strapping, and thus diminish the handling to which the stump is subjected. I am aware that many very good surgeons dress their stumps chiefly with strapping; and in the practice of Mr. Hewett you have had opportunities of seeing amputations treated without any suture from beginning to end. And so, in the "open method" just described, sutures are rarely used. I only speak of what seems to me the best among several good plans of treatment.

In considering the dressing and after-treatment of the case, we must discuss the value to be ascribed to antiseptics, and this connects itself with the all-important question of the exciting causes of pyæmia. Without going into details, for which I have no time here, I may lay it down broadly that the death-rate after amputations of about equal grades of severity will vary with the prevalence of pyæmia. Many patients, of course, die from the shock of previous accident, or the exhaustion of previous disease, but such considerations I class as coming under the head of "the severity" of the operation; for an operation, such as a pathological amputation of the forearm, which would involve hardly any danger at all to a boy in moderate health, may be a proceeding of extreme severity, and very probably fatal, in the case of an old man exhausted by visceral disease. Excluding this consideration for the moment, we can only hope to diminish the risk of amputation by diminishing the prevalence of pyæmia, and of those affections—such as erysipelas, diffuse cellulitis, absorbent inflammation, and phagedæna—which have a strong affinity for pyæmia, own probably, in many cases at least, the same causes, and when they prove fatal usually do so by giving rise to definite pyæmia. Now, on the subject of the causation of pyæmia we have four different theories to discuss—(1) that it is caused by the implantation on the wound of germs which are present in the atmosphere; (2) that it depends on unhealthy inflammation generated in the wound and the vessels leading from the wound by a diseased condition of the patient's system; (3) that it depends on previous disease or injury of the parts concerned in the operation; and (4) that it is inoculated on the wound by putrefying or putrefiable matters carelessly introduced in the dressings. I need hardly say that none of these theories excludes any of the others. They may all be true in different cases. But if we look carefully at the first theory we cannot but feel great difficulty in admitting it, notwithstanding the high surgical and still higher philosophical authority on which it rests. That the atmosphere of a ward or sick-room may be poisoned by the accumulation in it of a number of acutely suppurating wounds or by other impurity, and that under such circumstances pyæmia and other allied affections may attain an even frightful prevalence, is very true; but this is far from proving, as Professor Tyndall would have us believe, that the cause of pyæmia resides in the minute dust-cloud, which is always demonstrable by a powerful beam to be floating in the air. Stated in this naked way, I think we can almost confidently say that the theory cannot be true. For the first leading fact in operative surgery which we notice with respect to the sequelæ of operations is the remarkable immunity of children from all such unhealthy conditions. And how can that be reconciled with the idea of atmospheric contagion? Are not children peculiarly liable to atmospheric contagions of all sorts? And is not this liability rather increased than diminished in regard to those contagions which are unquestionably material? How, then, can we explain the undoubted fact that the prevalence of pyæmia after amputation (and I have no doubt the same thing is true of all other operations) advances steadily with each decade of life, so that, apart from the risk of shock or exhaustion, amputations of the gravest character, such as primary thigh amputations, can be performed with almost a certainty of success in infancy, while they become more dangerous in youth, and are nearly certainly fatal in advanced age? If the supporters of the germ theory reply that in childhood the soil is, as it were, not prepared for the growth of the seeds deposited upon it from the atmosphere—*i.e.*, that the tissues of children do not readily take on the actions which lead to pyæmia,—many facts would lead us to doubt this explanation, which in any case is merely conjectural. Such facts are—the somewhat great prevalence of erysipelas in childhood, and the readiness with which acute periostitis and acute osteomyelitis are generated by trifling injuries at an early age. These diseases have a great analogy with pyæmia, and very frequently terminate in secondary deposits in the viscera. Again, the sporadic manner in which pyæmia shows itself in a well-managed hospital like this is a very serious difficulty in the way of the germ theory. If the seeds of pyæmia are always floating about our wards in clouds, how comes it that the growth is not developed in one wound out of a hundred? The most exaggerated impressions prevail, I am sure, in medical circles, and still more among the laity, about the prevalence of hospital diseases (so called) in our metropolitan hospitals. I have frequently met hospital governors, and even medical practitioners, who have received with obvious incredulity my

statement that I often go weeks and sometimes months without seeing a case of erysipelas or pyæmia, and that, as far as I can see, our hospital is quite as healthy as any private house, in the sense of being as safe a place for the treatment of an injury or operation. Yet such is the fact. Dr. Bristowe and I showed long ago that, taking a period of about two years, in three of the largest metropolitan hospitals (viz., Guy's, St. Thomas's, and St. George's), the deaths from pyæmia were only 1·23 per cent. of the total number of deaths, and only 0·115 per cent. of the total number of patients, or that, roughly speaking, but one patient in a thousand of all those admitted (medical and surgical) died of pyæmia—a disease, be it remembered, usually fatal, and which prevails in medical wards as well as (though of course not so much as) in surgical. Again, Dr. Bristowe and I found during our visits to all the metropolitan hospitals that less than 2 per cent. of the surgical patients were at that time affected by all the (so-called) hospital diseases put together;(a) and this total is of course made up chiefly of cases of erysipelas in its various forms, and of those most were admitted with the disease, and many had no wounds at all. Could this have been the case if these diseases are sown broadcast on all the wounds in our hospitals by clouds floating continually in the air? Nor can we leave out of sight the great success which attends other systems of dressing in which the distinctive principles of the antiseptic method are either neglected or expressly violated. I have already alluded to the results of the open method of treatment in the hands of Dr. James Wood, of New York, and if this experience is objected to (as perhaps it fairly may be) on the ground of the small number of cases—though the uniform success of fourteen unselected consecutive amputations of the limbs is a striking testimony to the harmlessness, to say the least, of the treatment,—no such objection, I should think, can lie against the experience of Dr. Humphry, of Cambridge, who has, I believe, treated all or most of his capital operations for many years on the "open" method, combined with drainage. This method, of course, violates the cardinal principle of the antiseptic theory—viz., that for the safe treatment of large wounds the air must be filtered through a medium in which its noxious germs are destroyed. And the exceptional success of Mr. Callender in amputations has been obtained under a system of treatment in which, although carbolic acid is used as a dressing, none of the special precautions said to be essential to the success of the antiseptic method are employed.(b) Nevertheless, the results obtained by these surgeons are, as far as we know, equal, if not superior, to those which have followed the strict employment of all possible antiseptic precautions. Yet although, for these and other reasons, I cannot accept the theory in its entirety, and though I give myself no trouble in following out the practice in its minuter details, I would not have you think that I am insensible to the merits of the treatment which Mr. Lister has introduced, or that I have been slow in attempting to avail myself of its numerous advantages, or rather, I would say, in trying to realise these advantages for my patients. And I think I may say that the results have been satisfactory. To test this, I have looked down the records of our Amputation-book since the commencement of the year 1870, which, as far as I can recollect, is about the date at which I began to treat operations on the modified antiseptic method which you see me employ. I find attributed to me thirty-two amputations of all kinds, with about the usual proportion of primary, secondary, and pathological amputations of the various limbs (partial amputations of the hand and foot being excluded), and, of course, comprising the natural variety of age, sex, and state of health. Out of these thirty-two cases four died. But one of the fatal cases was an amputation at the hip in a child, after the failure of excision (delayed, in consequence of the opposition of the parents, till there was no reasonable prospect of recovery, and in which I think I ought not to have amputated). The child sank in a few hours. Another was a case of secondary amputation at the shoulder-joint, at the age of seventy, for gangrene, the result of displacement of a fragment in a fracture of the neck of the humerus, which had ruptured a diseased artery; and here the patient died on the seventh day of secondary hæmorrhage. The arteries in this case were tied with silk, and no antiseptic precautions were adopted. Both the other fatal cases were secondary amputations. One of the thigh, which proved fatal by secondary hæmorrhage, I have above referred to. The other, which was a case of amputation of the forearm for gangrene after a wound involving the main arteries and nerves of the hand, is the only death that I have had from pyæmia after amputation in the whole series, and in this case I think it very probable that the pyæmia dated from before his admission into hospital.(c) But the above list does not include two cases of amputation of the leg in which the operations were performed not in this hospital, but in our country branch at Wimbledon—the only two amputations which have been performed there, and both of which proved fatal: one of pyæmia, the other of erysipelas of the head and face. Although treated in separate rooms of ample size, which had never been used before, in a magnificent country situation, with the services of a separate nurse, and with "all the appliances and means to boot" that a monarch could have had, these patients died of blood-poisoning a few days after the operation. I need hardly say that so disastrous a commencement indisposed me to persevere with the experiment of amputations in the country, especially as the result of those performed in our London hospital is so satisfactory. I ought to add that in neither of these cases were any antiseptic precautions taken, nor was carbolic acid used in the dressings. I hope I have shown you some reasons, satisfactory to a practical surgeon, if not to a professor of physics, for withholding assent to the now fashionable germ theory, and also some reasons which have borne the test of considerable experience (of which this series of amputations is only a small part), for, nevertheless, adhering to the above system of dressing, seeing that it appears to combine all the essentials of good treatment of wounds—viz., perfect drainage (which, I cannot too often repeat, seems to me the first requisite), equable support, entire rest, and an absence of all risk of contamination from any accidental impurity. Its only drawback, as far as I have seen, is the somewhat irritating quality of the acid, assisted by the heat kept up by the environment of the wound. I have often found myself obliged on this account to renounce the use of the carbolised dressings after a fortnight or three weeks, by which time, however, all serious danger is usually over. This irritating quality of the dressing seems to be the motive of many of the endless modifications made in its details.

Now to proceed to other theories of the generation of pyæmia. That the state of the patient's health, and the previous condition of the tissues through which the operation is performed, have much more to do with predisposing the patient to pyæmia after amputation than all other causes put together, is to me more certain than any other fact in operative surgery; and yet it is strange how little this fact is dwelt upon in the treatises on hospital hygiene. If you read these authors, without any practical experience, you would believe that the chief danger in an amputation is that it should be performed in a hospital where the cubic or the floor space is too limited or the ventilation imperfect. If you come to practise surgery in a large hospital, you will see that the chief danger in amputation is that it should be performed on a patient weakened by disease and intemperance, and in tissues broken down by previous diffuse inflammation, whether called erysipelas, cellulitis, angeioleucitis, acute abscess, or gangrene. I do not mean to say that you will be led to undervalue the real effect of good or bad hospital arrangements, but you will see that, if proper care and cleanliness are enforced, the details on which, a few years ago, such stress was laid, are of very minor importance, and that no changes made in them could materially affect the success of our operations. Time would fail me if I endeavoured to accumulate the proofs which our Amputation-book would afford of the fact that the danger of amputation (measured, as it is, by the danger of the occurrence of pyæmia) depends, above all other things, on this—whether the amputation has been immediately preceded by severe irritative fever ("surgical fever," as Sir J. Simpson called it), or by the efficient causes of such fever. And I hope it is needless for me to furnish you with such proofs (though nothing would be more easy), since I cannot conceive of the mental condition of any practical surgeon accustomed to amputation who could deny it. To take a flagrant instance:—Two men are admitted, equally young, strong, and healthy,

(a) "Report of the Medical Officer to the Privy Council for 1863," pp. 552-554.

(b) *British Medical Journal*, October 11, 1873.

(c) There has been a delay in completing the Amputation-book for 1875, and I think a case has been thus omitted from the above list, in which a primary amputation of both legs for railway smash proved fatal by shock in a few hours. But this case has no bearing on the danger of amputation or on its treatment. The poor fellow would have died as soon, and probably in more pain, without operation.

sufferers from the same accident, and placed in neighbouring beds in the same ward. In one the leg is hopelessly disintegrated; in the other, not. The former suffers from traumatic gangrene, but amputation is delayed. As the gangrene advances, diffuse inflammation proceeds up the limb, and especially along the course of the absorbent vessels, At last the surgeon makes up his mind to interfere; but, too probably, in vain. Wherever and however the case is treated, blood-poisoning is only too likely to ensue. Meanwhile, the other man, though exposed to the same atmosphere, and treated on the same principles, has remained free from any serious constitutional disturbance; and if any local mischief should, in the surgeon's judgment, necessitate amputation, it may be performed with every prospect of success. Or look at the difference between the dangers of amputation performed immediately on the subsidence of phlegmonous erysipelas, when the surgeon thinks the removal of the limb absolutely necessary to give the patient a chance of life, and those of the same operation if performed long afterwards to rid him of a member which is a useless encumbrance. In the first case, pyæmia is (to put it much below what I believe to be the case) ten times more likely to follow than in the second. Or take the case of a primary amputation. Is not the avoidance of blood-poisoning far more probable when the amputation is performed through healthy than through contused or lacerated parts? I allow that many cases of primary amputation prove fatal by pyæmia in which the surgeon has made his flaps through healthy structures; but I would submit to further experience how far this may have been due in past times to the neglect of efficient drainage. I think there is the best reason to hope that the frequency of pyæmia in these cases may have depended on retention of putrefying matter in the deep parts of the wound. I know that in old times, before drainage was thought of, or when, as was taught—most incorrectly, as I believe,—the ligatures were left to serve as a drain (whereas they generate an amount of suppuration in the deepest parts of the stump which they are quite inadequate to carry off), we used constantly to see the flaps become so tense a few days after the amputation that the surgeon was obliged to cut several of his sutures. This is very rarely necessary, I think, if drainage is secured and the stump treated antiseptically. But much more extensive experience than I possess at present is necessary before any decided opinion can be pronounced on this point.

Finally, what shall we say about the theory that the cause of pyæmia is direct inoculation, as by careless dressing? That it is true in some cases I cannot doubt. Direct experiment shows its possibility; and hospital experience seems to me to prove that pyæmia is undoubtedly so produced in some cases. By "hospital experience" I mean this—that whatever form of dressing you adopt, you will find the prevalence of pyæmia less, the more careful you are to observe the minutest precautions in its application. And herein consists, to my mind, another great virtue of Mr. Lister's system. In the "open" method your wound may possibly be tampered with. If the ward is full of the products of acutely suppurating wounds, some of the particles may be implanted on it. But when securely swathed in the gauze and macintosh, it is at least safe against any interference till you see it again.

I have detained you a long time, and have perhaps told you nothing new, yet I hope I have shown you that the gravest surgical emergencies can be met with as much success in a large metropolitan hospital as the nature of the cases justifies us in expecting; and that very severe operations may be conducted to a happy termination by a method of treatment involving no elaborate details, and resting on the plainest possible deduction from everyday experience. My whole directions for the after-treatment of an amputation may be summed up in three words—viz., rest, drainage, and cleanliness.

Verification of Deaths in Paris.—There are in France certain medical officers appointed for the purpose of the verification of deaths, without whose certificate interments cannot take place. Unlike the practitioners in this country who have to furnish such documents gratuitously, these officers are paid; and as regards Paris, the Municipal Council has this year increased the number and pay of the *verificateurs*. These are now seventy-two in number, receiving together the sum of 158,000 fr., in annual salaries varying from 3000 fr. to 1800 fr., according to the populousness of the districts to which they are attached.—*Progrès Méd.*

ORIGINAL COMMUNICATIONS.

ON REDUPLICATION OF THE CARDIAC SOUNDS.(a)

By JAMES BARR, M.B., L.R.C.S. Edin.

The very interesting phenomenon of reduplication of the cardiac sounds, which has gained considerable attention of late, is an event of common occurrence, not only in many morbid conditions of the heart, but it can also be detected in the healthy individual.

Dr. George Balfour goes so far as to say that with care it can be heard in anyone, but I never found it very appreciable except in those of great vital capacity. This normal doubling of the first sound takes place at the end of expiration or commencement of inspiration; and reduplication of the second sound occurs at the end of inspiration or commencement of expiration, as first pointed out by Potain.

Both Dr. Balfour and Dr. Sansom account for normal reduplication of the first sound by supposing that the excess of blood-pressure in the heart retards the closure of the tricuspid valves; and for doubling of the second sound by stating that excess of pressure in the aorta accelerates the occlusion of the aortic valves. Such an explanation is not merely inconsistent, but at entire variance with the influence which the respiratory process plays in carrying on the circulation of the blood. I would rather say that the excess of blood in the right heart during deep expiration stimulates the right ventricle to commence contraction first, and consequently the tricuspid valves are tensely closed before the mitral, thus giving rise to a double first sound; but owing to the overloading of the ventricle and the increased obstruction in front, or want of freedom in the flow of blood through the pulmonary circuit, the ventricle is longer of emptying itself; and hence, although it had the start of the left, it has not completed its contraction before it, so there is no reduplication of the second sound under these circumstances.

Dr. Milner Fothergill, in his "Hastings Prize Essay," truly says—"The vagus normally acts against the first impressions of distension, and only permits contraction when the distension is sufficient to produce uniform contraction, which then goes on in a truly peristaltic manner, but so swiftly as to be easily mistaken for a simultaneous general contraction." Accordingly, when the distension is sufficient to overcome the inhibitory action of the vagus, uniform contraction begins. Each side of the heart has more or less independently its own nerve-supply, its own peristaltic action, and, notwithwithstanding that both sides are set to the same time, and that they have a complex interlacement of fibres, yet it is quite possible, yea, it is an experimental fact, that one side can begin or end contraction before the other.

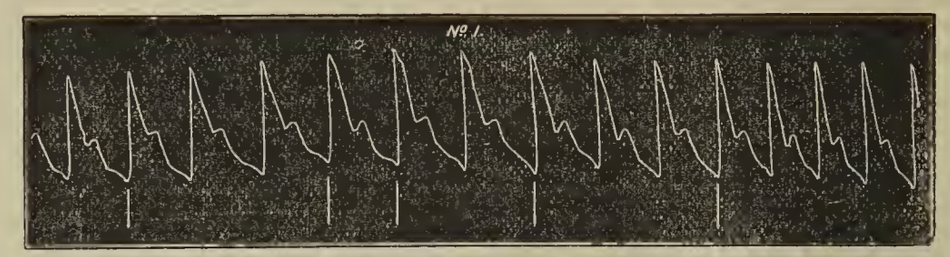
Dr. Fothergill again says—"Between the ordinary balancing powers of the obstacle of the blood to be driven, and the muscular power to drive it, of the stimulating effects of distension in producing contraction, and the controlling action of the vagus, the heart's action ordinarily rocks."

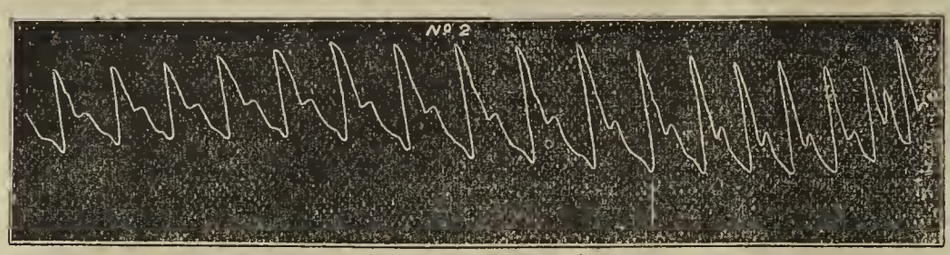
From the foregoing it necessarily follows that the primarily or over-distended ventricle initiates contraction, raises the intra-ventricular pressure to its maximum, and first produces auriculo-ventricular valve-tension, with its resultant sound. Again, the contraction of that cavity is longer sustained which has, in proportion to its power, relatively the greater quantity of blood to be driven, or the greater resistance offered to the issuing current.

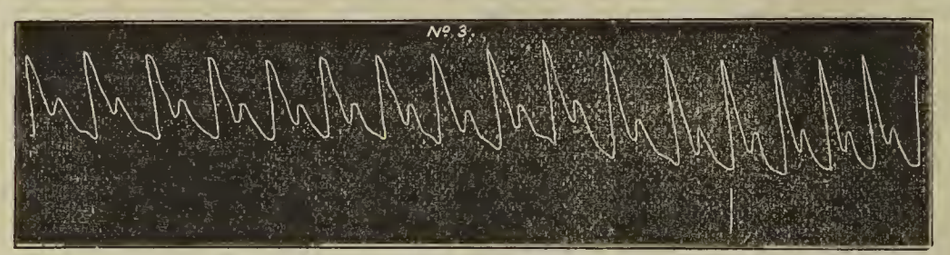
Regarding reduplication of the second sound, I say that in inspiration the tension in the aorta is not "increased," but is diminished, as has been clearly demonstrated by Professor Andrew Buchanan in his work "On the Forces which Carry on the Circulation of the Blood." Whether Dr. Buchanan estimates this respiratory force at too high a figure or not, would be quite beyond our province to stop here to consider; but anyone can satisfy himself that such a force really exists by keeping his fingers on his radial pulse during full inspiration and deep expiration, when he will find that in the former condition the tension is greatly lessened, while in the latter the pulse becomes fuller and the tension is increased.

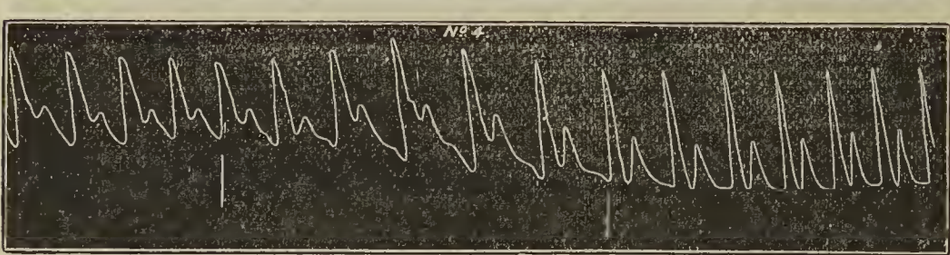
That the diminution of the tension in inspiration is not due to a backward movement of the blood towards the aorta, as

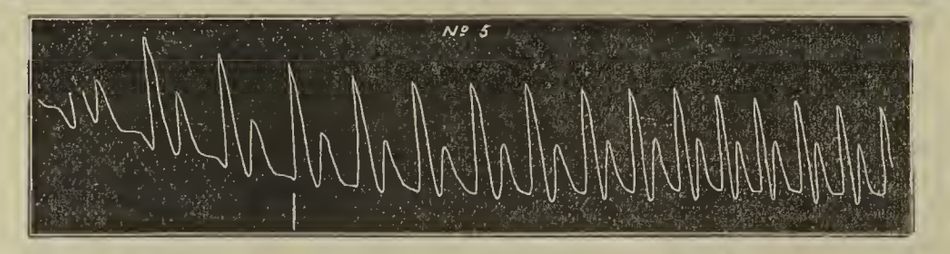
(a) Read before the Liverpool Medical Society.

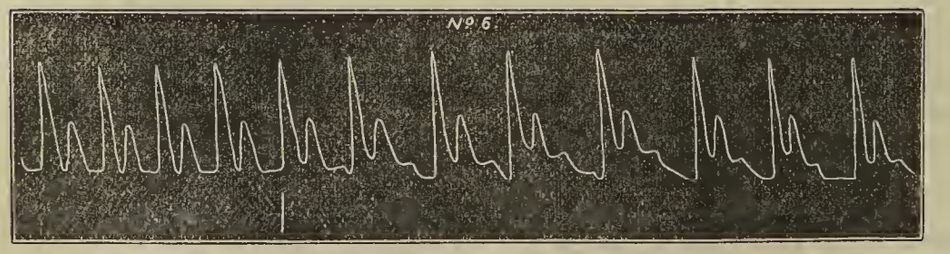


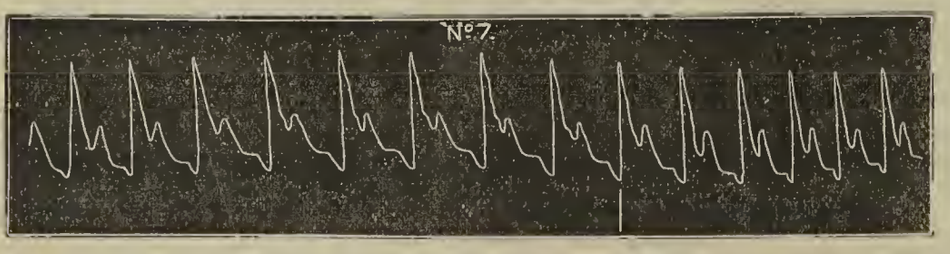


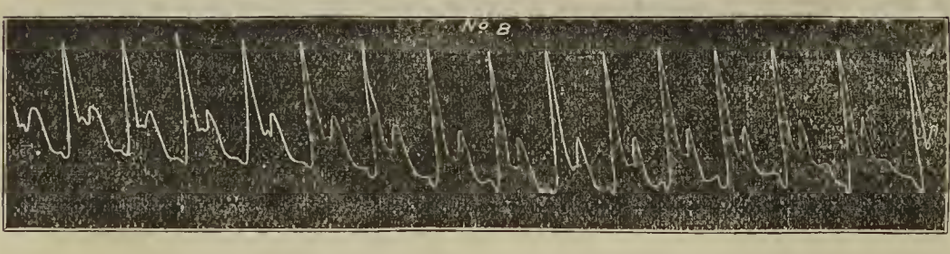












was formerly supposed, but to a hurrying on of the circulation towards the great veins of the chest and the right side of the heart, is shown by the aortic second sound being less accentuated in full inspiration than in forced expiration. Some may say that this is due to an impaired convection of sound, owing to the aorta being more completely embraced by the expanding lung; but this argument will be found to have very little weight if you listen to the pulmonic second sound, which, although less articulate, has a greater thud and deeper ringing tone in inspiration than in expiration.

But, to place the subject more in the light of matter of fact, and on a more certain basis than that of mere tactile and auditory perceptions, the pulse-tracings here shown are subjoined. Nos. 1 to 8 were taken under the same pressure from the radial artery of Dr. D. J. Jones, who may be considered an example of perfect health. Tracings Nos. 9 and 10 were obtained from the same gentleman at a different sitting from the above.

Interpretation of the Sphygmographic Tracings.

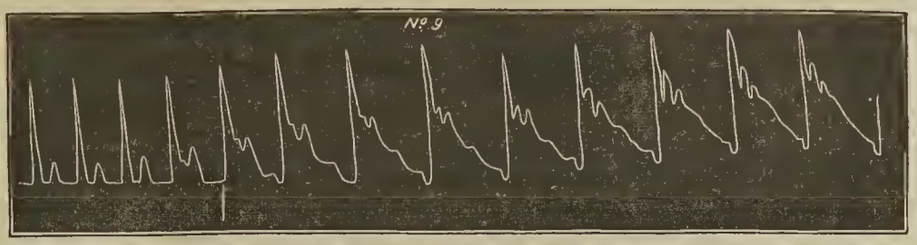
No. 1 *was taken during quiet respiration*, but even here the effect of that process on the circulation is well marked. The first curve may be said to represent the state at the end of slight inspiration; the next three the condition in expiration; the fifth that in slight inspiration; the sixth and seventh the state in expiration; the following three that in inspiration; and the remainder with the breathing suspended at the end of the last stage.

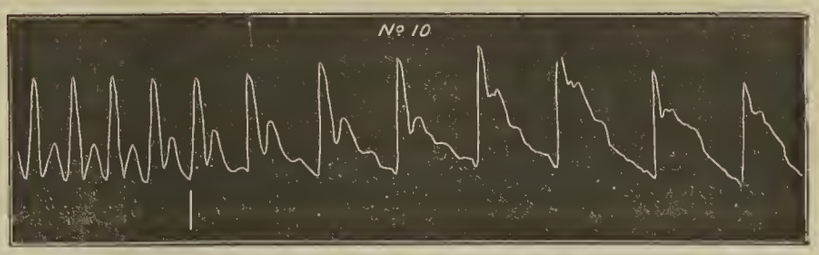
No. 2 *was taken during prolonged and full inspiration, which was at first slow, and then rapid, followed by suspension of breathing.* In the inspiratory part the base line gradually descends, thus indicating the decrement in the quantity of blood in the artery between the pulsations. The height of the upstroke greatly increases, but it quickly collapses, thus giving the short, sharp shock of low tension, which condition is shown by the approximation of the aortic notch to the base line, and the indistinctness of the tidal wave. The frequency of the pulse remains pretty uniform, or rather lessens—the distance between the upstrokes being from 6·2 to 6·5 millimetres,—and the period of systole, as measured by the distance from the upstroke to the aortic notch, is tolerably well sustained. When the breathing is suspended in the state of full inspiration the low tension is even more marked, the pulse increases in frequency so that the curves at last measure only 4·5 millimetres, and the length of the systole falls from 2 to 1·5 millimetres.

No. 3 *was taken during prolonged and full inspiration, followed for the last three beats by suspension of breathing.* In this case the conditions are almost similar to those of No. 2, but the diminution in the tension is even more decided.

No. 4 *was taken during slow, followed by rapid and full, inspiration, and then while the breath was held in the latter state.* In the first place the tension is

rather low, the pulse is frequent—the individual curves only measuring 5·5 millimetres,—but the systole is of fair duration, as it measures 2 millimetres. In the rapid and *full* inspiratory part the base line descends; the upstroke is vigorous; the tension diminishes; the frequency of the pulse lessens, so that the curves reach 8 millimetres; and the systole is of good length. In the latter part, or that of full inspiration, the base line remains on a level; the dicrotism is great; the length of the pulse-curves gradually decreases to 5·5, and that of the systole to 1·5 millimetres.





No. 5 exhibits the condition at the end of full inspiration, followed by suspension of breathing with the chest fully expanded. The base line of the first three curves quickly descends; the dicrotism is full; but the curves are long, and the systole is well sustained. In the latter part the base line remains stationary; the tension is so low that hyperdicrotism becomes very distinct; the frequency of the pulse is increased, so that at last the curve only measures 4·8 millimetres, and the period of systole is reduced to 1·5 millimetre.

No. 6 shows the state during full inspiration, followed by deep expiration. In the first part there is a good upstroke, full dicrotism, a pulse of moderate frequency, and ordinary systole. In the expiratory stage the pulse becomes very slow, so that the curves measure from 9 to 10 millimetres, and the systole is prolonged to about 2·5 millimetres. The tidal wave is fairly sustained, and as many as two undulations are noticeable after the aortic curve.

No. 7 indicates the condition during deep expiration, followed by slight inspiration. In the expiratory part the base line slightly rises, the tension increases, the frequency of the pulse lessens, and the systole is lengthened. In the slight inspiration the tension is lowered, the frequency of the pulse increased, and the period of systole is lessened.

No. 8 was taken while the breathing was suspended in the state of deep expiration. In this instance the base line remains on the same level, and the individual curves are very uniform. The percussion wave is good, the tension fair, and four to five undulations appreciable in each curve. The pulse is infrequent; each curve measuring about 7 millimetres; and the period of systole is increased to 2·5 millimetres.

Nos. 9 and 10 represent the state at the end of full inspiration, followed by deep expiration. In the first part the tension is very low, the pulse frequent, and the systole short; but during the expiratory stage the base line rises, the tension greatly increases, the pulse becomes slower, and the systole is slightly lengthened.

Summary.

1. *During inspiration* there is an accumulation of blood in the great veins of the chest, and in the pulmonary circuit, which gives a good supply to both ventricles, and hence there is then perfect synchronism in the initial stage of contraction. The aspiration of the thorax increases the capacity of the pulmonic system, thus primarily lessens the obstructive burthen of the right ventricle, and gives a freedom to the pulmonary flows throughout the whole period of inspiration, and that proportionate to the extent of expansion. As not merely the rapidity of the pulse, but also the duration of systole, greatly depend on the amount of resistance—the less the resistance, the shorter the systole,—so it follows that the right ventricular systole will occupy less time at the end than at the beginning of inspiration, or indeed than at any other time. It is true that there is a similar increase in the capacity of the systemic circuit, by the indirect action of lessening the quantity of blood in it; but then the assistance rendered to the left ventricle is only in proportion to that given to the right, as the quantity of blood in the systemic is to that in the pulmonic system. Accordingly, we find in the tracings Nos. 2, 3, 4, and 5 that, although the tension is diminished, the frequency is not increased, but is rather lessened, and the systole is well sustained—which can be accounted for by the increased supply of blood to the left ventricle. Besides, the indirect aid to the left ventricle is not rendered *pari passu* with the direct assistance afforded to the right ventricle, for we find that when the chest is fully expanded, and consequently all further succour withheld from the right ventricle, yet the tension in the systemic arteries still diminishes, the frequency of the pulse is increased, and the period of systole is lessened (see tracings Nos. 1, 2, 3, 4, and 5).

From the foregoing it may be easily adduced that *at the end of inspiration* a degree of asynchronism may be established at the end of ventricular contraction, and in the consecutive reaction of the pulmonary artery and the aorta, which would give rise to a reduplicate second sound, the primary element being pulmonic.

2. *When the breathing is suspended in the state of full inspiration* the aspirating force has ceased, so there is no further aid given to the right ventricle. The thorax now contains its maximum quantity of blood, and consequently the systemic system its minimum, which latter condition is well exhibited in tracing No. 5. Any abstraction in the course of the circulation from the repletion of the intra-thoracic vascular cavity is quickly refilled from the systemic veins by the atmospheric pressure. This good and equal supply of blood hastens the cardiac action (Nos. 1, 2, 3, 4, and 5), and equally stimulates each ventricle to begin contraction. Now the mass of blood in the lungs becomes an obstacle to the right ventricle, which prolongs its systole, while at the same time the low tension in the systemic vessels shortens the left ventricular systole, so that a balance is again struck, with restoration of synchronism and abolition of the reduplication of the second sound which existed at the end of inspiration.

3. *At the commencement of expiration following on full inspiration* the reduction of the chest affects primarily and mainly the aërial thoracic cavity, and, I may say, only negatively the blood vascular, as the resiliency of the lungs does not drive the blood out of the latter cavity, which is essentially a closed circuit. So at the beginning of expiration the right ventricle is not at once appreciably affected, but, the aspirating force being removed, accumulation of blood at once begins in the systemic radicles, with increase of tension and prolongation of systole, as will be seen in tracings Nos. 6, 9, and 10,—so that reduplication of the second sound can still be detected; and this phenomenon might continue throughout the whole expiratory period, were it not that the overloading of the right ventricle, and the greater obstruction in front, lengthen its systole also.

4. *During expiration* both ventricles are well supplied with blood—in the case of the right, owing to the accumulation in the great veins; and in that of the left, owing to the amount stored up in the lungs during inspiration. Again, in both systems arterial tension is high, so synchronism is maintained both at the beginning and end of ventricular contraction (see tracings Nos. 6, 7, 9, and 10).

5. *At the end of expiration* the great veins of the chest have become engorged, while the surplus in the lungs has been disposed of, so the right ventricle becomes over-distended, and is stimulated to initiate contraction, thus giving rise to a reduplicate first sound; but the same overloading and the increased obstruction in front prolong the right ventricular systole, hence there is no doubling of the second sound.

6. *When the breathing is suspended in the state of deep expiration*, accumulation of blood has taken place in the systemic vessels, so that they now contain their maximum quantity and their tension continues uniform; the curves are equal, and also the periods of systole, as will be seen from tracing No. 8. This cumulation reduces that in the thorax to its

minimum—both that in the great veins to the right heart, and that in the lungs to the left,—so that, as far as the heart is concerned, an equable distribution of blood is maintained, and thus, all disturbing influence being removed, synchronism is restored.

7. *At the beginning of inspiration following on deep expiration* the right ventricle is the first to be over-repleted, which stimulates it to initiate contraction, and thus we again get a double first sound; but as inspiration goes on, both ventricles are equally well filled, hence there is abolition of the reduplication.

Dr. George Johnson—to whose writings on the present subject I shall have afterwards to refer—seems to have very little faith in any assistance rendered by the respiratory process in carrying on the circulation of the blood, as evidenced by his recent communications on the so-called "Dr. Patrick Black's Theory of Asphyxia"—a designation, by the way, which seems rather strange to those who are acquainted with the works of Professor Andrew Buchanan of Glasgow, and of the late Dr. Carson of this town. If there be no such force, how, then, are the foregoing facts to be explained, and what interpretation is to be put on cases of venous pulsation such as those which came under the care of Sir Wm. Jenner, and which are noted by Dr. Walshe? The latter says, in his work on "Diseases of the Heart and Great Vessels," that "the veins of the dorsa of the hands and feet may be the seat of pulsation either of cardiac or respiratory rhythm. . . . When the rhythm is respiratory the vein collapses in inspiration *rapidly*, swells in expiration *slowly*, and, when pressed on, its pulsation ceases to the distal, increases to the proximal, side of the point pressed on. One of Dr. Jenner's cases exhibits the two sorts of pulsation (respiratory and cardiac)." Somewhat similar phenomena to those can be produced by section of the vaso-motor nerves.

It is not necessary for my purpose to consider here the amount of assistance rendered to the circulation by the respiratory process, but I believe—and I am not one of those who adopt the extreme view held by Drs. Buchanan and Black—that there is a certain modifying influence exercised (which affects mainly and primarily the right side of the heart, and only secondarily and indirectly the left side), a relative disturbance in the balance of the blood-supply in the two sides of the heart, and in their respective arteries, sufficient to account for the phenomena in question.

(To be continued.)

CASES ILLUSTRATING

SOME OF THE LESS FREQUENT FORMS OF KERATITIS AND CYCLITIS;

WITH SHORT REMARKS.

By EDWARD NETTLESHIP, F.R.C.S.,
Surgeon to the South London Ophthalmic Hospital.

THE following cases, illustrating some of the less common affections of the ciliary region, belong to a class which, though small, is of great importance in practice, and of no little interest on other grounds. The complex features often presented by the cases individually, the various conditions under which they arise, and the difficulty we often find in assigning a cause, combine in raising doubts, whether as to nomenclature, classification, or treatment. It is sometimes tempting to make the diagnosis of "cyclitis," or "keratitis," or "episcleritis," or "phlyctenular ophthalmia," and to avoid minute details from a fear of finding a more lengthy description difficult, and from a feeling that the cases often seem to belong to no particular class. Notwithstanding that cases such as the few given below are familiar to all ophthalmic surgeons, it seems probable that the collection of careful details in a large number of instances will prove necessary to a fuller understanding of their pathological kinships and preventive or curative treatment; and it is almost essential, in order to avoid various fallacies, that this should be done by those who have had the immense advantage of learning at the Moorfields Hospital to recognise that special form of keratitis which is caused by inherited syphilis. I must add that I had paid scarcely any attention to this group of diseases until Mr. Hutchinson drew notice to it in a paragraph entitled "Mackenzie's Scrofulous Sclerotitis," in the *Ophthalmic Hospital Reports*.(a)

(a) *Ophthalmic Hospital Reports*, vol. viii., page 1: "Suggestions for Future Clinical Work in Ophthalmology."

The cases present enough differences among themselves to suggest their division into several minor groups.

In the five cases included in Group I. there was circumscribed inflammation at the centre of the cornea, with overgrowth of the epithelium, and some infiltration of the surrounding part, but without ulceration. In such as were under notice long enough, more or less opacity with some elevation on the surface remained.

The subjects of these cases were all women, and all excepting one were under thirty years of age. In respect to other predisposing causes, it will be noted that two attacks took place during lactation (Cases 1 and 4), and another during pregnancy (Case 4, first attack). Rheumatism or gout appear in connexion with two (Cases 2 and 3), and one of these (Case 2) is also strumous. One was, perhaps, the subject of hereditary syphilis (Case 5). Another patient, who had two attacks (Case 4), though not definitely strumous, was extremely subject to sore throat and "colds," and her circulation was somewhat feeble. The disease was unsymmetrical in all the cases. In three of them (Cases 1, 2, and 5) an inflammation of one or both had occurred before; and in another (Case 4) a second attack of cyclitis, with marginal deposits in the cornea, took place some months after the first. In this attack the case was quite similar to those which are placed in Group III., and it illustrates remarkably well what is in some instances the earliest stage of the "scrofulous sclerotitis" above alluded to. There was iritis in the same case; and the iris acted badly in another (Case 2), though without actual synechiæ. The abruptly limited violet zone of cyclitis was seen in Case 4; in one (Case 3) there was no congestion whatever. In each case only one eye suffered. None of the cases lasted less than six weeks, and some extended over three or four months. Atropine appeared to do more good than any other treatment, either general or local.

Case 1.—*Central Keratitis and Ciliary Congestion without Ulceration of Cornea—Well-defined Elevation on the Cornea—Patient a Woman, suckling.*

Jane P., thirty-four, married, suckling a baby eleven months old; admitted April 24, 1875. Left eye, photophobia, ciliary congestion and a well-defined slight elevation on the cornea near the centre, looking as if due to increase of epithelium. History of a short attack of severe inflammation and photophobia in childhood. Belladonna lotion and iron mixture.

28th.—Better. She continued taking the medicine for a month. She was hypermetropic (+ 7) under atropine.

Case 2.—*Keratitis, nearly Central, with numerous little Pearly-looking Elevations, but no Ulceration—Slight doubtful Iritis—Patient a Strumous Young Woman—History of Consumption and Gout in Family.*

Constance K., twenty-three, single, admitted November 6, 1875, with several small, clear elevations slightly below the centre of right cornea; they were more or less confluent, forming a sort of band with little nodular elevations upon it; they had a pearly lustre and looked not unlike vesicles. Slight ciliary congestion and a little discoloration of aqueous (or of iris?) caused a suspicion of iritis; and the pupil, although remaining circular, did not dilate fully under atropine. Atropine alone was prescribed, and at the end of six weeks the eye was quiet.

In September, 1876, I saw her again (at request), and found several small, rounded, nearly clear elevations still present on the cornea in the same situation as before. No fresh attack of inflammation had occurred.

I also learnt the following facts in her history. In childhood she had some affection of the eyes believed to be due to cold, and another attack eight years ago. She is very subject to neuralgia of the head and face from decayed teeth. In childhood she had many strumous abscesses on the right side of her neck (none on the left). She is subject to pain at the top of the shoulders, and of late has suffered from indigestion. Her father died at thirty-four of consumption. Her mother suffered much from "rheumatics" in the face and head, but not in the joints; a brother, however (patient's uncle), is subject to gout.

Case 3.—*Keratitis, chiefly Central, and much resembling Mild Syphilitic Keratitis, in One Eye of a Young Woman who had formerly had Rheumatic Fever—No Evidence of Inherited Syphilis.*

Jane C., aged twenty-six, married, admitted March 29, 1876,

with a large patch of keratitis in the right eye. She had first noticed a "skin" over the eye three months before, and it had increased. A large patch of the cornea was cloudy, and its surface steamy, very much like syphilitic keratitis; it was most dense at the centre, but spread irregularly outwards, nearly reaching the periphery at some parts. There was not the slightest congestion of the eye. She often had pain at the right side of the root of the nose. She showed no signs of inherited syphilis. There was no choroiditis visible in the other eye (the corneal haze prevented inspection of the right fundus). About seven years previously she had been laid up in a hospital with "rheumatic fever," the joints being swollen. She attended only twice, using the yellow oxide of mercury ointment; at the second visit the cornea had begun to clear. I have not been able to learn the final state.

Case 4.—Relapsing Cyclo-Keratitis, with Central Elevated Spot on Cornea, and afterwards Marginal Deposits—No Ulceration of Cornea—Slight Iritis—Patient a Delicate Young Woman, Pregnant during the First Attack, Suckling in the Second.

Margaret C., twenty-three, married, pregnant five months with her third child. Pale, delicate-looking, with fine skin and clear complexion, brown hair, and blue irides; teeth perfect. Admitted February 10, 1875, for inflammation of left eye of a week's duration; there had, however, been "a little speck" coming on it for two months. A small central spot of opacity of cornea, apparently due chiefly to epithelial growth and deposit in the corneal substance around, doubtfully ulcerated; intense purple ciliary congestion, forming a wide zone abruptly limited to ciliary region, the sclerotic behind it being scarcely affected, and the conjunctiva very little implicated; pupil active, and round after atropine; V. = 16 J.; T. n.

February 13: Iritis; a single adhesion at lower part of pupil. The ciliary inflammation subsided in a month from admission, but the corneal patch continued exactly the same till she ceased attending at the end of three months. April 7 it is described as a small, bluntly conical, white elevation, about as wide as a millet-seed, surrounded by a patch of diffused white haze about the size of a hemp-seed. There was still, when discharged in May, slight duskiness of ciliary region, and this was still present when she came at request in September. The corneal elevation was in the same state at the latter date.

February 5, 1876: She came with another attack in the same eye; it had been inflamed for two months (December). The congestion was, as before, of the peculiar violet tint, and abruptly limited to the ciliary region. There were now several patches of deposit near the margin of the cornea, and the old central elevated dot was unaltered. The marginal patches were clearly deposits in the corneal substance, the surface over them being quite smooth. She attended for two months (till April 5), by which time the congestion had almost disappeared, the corneal deposits, however, remaining *in statu quo*. There was throughout no evidence that any of them had ulcerated. This attack lasted altogether four months. There was no increase of iritic adhesions. This attack came on after suckling for six months.

There was not the slightest evidence of syphilis, either acquired or inherited; nor was there, so far as she knew, any rheumatic or gouty history in the family, but her knowledge of relatives was incomplete. She was very subject to sore throat from cold, and her fauces were red. She also had at times a little dry eczema of the face and soreness of the nostrils. Her circulation was easily disturbed, but probably not very vigorous.

During the first attack she improved quickly under atropine and grey powder (two grains twice daily); the active symptoms being well in a month from admission. She was never salivated. In the second attack, already of two months' duration when she came under care, she got well about as quickly with atropine and bitter mixture; grey powder in one-grain doses was tried, but made her sick, and only a very few were taken. Blisters were used in the first attack, but she did not think they were of much use. The yellow oxide of mercury ointment, used experimentally during the inflammatory stage, and even after the congestion had subsided, caused irritation; and, though persisted in after all active symptoms had subsided, it had no effect on the corneal deposits. Atropine seems to have been the remedial agent.

Case 5.—Keratitis, nearly Central, with well-marked Elevation of Corneal Surface, in a Young Woman—Perhaps an Unusual Form of Syphilitic Keratitis.

Mary A. S., aged twenty-two, married, admitted January 3, 1874, with a "peculiar grey elevation on left cornea near centre, like a milky vesicle," the surrounding cornea being somewhat hazy; there was photophobia. She said she had had a similar attack a year before. I noted that her physiognomy was suspicious of hereditary syphilis, and at the next visit, the cornea being more hazy, I wrote, "Undoubtedly interstitial keratitis." She attended only once more, and I have no note of her final state, and have been unable to trace her. Whether the keratitis were syphilitic or not, its mode of beginning was unusual and noteworthy.

Group II. contains some cases of diffuse keratitis, with steamy surface and more or less interstitial deposit, the inflammation affecting a considerable part of the cornea, and its limits being ill defined and having some resemblance to syphilitic keratitis.

There was no positive iritis in any of the four cases, but in two of them (Cases 7 and 8) the iris acted badly. In Case 6 there was definite cyclitis, the patient being a young woman lately confined, who gave an account of a similar attack after a confinement a year and a half previously. Her case, excepting as regards the corneal appearances, bears more resemblance to those in Group I. The other three patients were men varying in age from twenty-eight to forty-five. There was a history of chronic articular rheumatism in two of the men (Cases 7 and 8); Case 7 was probably phthisical as well as rheumatic, and he had had a similar eye-attack before. These two cases were, perhaps, instances of what has been, I believe, named "arthritic keratitis" by some authors, and it may be observed that in both of them iritis was suspected, although no adhesions formed. The disease was unsymmetrical in all.

Case 6.—Cyclitis with Slight Keratitis in a Young Woman shortly after Confinement—History of similar Attack after a Previous Confinement.

Harriet P., twenty-four, married, admitted July 15, 1874. She had been confined five weeks before, and the right eye had been inflamed a fortnight. There was dusky congestion, great photophobia, and very slight haze of cornea. Atropine disproved the suspicion of iritis. She said she had had a similar attack after a previous confinement eighteen months before. Under the use of atropine and three blisters the symptoms were much relieved in three days, and she did not come again. The photophobia in this case was quite out of proportion to the corneal change.

Case 7.—Keratitis in One Eye, with Steamy Surface and Interstitial Linear Deposits, worst at Upper Part—Pupil acting Imperfectly—Slight Iritis (?)—Patient a Middle-aged Man, subject to Rheumatism in the Knees—No Proof of Syphilis, acquired or inherited—History of similar Eye-Attack ten years ago.

John P., aged forty-five, shoemaker, was admitted December 29, 1875, with keratitis of two weeks' duration in the right eye. The haze was much more marked at the upper part than elsewhere, but no part of the cornea was quite clear. The surface steamy or finely pitted, and the corneal substance hazy, the deposit taking the form of tolerably well defined lines running towards the centre, these being confined to the upper part. Pupil active and same size as other, and no signs of iritis after atropine. T. slightly −; V. 12 J. badly; lids not granular. In each cornea a well-marked symmetrical arcus confined to the lower part.

History of a somewhat similar attack ten years before, which was soon cured. He had since then remained well till the present occasion.

Attended six weeks. Haze increased at first under the yellow oxide ointment. Atropine, iodide of potassium, and subsequently mercury (grey powder) ordered. No great improvement was made while he remained under notice.

I found afterwards that he went to another hospital after leaving me, and that the eye recovered in three months under the use of belladonna lotion and a compress. I saw him again in September, 1876, and found the eye quiet, but there was still some slight haze at the upper part of the cornea.

No evidence of hereditary syphilis, but he was the eldest of his family; none of the others have had bad eyes. No good evidence that he ever acquired syphilis, but admits risk freely within the last four years (since wife's death); carefully examined for chancre, etc. No choroiditis in the left (inflamed) eye. No iritic adhesions in either eye; but after attending

some weeks it is noted that the right pupil, although circular, did not dilate fully with atropine.

Six years previously he was laid up for nearly a year and a half with "rheumatism" in the knees, so bad that he was unable to walk. He also suffered from cough at the same time, and was told he had phthisis. Three large spots (small carbuncles) formed, and have left round well-marked scars. He still remained liable to rheumatic pains in the shoulders, but had never again been disabled by the disease. He was a tall, emaciated, sallow man, phthisical-looking.

Case 8.—*Keratitis, with Steamy Surface and Interstitial Deposits (worst at Upper Part) in Left Eye of a Man who is subject to frequent Rheumatism in Left Shoulder—Imperfect Action of both Pupils to Atropine—Very slight Iritis* (?)—*No Signs of Inherited Syphilis.*

James M., aged thirty-three, a tall, robust, spare labourer, was admitted January 23, 1875. The left cornea was steamy, and minutely pitted over its entire surface, and by focal light numerous clouds of deposit were seen in the central part; these, however, were so slight as to be invisible in ordinary daylight. The changes were worst at the upper part, and least at the centre. There was slight ciliary congestion. Pupil dilated round with atropine, but not to its full size. V. = 19 J., the defect being apparently out of proportion to the visible changes. Duration ten days; it had been slightly painful. The right was also slightly congested, and had been worse a week before; V. = 1 J.; pupil, as in left, did not dilate fully with atropine, but no signs of iritis. No signs of inherited syphilis; has never had general rheumatism, but about once in two months is laid by with rheumatism in his left shoulder. No arthritic history in family; he knows most of his relatives for two generations. Attended only once, and could not be traced. If this were syphilitic keratitis, it is interesting from the late age at which it began.

Case 9.—*Keratitis of One Eye only (chiefly of Inner Part), with Steamy Surface, and no Ulceration—No Iritis—Duration Eighteen Months, with Variations—Patient a Young Man.*

William F., aged twenty-eight, shoemaker, was admitted September 25, 1875, with keratitis of the right eye. About a third of the cornea, at the inner part, was steamy on the surface, and hazy, probably from deposit in its substance; no congestion and no pain. Pupil active, and no signs of iritis after atropine. Fundus healthy. V. = 10 J. He said that the eye had been dim on and off for eighteen months, but never so bad as at present, and that it had several times been quite clear for a week or two. He attended three weeks, using the yellow ointment; but I have no later note.

(*To be continued.*)

Life Assurance and Criminal Abortion.—On November 4, 1871, the Mutual Life Insurance Company of New York issued a policy of insurance on the life of one Flora Hatch. The woman died in consequence of a miscarriage produced by an illegal operation performed upon her. The Company refused to pay the money, and the case was carried to the Superior Court, whence it went to the Supreme Court, which has just given the following decision:—The voluntary act on the part of the assured, resulting in her death, was of such a character as to preclude the defendants from assuring against the consequences.—*Boston Med. and Surg. Jour.*

"Glaswolle."—M. Limousin laid before the Paris Therapeutical Society a specimen of "glass-cotton," or *Glaswolle*, which is much used in Germany, and especially in Austria, for the purpose of filtration in laboratories. It exactly resembles wadding, but is a little more silky, and slightly crepitates when held near the ear. Bohemian glass is the only kind from which it can be produced, being drawn out at the moment of fusion into threads of an extreme tenuity. Under the microscope these fibrillæ are as delicate as those of cotton, and quite as supple. The *Glaswolle* is of great use in the filtration of acids and alkalies, even when concentrated, as well as of many other substances, such as nitrate of silver, albumen, collodion, Fehling's liquor, etc. Moreover, filtration takes place with great rapidity, because capillary action is not impeded by the too close approximation of the fibrillæ. The *Glaswolle* neither produces any alteration in the filtered substances, nor does it undergo any alteration from them. It may be also conveniently used for painting parts with chromic acid, nitrate of silver, tincture of iodine, etc.—*Gaz. Hebd.*, No. 49.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF RHEUMATIC FEVER TREATED BY SALICIN.

(Under the care of Dr. RINGER.)

(*Concluded from page* 11.)

[For the notes of these cases and the valuable analyses of them we are indebted to Mr. Judson Bury, Physician's Assistant.]

Case 6.—G. P., a van-driver, aged twenty-eight, was admitted on September 30. Of temperate habits and previous good health. He "caught cold" on September 9, and soon felt a pain in the right shoulder, followed by pain in the right elbow; then for twenty-four hours he was free from pain, when the corresponding joint of the left upper limb became affected. He left off work on the 19th.

Condition when Admitted.—3 p.m.: A well-made man, with anæmic mucous membranes and a moist skin. The following joints are painful:—Both shoulders, both wrists, both knees, both ankles, and the right hip. The right knee, right ankle, and left wrist are swollen, and are the most painful. The shape of each joint is maintained. Heart: Weak impulse; first sound is inaudible. Temperature 99·3°; pulse 92; respirations 20. Thirty grains of salicin every two hours; first dose taken at 6 p.m.; temperature then was 100°.

October 2.—The shoulders and right elbow decidedly, the knees slightly, painful. He has had noises in his ears since last night, and is a little deaf. Temperature 99·2°, in the afternoon normal; pulse 88.

3rd.—The right shoulder and both elbows are a little tender; other joints are normal. He still has ringing noises in the ears. Last night at ten o'clock salicin ordered every four instead of every two hours. Temperature, morning 98°, evening 99·6°; pulse 80; respirations 20.

4th.—The right shoulder, right wrist, and left elbow are a little painful on movement. The ear-noises and deafness are less. Heart-sounds little altered; the first is now audible, though very toneless. Temperature was normal at 9 p.m. yesterday. From this date onwards it continued so.

5th.—Slight stiffness in right shoulder and elbows. First sound of heart a little plainer. The last dose of salicin was taken at 3 p.m. to-day.

The urine gave a purple reaction with perchloride of iron as late as the 8th.

10th.—A slight return of pain in the shoulders and elbows, but temperature still normal. Ordered citrate of potash and iron.

19th.—Discharged with his right shoulder very stiff.

He was ordered to take Turkish baths; these temporarily removed the stiffness. Other joints became painful, he was unable to work, and returned to the Hospital on November 14. His temperature was then 99·6°, but the next day was normal. He left on November 20, free from pain, but shoulders a little stiff.

Summary.—Came under observation on the twenty-first day of illness. Took thirty grains of salicin at 6 p.m. the same day, and subsequently the same dose every two hours until 10 p.m. on October 3. Temperature began to be permanently normal at 9 p.m. on October 3—that is, after taking 1110 grains. The joint-pain soon became much less, but never quite left the patient. Salicin detected in urine nearly four days after its discontinuance.

Case 7.—T. B., a labourer, aged thirty-four, admitted October 19. On October 8 got a wetting, and did not change his clothes. Had pain in his hips on the 9th, and since then in other joints. Previously good health. No family history of rheumatism.

Present Condition.—A strong, muscular man. Skin moist. He has spontaneous darting pains in the left hip, the back of the left knee, the soles of the feet, and the shoulders. The following joints are tender to touch and painful on movement:—Lower limbs: Left knee, left ankle, metatarso-phalangeal joints of both feet. Upper limbs: Shoulders, right elbow, and right wrist. The left knee is much swollen, and the popliteal space full and tense. There is redness and tenderness over the inner tubercle of the tibia. There is a bright

blush over the outer part of the dorsum of both feet, and here the skin pits on pressure; both insteps are slightly swollen. Heart: No impulse to be seen or felt; sounds weak and deficient in tone. Tongue moist; covered with creamy fur. Temperature 103°; pulse 100; respiration 28.

October 20.—Patient passed a sleepless night, although fifteen minims of liquor morphiæ were taken on account of the pain. The joints of the right upper limb are much swollen, hot, and tender. The feet and left knee are better; other joints free. Temperature 103·2°; pulse 108; respirations 24.

21st.—Passed a sleepless night. The same joints, and in addition the hips, are swollen and painful. Began to cough yesterday for the first time, and to expectorate purulent, much pigmented sputa. Lungs resonant. A few bronchitic râles. Skin moist. Bowels have not been moved since admission; therefore to take the following pill:—Calomel. gr. j., ext. hyoscyami gr. iij. Temperature 102·4°; pulse 130; respirations 28. Ordered twenty grains of salicin every three hours; the first dose was taken at 5 p.m. A hypodermic injection of a quarter of a grain of acetate of morphia given at 11 p.m. Urine gives purple reaction with iron after two doses of salicin.

23rd.—Took fifteen minims of liquor morphiæ at 2 a.m., but did not sleep. The skin is dry, and was so yesterday. The following joints are affected:—Upper limbs: The joints of the left limb are all painful and swollen; the shoulder is the least affected; the forearm, wrist, and hand are much swollen, and the skin is tense and hot. There is a well-defined bright blush over the metacarpo-phalangeal joint of the middle finger. The right limb is affected in a similar way, but to a much less degree. Lower limbs: The feet are hot and swollen, but not tender; the other joints are free. The neck and back are stiff and painful. Heart: First sound more distinct; no pain in cardiac region. Temperature 102·8°; pulse 100; respirations 28. Bowels still constipated; to take two grains of calomel. Began at 5 p.m. to take thirty grains of salicin every three hours.

24th.—Took twenty minims of liquor morphiæ at 2 a.m., but passed the night without sleep. He still suffers much pain; the joints of the right hand are the most painful and swollen. Sweated much during the night.

26th.—Still passes restless nights, although small doses of morphia are taken. All the joints are free from pain. Movement is incomplete at the shoulder-joints. The right foot is much swollen, and the skin pits deeply over the dorsum and below malleoli, especially the outer; there is a pinkish-coloured blush on dorsum; the left foot is slightly swollen also. Skin is moist. Temperatare 102°; pulse, full and soft, 112; respirations 26.

31st.—Has slept fairly well the last two nights without draughts. The skin is moist; there has been much sweating since last note, especially at night; none, however, last night. He can now sit up without pain; no cardiac murmur detected whilst in sitting posture. Cough and expectoration much less; a little liquid rhonchus at bases. Joints: The shoulders are stiff and slightly painful; other joints free from pain. The feet are not swollen or red; there is slight pitting over left instep. Tongue coated with moist fur; breath foul; bowels open naturally once a day. Temperature 98·8° to 100°; pulse 96; respirations 24.

November 1.—Trifling pain in right shoulder; none elsewhere. Tongue clean; breath less disagreeable. Temperature usually 99°, and occasionally 100° in the evening. Salicin ordered every hour, beginning at 4 p.m.

2nd.—Owing to some headache and nausea, salicin to be taken every two hours, beginning at 10 a.m. Still slight pain in shoulders on movement.

6th.—Salicin every four hours.

11th.—Salicin three times a day.

14th.—Since November 3, temperature quite normal. There has been no return of pain to any joint; there is still slight stiffness in both shoulders and in two or three of the fingers. Has been up for the last seven days. Pulse 84; respirations 18. Left the hospital.

Attended as an out-patient up to the 23rd; when last seen had slight stiffness in shoulders.

Summary.—Admitted on the eleventh day of illness. About half the joints of the four limbs were affected. No salicin was given for the first two days. During this time his temperature, which was taken every three hours, varied between 101·6° and 103·2°. Began at 5 p.m. on 21st with twenty grains of salicin every three hours. This was increased at the same hour on the 23rd to thirty grains. On the 26th, at 10 a.m., slight stiffness of the shoulders was the only joint-trouble. This was the eighteenth day of the disease, and sixth of treatment, and about 980 grains of salicin had been taken. The temperature began to be permanently normal on November 3, the thirty-first day of disease, the nineteenth of treatment, number of grains of salicin taken being 2950. Urine passed after taking the second dose of twenty grains, and six hours after beginning the drug, gave a faint purple with a few drops of liq. ferri perchlor.

Case 8.—W. M., aged twenty-six, admitted November 6. Father seldom free from rheumatism, which chiefly attacks wrists. Two sisters and one brother have had rheumatic fever. Patient is an outdoor porter, of steady habits. Three weeks ago he slept in a nightshirt with damp wristbands, and awoke in the morning with his wrists painful and slightly swollen. He applied mustard and turpentine till the skin blistered, but the joints remained painful and swollen for ten days, and then improved. But he continued to feel stiff in many of his joints on getting out of bed each morning.

On November 2—*i.e.*, the seventeenth day of illness—he was suddenly seized with pains in the thighs and hips whilst riding in his van. The joints continued painful till the 5th, when the pain migrated to the knees and ankles.

Present Condition.—A well-made man. Face pale, but no decided anæmia of mucous membrane. He has supra-orbital headache. Both knees, both ankles, and some of the phalangeal joints of right foot are swollen, tender, very stiff, and the seat of spontaneous pain. There is slight redness of the second and third phalanges of right foot, and rose-coloured patches near the malleoli at the ankle-joints. Pain and stiffness at bottom of back. Joints of upper limbs free. Heart-sounds faint and distant at apex; otherwise healthy; no murmur. Temperature 101·2°; pulse 104. Ordered thirty grains of salicin every two hours; the first dose taken at 6 p.m.

November 7.—Less pain and less tenderness in joints. Urine slightly acid; contains a faint trace of albumen. Temperature 103·1°. Salicin omitted from 4 p.m. yesterday to 10 a.m. this day.

8th.—Only slight joint-pain. Slight effusion in right, none in left knee. Still red blushes about ankle-joint. Tongue cleaning. Temperature 100·2°; pulse 72.

9th.—Swelling and pain almost gone; no redness. Sweats a little during the night. Temperature 99·6°.

10th.—Joints quite normal. Temperature 98·4°; pulse 72. Salicin discontinued; last dose taken at 10 a.m. Urine: No albumen; slightly acid. Patient remained quite well up to day of discharge—namely, November 16.

Summary.—Joint-pain began to decline a few hours after beginning salicin, but did not quite disappear till the fourth day of treatment, after 1100 grains. Temperature became normal at the same time. The man was readmitted on the 23rd. After leaving the hospital on the 16th he had a Turkish bath; the cold douche gave him pain, which, however, passed off. He went to work on the 18th, still feeling a little stiff; was out in the rain, and got very wet; and the same night had severe aching pains in both knees and both ankles. He could only just stand on the 19th, and took to his bed on the 20th. The pain has increased daily.

Present Condition.—November 23.—Patient is anæmic and unable to walk. Upper limbs: The left upper is immovable; all its joints, including phalangeal, are painful and tender. The left wrist is swollen, and the swelling extends along the back of the hand to the fingers. The skin on the back of the hand and round several knuckles is rose-coloured. The right shoulder is stiff. Lower limbs: Both hips stiff, painful, and tender. Left knee painful and a little swollen; much tenderness near the patella, and bagging on each side of the bone; the popliteal space feels tense. Other limb-joints free. The spine is stiff and tender, especially in upper dorsal region. There is tenderness over the clavicle, most marked at sternal and acromial ends. No evidence of cardiac disease. Tongue moist and a little furred. Temperature 103·1°; pulse 108.

November 24.—Patient perspired freely yesterday afternoon. Skin is hot and moist this morning. Slept well. Upper limbs: No spontaneous pain in left. He is unable to move his shoulders at all, and has pain in moving wrist and elbow. There is pain in the right limb, but no joint is swollen; and whereas the left wrist is decidedly swollen and free from pain, the right wrist looks normal and yet is the seat of much pain and tenderness. Lower limbs: The right hip-joint is painful, and the groin is tense and tender; there is also

tenderness over the great trochanter. The left groin is a little tender. Darting pains are felt in right calf. Sharp shooting pains in upper part of spine, and great tenderness over cervical vertebræ. There is no spontaneous pain along sternum, but both sterno-clavicular joints are extremely tender, and there is a little tenderness over inner ends of second rib cartilages. Temperature 102·6°; pulse 94; respirations 24. Ordered thirty grains of salicin every two hours; first dose taken at 6 p.m.

25th.—Upper limbs: Left shoulder only a little stiff. Joints of right limb rather worse; the right wrist is now swollen, and it and two metacarpo-phalangeal joints are very tender. Much tenderness also over external condyle of humerus. Sternal joints as before. Spine still stiff. Urine very acid, specific gravity 1032. Temperature 102·4°; pulse 94; respirations 22.

26th.—Slept a little. Is now free from spontaneous pain. The calf of the left leg, the right wrist, and the joints of the right fingers cannot be moved without pain. Both shoulders are somewhat stiff. Perspired less last night than before. Skin now very moist. Slight tremor of hands when held out. Temperature 102·1°; pulse 92.

27th.—No salicin could be obtained last night, and none has been taken since 6 p.m. First dose this morning at ten. Sweated last night; slept soundly. He says that since admission skin has been always moist, and that occasionally sweating has been profuse. He is confident that sweating is increased by the medicine, for in about twenty minutes after a dose he feels drops of perspiration coming out at the roots of his hair, and round the neck, and on the body. The reaction of the sweat is found to be alkaline. Both shoulders tender and stiff. The right wrist is swollen, but not tender. Still slight tenderness over cervical vertebræ. Urine moderately acid, specific gravity 1032. Temperature 100°; pulse 80. No sweating in afternoon.

28th.—Slight sweating during night. Skin dry since 4 a.m. No salicin given at 4 a.m. and 6 a.m.

29th.—Aspect much brighter. Skin quite dry. Slight tremor of hands. Ringing noises in head. Both shoulders a little stiff, and right wrist tender. Urine alkaline (turns red litmus purple), specific gravity 1030. Temperature normal since 10 a.m. yesterday. No salicin taken at 2 a.m.; now to be taken every four hours.

30th.—No joint-pain; temperature normal, and remained so till his discharge on December 3. Urine faintly acid, specific gravity 1020.

December 2.—Urine neutral, specific gravity 1010.

Summary.—Patient was admitted on the fifth day of illness. His temperature then was 103·1°, and many joints were the seat of pain, and some of swelling. The next day his temperature was 102·6°. At 6 p.m. he began to take thirty grains of salicin every two hours; and after taking 840 grains his temperature was normal, and remained so for the five following days during which he was under observation. Tenderness and stiffness continued till 1350 grains had been taken.

Remarks.—The first attack of joint-pain occurred in the wrists, and followed a local application of damp linen. Such a direct sequence of events is rare. It is also interesting to notice, though the fact is doubtless a mere coincidence, that his father was specially subject to wrist-pain. The tenderness in the sterno-clavicular and sterno-costal joints is worthy of notice. That the reaction of the sweat, usually acid, and especially acid in rheumatic fever, should in this case have been alkaline is exceedingly remarkable. The urine tested the same morning was moderately acid, but two days afterwards alkaline. It is noticeable, too, that the urine at other times during treatment never showed excessive acidity.

Conclusions.

Pain.—Dr. Maclagan says that "the relief of pain is always one of the earliest effects produced." The present cases fully bear out this conclusion; and even when the pain was persistent, and migrated from joint to joint (as in Cases 5 and 6), it was not severe, and there was usually no subsequent swelling. Dr. Maclagan's sixth and seventh conclusions are: that "in acute cases, relief of pain and fall of temperature generally occur simultaneously," and that "in subacute cases the pain is sometimes decidedly relieved before the temperature begins to fall." The present cases do not support these two propositions. In three acute cases (Cases 1, 4, 7) the joint-pain ceased at least twenty-four hours before the temperature began to fall, and at least four days before it became normal. In three others (Cases 2, 5, 6) the temperature become normal before cessation of pain, and in two of them the pain "persisted." In Cases 3 and 8 the pain subsided and temperature became normal simultaneously. Perhaps the beneficial action of the drug on the pain ceases when the temperature becomes normal.

Cardiac Complications.—The present cases support Dr. Maclagan's statements. In only three did a murmur develope whilst taking salicin: this was in each case a distinct apex-systolic, and it disappeared before the drug was discontinued. In one case a murmur developed after the discontinuance of the drug. In the other four cases no murmur existed, though the soft, low first sounds in two of them suggested the anticipation of murmurs.

Sweating.—Profuse in three cases; produced miliaria in one of them; was alkaline in a third. In all the rest the skin was simply moist.

The *urine* never gave any large deposit of lithates; was usually only moderately acid, and on one occasion was alkaline. Salicin was detected in the urine in one case six hours after administration, and gave the purple reaction as late as the fourth day after the discontinuance of the drug—in this respect differing notably from quinine.

Pain Disappeared—

Initials of patients.	After. grs.	On day of Treatment.	On day of Disease.
Case 1. S. B. . .	1,080	4th	10th
2. B. L. . .	1,260	4th	14th
3. A. S. . .	720	3rd	9th
4. L. W.	1,500 together with 90 grains salicylic acid.	6th	19th
(*Relapse*)	1,230	3rd	4th
5. E. R. . .	Persisted.	—	—
6. G. P. . .	Ditto	—	—
7. T. B. . .	980	6th	18th
8. W. M. .	1,100	4th	25th
(*Relapse*)	1,350	5th	5th
Average . .	1,163¾	4⅘th	13th

Temperature became Normal—

Initials of patient.	After. grs.	On day of Treatment.	On day of Disease.
Case 1. S. B. . .	2,880	8th	14th
2. B. L. . .	900	3rd	13th
3. A. S. . .	720	3rd	9th
4. W. L.	Probably 3,000 grains, including salicylic acid.	12th	23rd
(*Relapse*)	1,590	4th	5th
5. E. R. . .	570	2nd	9th
6. G. P. . .	1,100	4th	24th
7. T. B. . .	2,950	19th	31st
8. W. M. .	1,100	4th	25th
(*Relapse*)	840	5th	5th
Average . . .	1,565	6⅖th	15⅕th

Obs.—The relapses are reckoned in the above table as separate attacks.

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 9th inst., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £100 was distributed among the various claimants.

The "Archiv für Anatomie und Physiologie."—This journal, which has during the greater part of the present century exercised so powerful an influence on the progress of scientific medicine, under the successive denominations of Meckel's, Müller's, and Du Bois-Reymond's *Archiv*, is about to cease to appear in its present form. In accordance with the principle of division of labour, and the system of splitting up subjects, which has become so marked a feature of the German, and we may add of the French medical journalism of the present day, it is to be divided in future into two separate journals. One of these, devoted to physiology, is to be edited by Profs. Du Bois-Reymond and Ludwig; and the other, confined to anatomy, is to be edited by Profs. Braune and His.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JANUARY 13, 1877.

THE MODEL DWELLING-HOUSE.

When the Social Science Congress was held at Brighton, in the autumn of 1875, Dr. B. W. Richardson, the President of the Health Section, gave a poetical, and, we may well add, an instructive, picture of a "model City of Health,"—a "theoretical outline of a community so circumstanced and so maintained by the exercise of its own free will, guided by scientific knowledge, that in it the perfection of sanitary results would be approached, if not actually realised, in the co-existence of the lowest possible general mortality with the highest possible individual longevity"; and he has now, in the first of two lectures on "Health Improvements in Great Cities," delivered at the London Institution, "told us how our houses ought to be constructed." His ideas are all large; his reforms all sweeping; and he starts by saying that "for purposes of health the houses on this island require to be rebuilt or remodelled from Land's End to the Hebrides,"—a statement rather alarming to all but architects and builders. With these classes of society the lecturer will, no doubt, become, if he is not already, very popular, and will probably be elected an honorary fellow or member of their associations or societies; even though, while allowing that "about some" of our houses there is a certain element of beauty, he declares that he "has not been able to discover one house in the island constructed on a plan perfect for the requirements of the healthy existence of its inmates."

In the first part of his lecture Dr. Richardson gave a slight sketch of the rise and growth of "all our new knowledge" on the subject of what is essential to make a dwelling-house healthy; and then went on to say that we must have pure air, pure water, purity from damp, pure daylight, and equable temperature: "these are the five fingers of the right hand of health. They are little known, but the knowledge exceeds the practice of them." Our buildings spring, he said, from three sources—the cave, the castle, and the cloister; and the progressive development of practical learning in the building of houses had been much delayed and modified by political causes. But political circumstances in England had now become very favourable to improvement; and while waiting for the gradual development of a model city, he described a simple model house for the metropolis, "such a one as he would, if he could, build for himself." The construction of the basement must be reformed, as he told us before: "it saps the health of the occupants of the house more than any other deteriorating influence." Its walls and rooms are surrounded by the damp earth; all the rain that falls near the house splutters down into them; rain- and closet-pipes find their easiest points of leakage near them; and all kinds of processes that produce dampness of air go on within the rooms. So that the occupants of a house living above wet basements, with fires to draw up the water, are "in a worse position than if they lived in a city raised on piles above a lake." Food is, moreover, rapidly decomposed in the damp air, and its particles carry infection through the house. All this must be changed. The basement should "no longer be a living-place, a cooking-place, a laundry, bottle-vault, refuse-store, larder, servants' bedroom, drain-trap, and lavatory." It is to be an arched subway of one or more arches, with a free current of air through each. It will contain a closed receptacle for all the house-refuse, transmitted by means of an outer shaft; and "a closed tumbling-bay, into which the soil-pipe would discharge." Water- and gas-pipes are to enter the house through it; one or more of its arches may be fitted up with furnaces or stoves, through which air can be drawn, and then, heated and purified, passed up into the house; and some rooms in the arches may be even converted into hot-air baths. But the basement is never to be entered by any direct shaft communicating and forming a distinctive connexion with the rooms above it. Next, the construction and site of the staircase must be changed. Dr. Richardson draws up a terrible indictment against the present staircase, and, on purely sanitary grounds, a verdict of "guilty" might be obtained on every count. "In the present construction the staircase is the shaft of the dwelling through which all the products of respiration, combustion, and other forms of volatile impurity rise from the lower to the upper floors. It holds an open communication with all parts, and while it allows for the diffusion of every volatile impurity and damp, it prevents all possibility of maintaining through the house an equitable and agreeable temperature. It is the great source of draughts, and it lessens the size and comfort of every floor. It enforces that all the water-closets shall be included actually in the living part of every dwelling—one of the most unwholesome and objectionable of all modern arrangements." In the model house the staircase is to be placed in the rear of the building, in a distinct shaft or tower of its own, leading straight from the ground floor to above the level of the house. On each floor there is to be a door, and each flat is to be independently warmed, lighted, and ventilated; and all that should not be in the house would be in the shaft—ventilating-tubes, closets, lavatories, and a lift. Then, as in the houses of the City of Health, the kitchen is to be on the upper floor of the house, as also the servants' dormitories. From a spare boiler in the kitchen hot water would be supplied to all the other floors; and the kitchen sink would open into the dust-shaft. Finally, on the flat asphalted roof of the house there is to be a glass-covered garden, in which the stair-shaft would end; "and if any impurities reach this covered garden, with its summer temperature always derived from the kitchen just beneath it, these impurities will be consumed by the plants."

It was announced some time ago that a company was being, or going to be, formed to carry into practice Dr. Richardson's idea of a model City of Health: and we may surely hope that

some enterprising architect and builder will be found to much sooner erect a sample of the model house. There does not seem to be anything impossible or difficult about it, so far as the construction is concerned. But we suspect the occupier of the model house would need to have a model income; and it is always difficult to overcome the prejudice against even small innovations in general plans of building and construction; while, further, it would in all probability be very difficult to find servants who would submit to being relegated to the top of the house, though the education of the day is to furnish them with all the virtues, and none of the vices of civilisation. Be all this as it may, however, Dr. Richardson is doing a good work by his sanitary lectures and addresses. For the gradual general diffusion of a knowledge of sanitary art and science, there is nothing like the late President Lincoln's "pegging away," and Dr. Richardson has the happy art of always doing this in an especially attractive, striking, and eloquent way.

There is, however, one objection that may be made to his sanitary proposals—they are too great and grand; too much like Utopian dreams. It is true that we are always advised to "aim high"; but the aim must be at something practical and capable of realisation, or the arrow will be spent on the empty air.

MARRIED WITHOUT LEAVE.

A QUESTION of some importance is raised by the proceedings of a jury at a coroner's inquest which took place at Woolwich on January 3. A soldier's child died, as alleged, in consequence of the refusal of a military medical officer to afford medical attendance, and the officer pleaded "regulations" as a reason for his non-attendance. The jury declined to accept such a plea, and blamed the medical officer. The question we must ask ourselves is, whether any "regulations" can limit the claims of suffering humanity upon the State-paid members of the medical profession. It would appear that regulations can limit the relief which the medical officer may be able to afford, but cannot relieve the medical officer from personal attendance, even when he is forbidden to exercise freely his professional knowledge. The public "sentiment" holds that the cry of suffering is sufficient warrant for the best attentions of all medical men, who must not stop to reason about ways, or means, or expense, but obey the trumpet-call of duty, and rush off to the valley of death, heedless of all considerations excepting that "help" is needed. Public "opinion" as distinguished from "sentiment" is more cautious. It balances the claims of the healthy and the industrious against those of the sickly and non-working members of society, and all State departments make regulations for the medical attendance to be conferred upon State patients. But the rules seem always intended to qualify the nature of the assistance to be rendered rather than the amount of personal attendance to be afforded. The guardians of parishes are careful to lower the scale of medical treatment, but never dream of interfering with the personal exertions of their medical officers. The only thing forbidden by "regulations" is that parish doctors should lavish upon paupers the medical comforts they would prescribe for persons who can pay their own bills. The guardians compel the doctors to moderate their professional enthusiasm, and to recollect that any disease in a pauper is so modified by his poverty that it requires different treatment from what it would receive if occurring in a ratepayer. The doctor's duty consists in personal attendance upon the paupers, and non-attendance is the one sin which cannot be forgiven. But the regulations which insist that the parish doctor shall, at least, look upon the pauper patient, by no manner of means relieve the doctor from any claims which passing tramps and wandering gipsies may have upon his humanity. The guardians would tell him he is not bound to furnish attendance upon outcasts who do not belong to the parish; but the officers of the law can do no more than this for their own medical officer. They hand him over to public "sentiment," and woe to the doctor who falls under its ban. The army medical officer is in some respects differently situated from his civilian brother, who is equally employed in rendering medical aid to persons entitled to gratuitous medical attendance. The army doctor does not supply his own drugs, and he is permitted to order medical comforts on his own responsibility. But the advantage enjoyed by the army medical practitioner, in the State supply of medicines and medical comforts, is counterbalanced by the restrictions placed upon their issue. The army doctor, as well as the parish doctor, may be called upon for treatment by persons who have no claim upon the State, and "regulations" seem helpless to shield him, and, at the same time, he is in a worse position to fight the battle of life or death than the parish doctor. The latter, if called upon for aid by tramp or gipsy, has at least a private stock of medicines and appliances of his own; but the army doctor called upon for medical attendance has nothing. His medicines and his implements are the property of the State, and he must not touch them. Is the military medical officer, thus unfurnished with the implements of his art, relieved from the necessity of personal attendance? Public sentiment says, No; regulations cannot shield him; he must go when he is sent for, and it matters nothing that the person who claims his assistance has no right to ask it,—it matters nothing that he is disabled by "regulations" themselves from affording aid,—he must go. In the case of the soldier's child at Woolwich, everything would seem to excuse the non-attendance of the doctor. The mother had been married for years, and married without leave. She was perfectly aware that she was not entitled to military medical attendance, and yet for years she had claimed it. Woolwich is not a place devoid of civilian practitioners, and yet she would have none of them. All she knew was that for years she had cried out for the military medical aid she was not entitled to, and she had hitherto received it. She relied upon public and private sentiment, and could afford to despise regulations. Probably on former occasions the military doctors had committed a military crime by giving State medicines away to this woman, who would not conform to regulations (for these have had to be reprinted and reissued). They say that "no medicines, medical or surgical appliances of any kind, shall be issued to the wife or children of any soldier who is not married with leave, and whose name, and that of his family, is not borne on the married roll of the regiment or company to which he belongs." The regulations, in fact, forbid the supply of medicines, but they do not shield the medical officer. Juries apparently think that, so far as attendance goes, those who are married without leave have a right to demand it. The doctor is wanted, at any rate; and personal experience has probably taught each juryman that medicine follows the doctor's visit as a natural consequence. But it would seem that although "regulations" cannot protect the army doctor, they are intended to restrain him from giving personal attendance; and, if so, the military medical officer is not only placed in a trying position, but also in a false one, when his assistance is demanded for the family of a soldier who has married without leave. The "coroner's officer" informed the jury that he had ascertained that lately *ten or twelve cases* daily were refused attendance, by the army medical authorities, on the ground that the people applying were "married without leave." There is reason enough why the State should discourage army marriages, and now that short service is the rule there is little excuse for men undertaking the responsibilities of married life; and the State may be justified in refusing to their families the benefit of State medicines and medical comforts. But it seems to us that, in common justice, the army medical officer should be protected. Regulations cannot do it; but

an "order" that no medical officer should attend the family of a soldier married without leave would enable the officer at least to defy sentiment, and direct public opinion to consider the action of the "War Office," instead of making a scapegoat of an army medical officer who merely complies with the spirit of "regulations."

TOXIC EFFECTS OF SALICYLIC ACID.

Professor Abelin, of the Hospice des Enfants Trouvés at Stockholm, has published some startling results of the treatment of various diseases in young children by salicylic acid. These results are recorded with great candour in a recent number of the *Nordiskt Medicinskt Arkiv*. They are worthy of note by way of caution in the use of salicylic acid, although we apprehend that no English physician would prescribe a dose of twelve grains of this remedy for a child at the breast.

The rapidity with which salicylic acid may be detected in the urine is well-known, and we are now also aware of the liability to adulteration of it with carbolic acid. In none of Professor Abelin's cases is the urine recorded as being olive-coloured, but the frequency of albuminuria is very important.

In Professor Abelin's clinic, salicylic acid was given as an internal antiseptic on a large scale in cases of diarrhœa with offensive stools. It was not observed to have any beneficial effect upon such cases, except to modify to a slight degree the offensive odour; and even in this respect it was found inferior to other remedies. In some of these cases nephritis occurred during the exhibition of the drug.

As an antipyretic, it produced a definite effect in a great number of cases, but, when given in a dose large enough to produce a lowering of temperature from 2° to 4°, was badly tolerated, and produced serious symptoms and great depression. In a dose of 0·8 to 1 gramme (*i.e.*, about 12⅓ grains to 15⅔ grains) it acted in an infant at the breast as a violent poison. It has also a very irritant action on the mucous membranes of the mouth and pharynx. This action prevents the child from swallowing and sucking. It produces rapidly a lowering of more than 5° Fahr., a considerable amount of collapse, irregular respiration, altered skin functions, and a strong fluxion of blood to certain viscera. The following case is given as an example:—A child at the breast, aged four months, up to that time healthy, became febrile from vaccination. Temperature in the morning 104°. Dejecta natural. Three vaccine bullæ beginning to suppurate.

Ordered fifteen grains and two-fifths of salicylic acid, to be divided into three portions. A good part was lost in struggling, so that not more than about twelve grains were actually taken. The child became rapidly restless, and unable to suck. The mouth and pharynx became coated with a thin white deposit. The child could not swallow; the pharynx got full of mucus. Respiration was difficult and rattling; there was obviously an obstacle to the entrance of air into the larynx. The face looked pinched; the eyes sunken. The temperature fell rapidly, and in two hours it was only 98·6°. The child got rapidly worse; the pulse small and unequal—160; face pale-yellow. There was inability to swallow and to utter a sound; and extreme restlessness.

It was only after persevering for ten hours with warm baths and cold douches, inhalations of steam to which carbonate of ammonia was added, and bathing with musk and opium, that there was a subsidence of these symptoms.

In two days' time there was pneumonia at the right base, and in four days at the left base. The urine was strongly albuminous; it deposited a crowd of lymphoid cells and hyaline casts.

The child now became able to swallow, but not to suck. It was treated with quinine, musk, wine, and enveloped in a cold wet sheet. The temperature did not exceed 100·2° Fahr. In proportion to the progress of the hypostatic pneumonia and the nephritis, the collapse and somnolence increased, and the child died on the tenth day after the administration of salicylic acid.

At the post-mortem there was emphysema in front, pneumonia behind. The kidneys were enlarged, capsule stripping easily; on the surface of one there were numerous extravasations. There was also hyperæmia of the pyramids, and the tubules of the cortex showed swollen and granular epithelium cells. In the pelvis of one kidney there were several ecchymoses.

To sum up, Dr. Abelin is of opinion that in young children the use of salicylic acid must be very restricted. In a dose of twelve to fifteen grains it acts as a corrosive poison; in smaller quantities it lowers the temperature wlthout acting beneficially on the course and symptoms of the malady.

THE WEEK.

TOPICS OF THE DAY.

So much has been written lately on the subject of hydrophobia, and the matter has recently been brought so prominently before the notice of the public, that, in considering one of the many theories advanced—namely, the influence of nervousness and debility in relation to deaths from this disease,—it may be thought desirable to know the ages of the different patients whose cases have been recorded. The registers of deaths in England caused by hydrophobia in 1874 (the latest return of causes of death at different ages) show one girl under 3 years old; two boys 3 years old, but under 4; one boy 4, but under 5; eight boys 5, but under 10; two boys and three girls 10, but under 15; one young man 15, but under 20; six men and one woman 20, but under 25; ten men and one woman 25, but under 35; twelve men and one woman 35, but under 45; five men and two women 45, but under 55; three women 55, but under 65; and two men 63, but under 75 years of age. The total reached sixty-one in all. The small number of deaths from hydrophobia in Scotland and Ireland is very remarkable; in the five years 1870-74 there were no less than 216 such deaths in England, but in Ireland only one—namely, of a woman in 1870, who was 25, but under 35 years of age. The returns for Scotland do not come down to so late a date; they show no such death in 1868; none in 1869; one in 1870, of a man of 55, but under 60; four in 1871—a boy under 2, a girl 3 but under 4, and two men 30 but under 35 years of age; in 1872 none at all.

An inquiry was held last week, by the Coroner for West Kent, touching the death of Mary Ann Webster, aged three years, daughter of a driver in the Royal Artillery, residing at Woolwich. From the evidence of the mother it transpired that the deceased was taken ill on Christmas-day, and the next day, as deceased became worse, application was made to the Military Auxiliary Hospital for advice. After asking her a number of questions, however, the mother was referred to the parish for medical assistance. On her return home she found the child dead. She had always obtained the services of an army doctor at other stations; she had been married seven years, and had two other children. It further appeared that the refusal of the army medical officer to attend was on account of the soldier having married without leave; and a circular from the Army Medical Department, issued last November, was produced to substantiate such refusal. Medical evidence proved that death was caused by collapse of the lungs. Several of the jury expressed their displeasure at the conduct of the medical officer, but the coroner held that the order was a justification. The jury, however, differed from him, and, at their request, he promised to write to the Secretary of State for War on the subject. The coroner's officer,

who had seen the medical officer referred to, said that he was told that in consequence of the order they sometimes had to refuse ten or twelve applications daily. The following is the circular:—"No medicines, medical or surgical appliances of any kind, should be issued to the wife or children of any soldier who is not married with leave, and whose name, and that of his wife and children, is not borne on the married roll of the regiment or corps to which he belongs."

The *Scotsman* says:—"The official denial given to the statement that the illness of Lord Eustace Cecil, the Surveyor-General of the Ordnance, was caused by the imperfect sanitary arrangements of the War Office, and the assertion that there has not been an unusual amount of sickness among the staff at Pall-mall during the last year arising from the same cause, has been received with astonishment among the War Office *employés*. It is alleged that the existence of cesspools in close proximity to the foundation of the western end of the building is notorious, and that a number of the members of the staff occupying the rooms close to these cesspools have during the past twelve months been on sick leave in consequence of the blood-poisoning arising therefrom." It is, of course, to be presumed that the official who signed the contradiction referred to was in ignorance of a state of things which has been a subject of comment in many clubs for some time past, and is a matter of notoriety.

Subject to the payment of certain legacies, etc., Dr. Cesare Alessandro Bressa, by his will dated September 4, 1835, left all his property to the Royal Academy of Sciences of Turin, for the establishment of a biennial prize, to be adjudged in the following manner, viz.:—The interest of the first two years to be given as a prize to that person, whatever his nationality may be, who, during the previous four years, shall have made the most important discovery in, or published the most valuable work on, natural and experimental philosophy, natural history, mathematics, chemistry, physiology and pathology, geology, history, geography, or statistics. The interest of the next two years to be given to an Italian who shall fulfil the above-named conditions. Dr. Bressa further directed that the prize should "continue to be distributed in the same order." The Bressa legacy having now become available, the Royal Academy of Sciences of Turin has given notice that the first prize (value nearly £500 sterling) will be awarded in 1879, and that, in accordance with the spirit of the testator's will, it will choose the best work or discovery, whether the claim be put forward by the author or not. In 1881 the second Bressa prize will be awarded, but on that occasion it can only be given to an Italian.

In addition to the recent circular addressed by the Poor-law authorities to all the unions in the metropolis to provide hospital accommodation for small-pox patients, the Local Government Board have found it necessary to address all the vestries and district boards in the metropolis on the subject. The circular issued on Thursday states that "the Local Government Board regret to find that small-pox is still extending in the metropolis. It appearing that the Metropolitan Asylums Board have only thirteen beds at their disposal, and having regard to the pressing necessity which evidently exists for better accommodation for non-pauper cases, the Board beg to draw the attention of district boards and vestries to the subject, with a view of making provision, under Section 37 of the Sanitary Act, 1866, to meet the emergency. The Board wish to point out distinctly that the hospitals provided for the reception of patients by the Metropolitan Asylums Board are specially intended to meet the requirements of the destitute class, and that admission to those hospitals of persons not in need of poor relief is altogether exceptional, and is only allowable on the condition of great urgency, and of there being sufficient accommodation for the patient without infringing on the space required by paupers. Looking to the proportions the epidemic is likely to assume, the Local Government Board cannot hold out any expectation that the accommodation at the disposal of the Metropolitan Asylums Board will exceed the amount required by the pauper class, and therefore beg to impress on boards of works and vestries the importance of exercising the beneficial powers conferred on them by making as early as possible ample provision for that large class of persons not needing relief, but whose isolation in hospital is necessary for preventing the spread of the disease." At a special meeting of the Metropolitan Asylums Board, held last week, it was stated that the Homerton Committee had inspected premises in Limehouse capable of accommodating about 200 patients, which it was believed could be prepared for the reception of convalescent small-pox patients within a fortnight, at a comparatively small outlay; moreover, the proprietor was willing to let the premises for this purpose. The Committee recommended "that the premises be taken for one year, at a rental of £2000, for the purposes of a temporary infectious hospital, and that the Committee be authorised to take all necessary steps to prepare the place for hospital purposes." In answer to some questions, it appeared that the local authorities of London had not generally prepared hospitals for small-pox cases, but some had done so—namely, Paddington, St. Olave's, St. George's (Hanover-square), and Greenwich.

We have received a copy of the Report of the Committee of Management of the Devonshire Hospital for the year 1876. It will be remembered that this Hospital has been added to the means of usefulness of the Buxton Bath Charity, having during eighteen years afforded board, lodging, and attendance to a much larger number of in-patients than the total number of patients treated in the older institution with which it was incorporated in the year 1859. The financial position of the Hospital at the end of the year, we are pleased to learn, affords continued reason for thankfulness, and probably shows in some degree the amount of assistance to be expected from the public whenever the full extension of the Hospital may be conceded.

The members of the Urban Sanitary Authority of Portsmouth assembled last week to meet Dr. R. Thorne Thorne, of the Medical Department of the Local Government Board, on the subject of the erection of a fever hospital for the borough. The meeting appears to have been by no means a unanimous one, and the proceedings commenced with an endeavour to exclude the representatives of the press. This having been overruled, Dr. Thorne proceeded to impress upon the meeting the extreme importance which existed for the provision by them of some means of isolation for infectious diseases, for persons other than paupers, within their district. He alluded to the great mortality which had taken place in the recent outbreak of scarlet fever from which the town had suffered, and which might possibly have been much reduced had the Sanitary Authority been in possession of means for isolating the early cases of the disease. The discussion which followed Dr. Thorne's address did not display such tokens of cordial co-operation as would lead to the conclusion that the Sanitary Authority at Portsmouth were actively imbued with the necessity of the course pointed out by him. It would seem that differences of opinion exist between the lay members of the Sanitary Authority and the medical profession; but without entering at all into the merits of the case, we can only say that the proposed hospital is a necessity for a large and important town like Portsmouth, and the sooner all personal grievances are forgotten, and the building finished, the better it will be for every class of the community.

The following are the names of the committee appointed by the Admiralty to inquire into the cause of the outbreak of

scurvy in the Arctic Expedition:—Admiral Sir James Hope, G.C.B. (President); Admiral Sir R. Collinson, K.C.B.; Vice-Admiral E. A. Inglefield, C.B.; Dr. James Donnet, Inspector of Hospitals, R.N.; Dr. F. R. Fraser, F.R.C.S.E. Mr. Vansittart Neale has been appointed Secretary.

It is reported from Burnley that a large farmer at Blacko, near Barrowford, with typhoid fever in his house, has been supplying milk to a large number of people at Barrowford, and there are now over fifty cases of typhoid fever at this latter place, which is near to Burnley.

At a meeting of the Weekly Board of St. George's Hospital, held on January 10, it was resolved that a special department should be formed for the treatment of patients suffering from diseases of the throat. Dr. Whipham was appointed to take charge of the same.

THE PUBLIC HEALTH.

The following is the weekly return of births and deaths in London and in twenty-two other large towns of the United Kingdom for the week ending Saturday, January 6:—During the year 1877 the area embraced by the weekly returns will be the same as in 1876. The returns will contain information relating to twenty-three of the largest cities and towns of the United Kingdom, having an aggregate population estimated to the middle of the year at 8,144,940 persons, and also to a population of 834,063 persons residing in the London outer ring; the returns will thus relate to a population of 8,979,003—only a few thousands less than nine millions. The estimated population of these towns in the middle of 1877 showed an increase of 153,229 persons, or 1·7 per cent., upon the estimate for the middle of 1876. The weekly return will contain, as before, through the courtesy of various authorities abroad, information as to the recent deaths, prevailing epidemic diseases, and rates of mortality in twenty-five great cities situated in the four quarters of the world, and having a population of about ten millions. During last week 6211 births and 3673 deaths were registered in London and twenty-two other large towns of the United Kingdom. The natural increase of population was 2538. The mortality from all causes was at the average rate of 24 deaths annually in every 1000 persons living. The annual death-rate was 25 per 1000 in Edinburgh, 26 in Glasgow, and 32 in Dublin. The annual rates of mortality per 1000 last week in the twenty English towns, ranged in order, from the lowest, were as follows:—Norwich, 14; Hull, 19; Plymouth, 19; Sheffield, 20; Oldham, 20; Bristol, 21; Portsmouth, 21; Nottingham, 21; Leicester, 21; Bradford, 22; London, 22; Birmingham, 22; Leeds, 22; Wolverhampton, 23; Brighton, 24; Newcastle-upon-Tyne, 26; Liverpool, 27; Sunderland, 28; Manchester, 29; and Salford, 30. The annual death-rate from the seven principal zymotic diseases averaged 3·6 per 1000 in the twenty towns. No death from these seven diseases was registered in Norwich, whereas the zymotic rate was equal to 5·1 in Manchester and 7·4 in Salford. The deaths referred to small-pox in the twenty towns were 146, against 125 and 104 in the two preceding weeks; 116 occurred in London, 22 in Liverpool, 6 in Salford, 2 in Manchester, and not one in any of the sixteen other towns. In London 2819 births and 1507 deaths were registered. Allowing for increase of population, the births exceeded by 200, whereas the deaths were 243 below the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the two previous weeks had been equal to 21·8 and 22·6 per 1000, was last week 22·3. The 1507 deaths included 116 from small-pox, 28 from measles, 25 from scarlet fever, 12 from diphtheria, 32 from whooping-cough, 22 from different forms of fever, and 18 from diarrhœa; thus, to the seven principal diseases of the zymotic class 253 deaths were referred, against 237 and 235 in the two preceding weeks. These 253 deaths were 6 below the corrected average number from the same diseases in the corresponding week of the last ten years. The 85 fatal cases of measles, scarlet fever, and whooping-cough were, in the aggregate, 83 below the corrected average. The 12 deaths from diphtheria showed an excess, and included 6 in South London, of which 2 occurred in Bermondsey. The 22 deaths referred to fever were 18 below the corrected average; 3 were certified as typhus, 14 as enteric or typhoid, and 5 as low or simple fever. The 298 deaths referred to diseases of the respiratory organs showed a decline of 54 from the number in the previous week, and were 163 below the corrected average weekly number.

THE DEVELOPMENT OF ANIMAL HEAT.

A new light is thrown upon the above subject by an experimental essay lately published by Dr. S. Samuel ("Ueber die Entstehung der Eigenwärme und des Fiebers"; Leipzig, 1876; Vogel), in which the author endeavours to prove that the *muscles*, especially those of the limbs, are the chief sources of animal heat. In experiments on rabbits, he found that if both subclavian and femoral arteries were simultaneously ligatured, or if the cervical plexuses of the sciatic and crural nerves on both sides of the body were divided, the temperature in the rectum immediately fell as low as 20° Cent. (68° Fahr.), or lower, its rate of falling being somewhat affected by the external temperature of the air. On the other hand, if the arteries were ligatured and the nerves divided in one and the same animal, the effect was not greater than if only *one* of these operations were performed. We should state that in animals treated exactly as the others were, as far as the preliminary incisions, etc., were concerned, but whose arteries were not ligatured, nor the nerves divided, there was only a transient fall of temperature of a few degrees, the normal level being speedily recovered. The author regards the products of tissue-change in the muscles, not only during action, but also during rest, as, so to speak, the fuel whose combustion in the blood by oxidation gives rise to heat. Dr. Samuel compares the effects of arterial ligature, or the section of the above-mentioned nerves, upon the temperature to those which follow section of the spinal cord, the latter, according to him, being due to the exclusion of the muscles from any share in the production of heat. The equilibrium between production of heat and loss of heat is maintained by the connexion between the spinal nervous centres which regulate heat-production, and those centres which are specially concerned with its emission; and in healthy subjects a uniform temperature is maintained in the body, owing to the fact that the centres connected with the nerves which contract the bloodvessels and so regulate the escape of heat, and the centres from which spring the muscular nerves which regulate heat-production, are mutually connected, and that they are excited by cold and depressed by warmth. Injury or extirpation of internal organs, ligature of abdominal vessels, or section and extirpation of portions of the sympathetic and other abdominal nerves, were followed by very varying effects on the temperature; for example, while extirpation of the kidneys and supra-renal capsules caused a severe fall of temperature and death, ablation of the abdominal sympathetic nerves or extirpation of the spleen caused no alteration in it, nor did the removal of large pieces of the liver produce any constant effect. Dr. Samuel, it should be stated, regards the changes in temperature which follow injuries of the abdominal organs such as the above as due, not to the suppression of powerful sources of heat, but to the reflex effects of the depressing action of such injuries on the centres which control the formation of heat. The enormous share which the muscles must take in the production of heat is shown by the effect of the ligature of all four arteries of the limbs in an animal in which fever has been artificially induced by some septic substance. Before the ligature its temperature

only sank at the utmost a few tenths of a degree Cent., althongh the temperature of the external air was as low as — 5 Cent., and it was exposed to it for seven to eight hours; but after the operation, even though the external temperature was as high as + 10° Cent., the bodily temperature fell so much in a few hours that the animal died.

THE HARVEIAN SOCIETY.

This Society held its annual meeting and *conversazione* on Thursday last, the 4th inst., at its rooms in Titchborne-street. The treasurer's report was satisfactory, and the report of the Council showed that the number of members was increasing, and that the papers read were of a high order. The retiring president, Dr. Frederick Cock, then read his address. He alluded to the loss the Society had recently experienced by the death of prominent members, to the anti-vivisection legislation, and to the course of medical study. He spoke in favour of the old apprenticeship, and thought there ought to be a larger tutorial element in the present medical teaching. He finished by reviewing the present position of medicine, and said that self-respect would ever command the respect of others. A vote of thanks was proposed by Mr. W. Adams, and seconded by Dr. Sedgwick; after which followed the usual votes of thanks to the different officers of the Society. One marked feature in the *conversazione* of the Harveian Society is its exhibition of works of art by members of the medical profession. There were pictures, water-colour drawings, and etchings by Sir Henry Thompson, Drs. Buzzard, Blandford, and Gilbert Smith, Messrs. Prescott Hewett, Seymour Haden, Lennox Browne, Evershed, Propert, and Orrock. Amongst them were works of much merit. Some fine paintings by well-known artists were lent by Dr. Farquharson. Some new lustre-ware of novel material and original design was exhibited by Dr. Reginald Thompson. The show of instruments by Messrs. Pratt, Arnold and Sons, Mayer and Meltzer, and Krohne and Sesemann, was large and interesting; while some beautiful microscopic slides were shown by Mr. Wheeler and Mr. Collins. The following is the list of office-bearers for the ensuing year:—*President* *Mr. T. Carr Jackson. *Vice-Presidents:* Dr. Thomas Morton, Mr. W. F. Teevan, *Mr. William B. Owen, *Dr. Hughlings-Jackson. *Treasurer:* Mr. Henry Power. *Honorary Secretaries:* Mr. H. E. Sewell and Dr. J. Milner Fothergill. *Council:* Dr. John Easton, Dr. E. Symes Thompson, Mr. H. Cripps Lawrence, Mr. George Eastes, Dr. Robert Farquharson, *Dr. F. Cock, *Dr. J. S. Ramskill, *Dr. Alfred Meadows, *Dr. Percy Boulton, *Mr. Stamford Felce, *Mr. F. J. Gant, *Mr. George Field. An asterisk is prefixed to the names of those gentlemen who did not hold the same office the preceding year.

FATAL CASE OF PEMPHIGUS.

We well remember how, when we saw our first case of severe pemphigus—being impressed by the very gloomy prognosis of this disease in a well-known text-book,—we gave a most unfavourable opinion; but as this case, and many subsequent ones, recovered, and none of our friends were able to recall in their experience a *fatal* case of pemphigus pure and simple, we began to doubt such occurrence. In the *Centralblatt für die Medicinischen Wissenschaften* of December 23 there is at last a reference to a fatal case, and some notes on the microscopic appearances, by J. Neumann. This unusual case, we are told, occurred in a lady who, during four months, suffered from a bullous eruption, and ultimately succnmbed from marasmns. Where the bullæ burst a dark-red-coloured excoriation showed itself. A few days later exuberant growths began to form in the centre, after the manner of condylomata lata, which increased more and more, and gave ground for the suspicion that one had to do with a case of frambœsia syphilitica or a vegetating cutaneous syphilide. However, all anti-syphilitic means were fruitless, and the disease soon manifested itself as a typical specimen of pemphigus foliaceus. The contents of the bullæ gave an alkaline reaction, and urea was found present in small quantity. The disease was ushered in with slight anginal difficnlties, depending on efflorescence of the pemphigus in the mouth and pharynx. Microscopic investigation gave papillæ which in height and breadth were considerably enlarged, and were pervaded by widened vascular loops, which took up the greater part of the papillæ. The tissue was very vascular, separated asunder by cell-infiltration, the cutis fibres swollen and loosened. There was much granular pigment generally distributed, free and in cells. The hair follicles and sebaceous glands were present; the hairs, together with their sheaths, fallen out. The sweat-glands were enlarged, and filled with brownish-yellow-coloured masses. The horny epidermic layer was completely wanting, and the cells of the rete were sparingly present. The question may perhaps be raised, whether the severe type which this case assumed was in any way dependent on the anti-syphilitic treatment adopted. It is well known that a frambœsiform skin lesion is one of the forms which arise occasionally during the exhibition of iodide of potassium.

SMALL-POX IN LONDON.

The epidemic of small-pox in London is steadily increasing. The deaths from that disease, which had been 75, 97, and 75 in the three preceding weeks, rose last week to 116, the highest weekly number during the present epidemic; 45 were certified as unvaccinated, 40 as vaccinated, and in the remaining 31 cases the medical certificates did not furnish any information as to vaccination. The 116 fatal cases included 47 in the Metropolitan Asylum Hospitals at Homerton, Stockwell, and Hampstead, 5 in the Highgate Small-pox Hospital, 2 in the North-street Infirmary (Poplar), 1 in an ambulance, and 1 in the House of Correction; the remaining 60, or 52 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 15 of the deceased small-pox patients had resided in Lambeth, 11 in Poplar and Bow, 10 in Hackney, 9 in Battersea, 9 in Stepney, 6 in Camberwell, 6 in Kensington, 6 in Southwark, and 5 in Pancras; in all (excluding 2 Acton cases, and 2 of which the previous residence was unknown), 15 belonged to the West, 22 to the North, 2 to the Central, 27 to the East, and 46 to the South group of districts. The fatal cases showed a marked increase in East and Sonth London. The Metropolitan Asylum Hospitals contained 859 small-pox patients on Saturday last, against numbers increasing steadily from 185 to 823 in the ten preceding weeks. About 200 cases were necessarily refused admission during the week, all the available beds being occupied. At a meeting of the City Commissioners of Sewers, held at Guildhall on the 9th inst., Mr. Frederick Cox presiding, the Medical Officer of Health (Dr. Sedgwick Saunders) reported that during the Christmas vacation of three weeks fifteen cases of small-pox had happened in the City, fourteen of the patients being between the ages of twenty-three and twenty-five, and he expressed his conviction that they would all have escaped if they had been revaccinated, which they had not. The circular letter from the Local Government Board, with reference to the provision of accommodation for small-pox patients other than paupers, was read to the Commission, and, on the recommendation of Dr. Saunders, they resolved to take steps to provide vaccination-stations for adults in various parts of the City, and also to make some arrangements for the care of convalescent patients recovering from small-pox.

MICROCOCCI IN THE LUNGS IN SMALL-POX.

The Prosector of the Medico-Chirurgical Academy of St. Petersburg, Dr. N. Jvanowsky, reports an interesting observation on this subject in the *Centralblatt*, November 5, 1876. He

has found in the lungs small disseminated nodules, not larger than a pea, in eight post-mortems out of fourteen made on small-pox patients in the last three years. The nodules occur in the lower lobes, and have a reddish or else a grey colour. Microscopically, in the red nodules the alveoli are found filled with a multitude of cells like white-blood cells, lying in a meshwork of coagulated fibrine. With these are numerous red cells. The grey nodules represent a retrograde condition of the same process, the cells having undergone more or less fatty degeneration. These changes in both kinds of nodules are most marked at their periphery. The central portions contain alveoli filled with "very fine, uniformly constructed, and rather highly refracting globules, which either lie huddled indiscriminately together, or else form single rows and chains." The reaction, or rather the negative reaction, with ether, potash, and other reagents, as well as their indifference to various colouring solutions, point to their vegetable nature. Iodine alone tints them dark-red or light-blue. Dr. Jvanowsky considers that they are colonies of micrococci, such as Cohn, Hallier, Klebs, and others have stated to exist in the lymph of small-pox, as well as in the skin and internal organs of persons with that disease. The inflammatory changes at the periphery of the nodules he regards as secondary to the irritation set up by the presence of the micrococci in the central portions; and their presence in the alveoli, and not in the tissue of the lungs themselves, he explains by their having been inspired with the external air. If this be so, the nodules are the primary seats of general infection, and resemble the pustules which follow inoculation of the skin.

RICHMOND WATER-SUPPLY.

It will be recollected that a few weeks ago a letter was received by the Richmond Select Vestry from the chief engineer of the Southwark and Vauxhall Water Company, threatening to cut off the water-supply to the town on the 13th inst. if the Vestry were not prepared to come to terms. The letter was referred to the Water-Supply Committee, who have just presented their report. They stated that, having received a report from the engineers that the well sunk some years ago by the late Richmond Waterworks Company was capable of affording, with proper engine-power, an ample supply of water, equal to at least twenty gallons per head per day for the inhabitants, they entered into negotiations, which ended in their acquiring possession of the well, and gave instructions for the erection of the necessary engines, etc., which were now all but completed. The laying of the mains, with a few exceptions, would be completed before the end of the week. The report was unanimously adopted.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

On the evening of Friday, January 5, the fourth meeting of the twenty-first session was held at the Royal Kent Dispensary, Greenwich-road; Dr. Creed, President, in the chair. C. Hilton Fagge, M.D., F.R.C.P., read a paper on "Some Spasmodic Neuroses." Dr. Fagge commenced by saying that the main object of this communication was to frame definitions of the less common spasmodic affections, which might be both more general in their scope, and at the same time more accurate than those given by writers on the subject. The author accordingly gave brief definitions of (1) solitary spasm (equivalent to convulsive tic); (2) to-and-fro spasm, or paralysis agitans; (3) cumulative spasm, represented by clonic wryneck, but including similar affections of other parts of the body; (4) co-ordinated spasms (chorea and athetosis); (5) spasms connected with particular voluntary movements (writers' cramp), and numerous other varieties of spasm; (6) tonic spasms, running a chronic course. Of these last Dr. Fagge endeavoured to show that, with the exception of tetany and the spasms occurring in paralysed limbs, they were always connected with hysteria, or dependent on reflex irritation. Under the former head he referred to cases of tonic wryneck, and to the contractures of which Charcot has given such full descriptions. Under the latter he cited cases of trismus and tonic wryneck due to affections of the teeth.

THE TREATMENT OF ACNE WITH SAND.

Dr. Ellinger (*Wiener Med. Wochenschrift*, No. 45, 1876) strongly recommends frictions of the skin with fine sand in the treatment of comedo and acne of the face in young persons. The sand should be regular in grain, not dusty and not containing lumps; particles half as large or as large as a poppy-seed should alone be used. Before the friction the skin must be thoroughly washed with soap and water. It is then to be kept damp for half an hour, and finally the affected parts are to be rubbed for a short time with the sand, which is to be used slightly wet. Afterwards any adhering sand must be sponged or brushed away. The same method is applicable to certain cases of psoriasis, eczema, lichen, acne rosacea, and freckles. If the eruption be situated on the trunk or limbs, each friction must be preceded by the prolonged use of a moist compress to the part, so as to soften the skin.

MEDICAL TEACHERS' ASSOCIATION.

At a meeting of the Council of the Medical Teachers' Association, held on Friday, January 5, it was resolved "That in consequence of the lamented deaths of the President of the Association, Mr. Campbell de Morgan, and of the Treasurer, Dr. Sibson, the Council think it desirable that a general meeting of the Association should be held on the third Friday in November of the present year, for the purpose of electing officers to fill the vacant posts, and to transact other business."

FROM ABROAD.

The Paris Exposition Universelle of 1878.

The Committee of Admission for the class "Médecine, Hygiène, et Assistance Publique" has just formed its bureau, having M. Barth as president, MM. Laussedat and Béclard vice-presidents, and M. Liouville secretary. The Committee has divided itself into two sections, the one embracing Medicine in general, and the other Hygiene and Public Assistance. The following are the members of the first section:—MM. Barth, Bouley, Broca, Ladreit, Mathieu, Reliquet, Terrillon, Thevenot, Tillaux, and Vulpian. To the second section belong MM. Béclard, Beni-Barde, Bergeron, Chatin, Chenu, Laussedat, Lefort, Liouville, Loiseau, and Roussel. The Committee has issued a circular, indicating the object of its mission, and appealing for co-operation to all who are able to contribute to the success of the undertaking.

In this circular the Committee observes that the title given to the class comprises all the inventions and all the "perfectionments" which contribute to the health and prosperity of the individual and of populations. It embraces—1. All the means which may better exhibit, increase, or vulgarise the knowledge of organised bodies and the actions of their various apparatus—as in the means for the preservation of anatomical parts, and for the reproduction in various substances of the organs of the economy. 2. All apparatus calculated to invigorate the organs and to maintain the strength and general health—gymnastics and hydro-therapeutics. 3. All means capable of preventing diseases by protecting the economy against the morbific agents which surround it—as in the preservation from the action of deleterious gases and miasmata, and the destruction of vegetable and animal parasites which attack the surface of the body or penetrate into its cavities. 4. All inventions capable of rendering certain occupations less inimical to health. 5. All that may be useful to man in a state of disease, embracing the means capable of furnishing a more prompt, easy, or complete idea of the nature or seat of the malady (*e.g.*, thermometers, microscopes, apparatus for the analysis of morbid products, etc.); as also the various means of curing diseases or attenuating their consequences—as the various

therapeutical agents, and the means of rendering medicinal substances more easily taken, more susceptible of toleration, and more efficacious. 6. The means for rendering operations less painful, more prompt, more certain, and more easy; for the remedying infirmities, whether congenital or acquired; or for the reparation of mutilations, whether accidental or surgical. 7. Objects of all kinds calculated to give the earliest succour to the sick or wounded, and for their transport, whether in civil life or on the field of battle. 8. All that relates to the amelioration and regular working of hospital establishments, whether fixed and permanent, or temporary and movable. 9. All that may contribute to the improvement and vulgarisation of public hygiene.

Desirous of fulfilling its mission conscientiously, the Committee appeals to all men of intelligence and goodwill, whether inventors, manufacturers, masters, or workmen. It will welcome with eagerness every new discovery, and all improvements and simplifications of means already known, and will do its best to carefully appreciate all productions that may be submitted to its examination; and in selecting those which it deems worthy to figure in the French section it will proceed with impartiality, rendering equal justice to the most humble artisan and the greatest manufacturer—alike to the hand which has executed and to the idea which has conceived.

Prof. Billroth and his Operations.

Dr. Howard, writing from Vienna, speaks as follows (*New York Medical Record*, November 11) of Prof. Billroth in his operating theatre:—

"Without any invidious comparison, it may fairly be said that there is no operating theatre in Vienna so popular as Prof. Billroth's. The cause of this is not wholly unconnected with the qualities of the principal performer. A profound pathologist, an accurate anatomist, an operator bold to the verge of rashness, an easy conversational lecturer, an accomplished linguist, a good blackboard draughtsman, are qualities not every day to be found combined in one who, during the most severe and tedious operations, preserves an amiability and unpretentiousness which makes his presence a companionship to the youngest assistant. Nor does one often find the strength and endurance of a blacksmith uniting these qualities on the one hand to a distinguished social reputation as a composer and pianist on the other. A combination of qualities like this, in one so favourably circumstanced, could hardly fail in achieving the popularity and success which Prof. Billroth has accomplished. In the theatre he is attended by nine assistants, all of whom he encourages to operate there occasionally, and thus secures for them a training not afforded in any other operating theatre with which I am acquainted. All the apparatus is according to Lister—carbolised gauze, carbolised oil-silk, carbolised caoutchouc, salicylic charpie, salicylic jute, etc., —most of them of the exquisite Schaffhausen manufacture. That pest of surgeons—ready-made (non)-adhesive plaster—is here unknown, the emplastrum diachylon being always freshly spread on linen as required for use, and is always soft, pliant, and thoroughly adhesive. The ligatures at hand are carbolised catgut, fine silk, and fine flax—the two latter lying in a carbolised solution. The flax, though fine, is very strong when wet, and is more generally used both for ligatures and sutures. The instruments to be used are laid out in a carbolised solution of a strength of 3 per cent., contained in shallow porcelain trays, in which also, before commencing to operate, the fingers of the operator are dipped, as also they are from time to time during the operation. Prof. Billroth has a peculiar *penchant* for bull-dog forceps with slide. Instead of waiting to tie arteries as he proceeds, they are instantly seized and left in the care of the forceps—and as many as twelve of these have I seen hanging like leeches from a wound —until, a convenient stage of the operation being reached, they are as far as necessary relieved by ligatures. This plan greatly facilitates dispatch, and is particularly convenient and serviceable in the extirpation of large fibrous or carcinomatous tumours. In the closure of wounds Prof. Billroth uses a great many sutures, making coaptation as perfect as possible, but uses drainage-tubes very freely. From a wound by no means large, following extirpation of the rectum, I have seen as many as eleven drainage-tubes projecting. In the Lister dressing (which, after unsuccessful experiments with boracic solutions, has been reinstated with increased care) an improvement in the way of economy has been introduced. For the caoutchouc or oil-skin, previously placed between the sixth and seventh layers of the Schaffhausen carbolised gauze, paper has been substituted, so prepared in a mixture of linseed oil, white wax, and litharge as to answer the same purpose. In such a large hospital a great saving is thus accomplished.

"The anæsthetic used by Prof. Billroth is not unlike that used by Dittel, consisting of three parts of chloroform, one of ether, and one of alcohol. The special advantage claimed for this mixture is that it rarely produces cramp or vomiting. Upon the whole, I think that its claims are sustained. However, vomiting not only does occur with it, but it has taken place precisely when it was most likely to prove disastrous. The inhaler in use here, and generally throughout Vienna, is a very simple affair. A scoop of wirework, large enough to cover the nose and mouth, is covered with a single cap of flannel, which is tightened around the frame by gusset and tape. The anæsthetic is poured upon the outside only, and in drops, the bottle always having a stopper-tube attachment. The patient can breathe either through or under this inhaler as may be desired. It is light, handy, cheap; and for safety, simplicity, and economy this method of administration is highly to be recommended. Esmarch's method, when practicable, is never omitted. The elastic tube is entirely discarded, an elastic band, simply a little narrower than that used for the preliminary compression, being substituted for it. There is a suspicion, however, that, in addition to the temporary paralysis sometimes caused by this method, it has a tendency to interfere with prompt primary union."

Sand-Frictions in Cutaneous Diseases.

Under the above title, Dr. Ellinger, of Stuttgart (*Wien. Med. Woch.*, No. 45), describes a practice he has followed with great success in certain diseases of the skin. Having occasion to seek for some additional remedy in treating two cases of acne of the face in young persons, he employed for this purpose white sand, and in the course of ten or twelve days the skin became clean and smooth, and has so continued since. Recommending the practice to others, he received such confirmation of its good effects that he gave it a trial in various other slight but obstinate cutaneous affections. In *ephelis* he found the effects longer in being produced, but very satisfactory; and in a case of *pityriasis versicolor* the scales disappeared in a few days, the skin losing all its roughness a week later. In a case of *acne rosacea* affecting the chin and cheeks of a girl, after six weeks' frictions the eruption disappeared, leaving the skin smooth and white. In other cases of *psoriasis palmaris*, *lichen albus*, and *prurigo* occurring in young persons the sand proved equally efficacious.

The selection of the sand to be employed is of importance, for while large granules are obviously unsuitable, yet a too large proportion of mere dust renders the frictions of no avail. It should be so sifted as to separate for use granules the size of a half or whole poppy-seed. Two kinds may indeed be prepared, a finer for the tender skin of the face, and a coarser for the trunk and extremities. In eruptions of the face, the skin before bedtime should first be washed with soap and water, and allowed to remain moist. In about half an hour after, some moistened sand should be rubbed into the affected parts for a short time, according to the tolerance and the necessity of the case. Any portion of the sand that adheres should be washed off with a sponge, or, better still, brushed off. In eruptions that only occupy a limited portion of the trunk or limbs, wherever it is possible, a Priesnitz compress should be first applied to the parts, and the sand rubbed in when they have thus become softened, they being afterwards cleansed by a sponge or brush. When large portions of the body are occupied by the eruption, baths prolonged for one or two hours should precede washing with soap and the application of the sand.

With all his patients Dr. Ellinger has made no change in their mode of life, and has abstained from administering medicine, whether internally or externally. For those who prefer everything to smell of the apothecary, he has sometimes added a little oil of thyme to the sand; and of late he has used a paste made of sand, carbonate of potash (one part to five), and water, which seems to have some advantage over the simple sand. He strongly recommends this also to clinical teachers and prosectors for cleansing the hands. He also thinks sand-frictions of importance as a means of keeping the skin in a healthy state—a fact, indeed, that may be demonstrated microscopically by comparing the water of a bath in which sand has thus been used with that of one in which it has not been employed. The frictions are, too, especially indicated in severe internal chronic diseases, with relaxed, inactive

skin—*seborrhœa tabescentium;* and they might probably be advantageously substituted, using coarse sand, for the severe procedures recommended lately by Dr. Hebra, jun., in the treatment of lupus and other ulcers.

REVIEWS.

Manuel Pratique des Maladies de l'Enfance. Par les Drs. A. D'Espine et Dr. C. Picot.

Practical Manual of the Diseases of Childhood. By Dr. A. D'Espine and Dr. C. Picot. Paris: Baillière et Fils. 1877. Pp. 592.

The little manual before us is evidently the outcome of much labour and research. It is a well-considered treatise on the diseases of childhood. One of its authors at least, Dr. D'Espine, is well-known to many of his metropolitan *confrères*, and his genial kindness, no less than his extensive knowledge of medicine, well fit him for the practice of a speciality which eminently requires these two qualifications.

The introductory chapter gives a summary of the physiological peculiarities of infant life, and also some hints on the manner of examining young children, which are interesting as well as useful.

The plan of the book, if not exactly new, has no exact counterpart in any English text-book with which we are acquainted. The description of each disease is preceded by a summary of the best and most recent literature of the subject, for the benefit of those who may wish for a more thorough account than the limited space of a small manual allows the authors to give. Then come a short historical survey, the etiology, the pathological anatomy of the disease, and then the symptoms, course, differential diagnosis, the prognosis, and finally the treatment. General diseases are taken first, and then diseases of the special organs.

It is not our intention, although we have just spoken so highly of this book, to bestow unqualified praise on it. As a whole it is excellent, but, like every other book, it contains some assertions and statements with which we are quite at variance, and others which strike us as too absolute, to say the least. Thus, in the article on diphtheria, the authors say—"Diphtheria is a disease of childhood, . . . it is but rarely observed in the adult . . ." This is contrary even to French experience, and Bretonneau in his "Memoirs" gives almost as many cases in adults as in children, while many English authors rely on this fact (among others) as proving the non-identity of diphtheria with croup, which latter disease is rarely seen in adult life. Again, in speaking of the local treatment of diphtheria, they say that "nowadays caustics, properly so-called, are generally abandoned. Indeed, it is known that they do not prevent the diphtheritic infection from propagating itself to the nose and the larynx; and, on the other hand, that the benign forms of diphtheria remain localised in the pharynx, whether cauterisation is employed or not. Furthermore, this barbarous proceeding fatigues the child by the constant struggles to which it gives rise." First, with regard to the assertion: for ourselves we should have hesitated to have made it; indeed, we have seen the greatest good result from the application of strong hydrochloric acid with glycerine (1 part to 3 or 4). We believe that it is just as essential to destroy any local manifestation of this undoubtedly constitutional disease as in the case of a cancerous nodule in the breast or elsewhere. We have seen over and over again diphtheritic membrane spread as the result of its own contagion. Perhaps this is most obvious with regard to the anterior nares. Who has not seen the nostrils and upper lip excoriated by the acrid discharge which is poured out from the interior of the nose, when the disease is more especially found in this part? The same undoubtedly obtains in the pharynx when the disease attacks this locality. Next as regards the fatigue which this plan of treatment entails. We differ quite as to this. The application, if well made, rarely requires to be repeated, and under no circumstances is it required more than two or three times—the interval which naturally elapses between the various applications prevents any serious fatigue even when the patients are young enough to be obstreperous. Moreover, the caustic seldom seems to affect any but the diseased parts; the mucous membrane, which is not affected by the false membrane, is covered with a thick, slimy mucus, which seems effectually to preserve it from the action of the acid.

We do not think our authors have been sufficiently explicit concerning the relation of diphtheritic paralysis (so-called) to the disease. They class it under the head of "complications." We should prefer to see it left out here, and treated as a pure accident. For our own part, we look at it in the same light as scarlatinal dropsy, or as perforation of intestine in typhoid fever. The celebrated clinician Bretonneau never once refers to it, although he details the history of three epidemics of diphtheria. Seeing how vigorously he treated his cases, we involuntarily ask, Is there the same relation between diphtheria and diphtheritic paralysis, as regards treatment, which undoubtedly exists between scarlet fever and nephritis, or between perforation of intestine and solid food during a certain stage of typhoid fever?

We will now pass on to another subject—rickets. First, then, in the bibliography we miss the name of Jenner. His lectures on this subject, reported in this journal some few years ago, were one of the most valuable contributions to the subject which has ever been made, and we should consider any description of the disease as imperfect which did not embody the substance of these lectures. In the etiology of the disease we learn, for the first time, that syphilis in the parents tends to the production of rickets in the child. "Exceptionally during the first months of life and after the third year, it appears almost always in the course of the second year, and generally at from eighteen to twenty months." This may be so in Geneva, or even in Paris, but a single visit to the out-patient rooms of Great Ormond-street or Ratcliff-cross would more than convince the authors that their statement is rather too absolute. We quite agree with them that the efficient causes of rickets are deficient air and sunlight, insufficient and improper alimentation,—we believe that such causes would give rise to rickets *de novo;* but we also think that these causes would be doubly active in children whose parents had themselves suffered from the disease. In other words, we do think that heredity plays an important etiological part, which our authors do not believe.

We will venture on one more criticism. In speaking of tubercular meningitis, the authors say—"The total duration of the disease varies but little; death occurs in the course or towards the close of the third week, very rarely *before* the fourteenth day, *never* after the twenty-first." (The italics are our own). In spite of their lengthened experience as resident officers in the Children's Hospital in Paris, we are compelled once more to differ from our authors. We have known death occur within a few hours of the first visible symptom, and that too in a young infant under twelve months of age. We have known cases last twenty-eight days. Rilliet, we believe, allows thirty days when prodromata are wanting. Thus, therefore, considerable variations in the duration of the disease are constantly occurring; indeed, for a disease the symptoms of which are so constant, and the pathology of which is now so well understood, this variable duration is a point of great interest, and one which deserves more attention than it at present receives.

Our space forbids any longer notice of this really excellent work. We have pointed out its weak points rather than its strong ones, because the task is so much shorter. In conclusion, we will add that when the absolutisms of extensive bibliographical research come to be tempered with the cautions which more extensive personal experience invariably adopts, we predict that future editions of this little manual will rank high among the text-books on diseases of infancy and childhood.

The Anatomy of the Head. With Six Lithographic Plates, representing Frozen Sections of the Head. By Thomas Dwight, M.D., Professor of Anatomy at the Medical School of Maine, Instructor in Histology at Harvard University, Surgeon at the Carney Hospital, and at the Boston Dispensary. Boston: H. O. Houghton and Co. 1876. Pp. 136.

The duties of a critic are not of the pleasantest when he is called upon to express an opinion upon the work of an author who may be speaking to an audience of which the critic is unable to appreciate either the requirements or the necessities. We do not feel ourselves sufficiently acquainted with either the manner in which anatomy is taught in America, or the condition in which it is carried away by the student, to enable us to decide whether or not Dr. Dwight's "Anatomy of the Head" is

likely to find a place amongst our Transatlantic brethren, but whilst perusing it carefully from an English point of view, we must confess that we were constantly asking ourselves the question, For what purpose, and for what class of readers, it is intended? The answer is given in the preface: that is it intended to assist the student to gain an idea of the head as a whole as it exists during life. Nothing can be more true than that "he who can tell what a rod thrust through any part of the body will strike, knows anatomy in its most practical aspect"; but whether this most praiseworthy object will be gained by our author's manner of treating his subject, we must leave our readers to judge by the extracts which are to follow.

We cannot give a better idea of the style of the book than by saying that each chapter reads like the answer of a well-read and senior student at an examination. Loose, rather, in method, looser still in composition, but correct withal as to facts; and thus, while conveying to anyone who can assume the position of an examiner a tolerably clear idea of what is in the author's mind, representing to the student little more than the stringing together of a series of more or less unintelligible terms. We will take a passage at random to illustrate our meaning, which may be fairly considered a sample of the rest. "They" [the tonsils] "correspond pretty nearly to the angle of the jaw, and are separated from the internal carotid artery merely by the wall of the pharynx. The artery is a trifle posterior to the centre of the tonsil. It is supplied with blood, not only by the tonsillar branch of the facial artery that enters its base, but also by neighbouring twigs from the facial and ascending pharyngeal. When inflamed it is exceedingly vascular. When the mouth is closed we find the tongue appearing at the lower border of the soft palate. It forms a nearly vertical wall, and is free from papillæ, very different from the anterior part of the organ. It is easy to see how, if it falls back, it will press the epiglottis across the larynx." And so on *ad infinitum*.

In addition to a certain want of arrangement, there is an amount of stress laid upon certain points which seems inappropriate in an account of the whole anatomy of the head in 130 pages, while others are passed over in a somewhat perfunctory manner. Thus, a full and interesting account is given of the varieties in shape of the jugular foramen, with some original observations by the author, and there is an elaborate discussion on the nerves of the dura mater and the mucous membrane of the nose (the last from Bigelow); while the description of the brain is rough, and that of the bones of the face—"the prime object" of which is said to be to "form the jaws, but it also has chambers for the organs of sight and smell,"—is, to say the least of it, short. Take for example the account of the spheno-maxillary fossa: "Just inside of the point of juncture of the pterygo-maxillary and the spheno-maxillary fissure, and therefore just in front of the base of the pterygoid processes, and behind and before (*sic*) the orbit, is a small cavity known as the spheno-maxillary fissure. This is thought very difficult to understand, but it need not be so. Introduce a probe from the zygomatic fossa into the orbit through the spheno-maxillary fissure, carry it inwards to its inner end, and it will pass through the fossa. In it lies Meckel's ganglion, and the foramen rotundum opens into it from the middle fossa of the base of the skull, transmitting the second division of the fifth pair of nerves. On its inner side is a round opening, the spheno-palatine foramen, in the skeleton, which in life just transmits a nerve from the ganglion to the nasal cavity. Below, the fossa runs down, like a funnel, into the posterior palatine canal, which passes through the back and outer angles of the hard palate. Behind, below the foramen ovale is the Vidian canal, through the root of the pterygoid process. I merely mention for completeness the utterly unimportant pterygo-palatine foramen."

It is perhaps ungenerous to complain of peculiarities in a language which has become, in many respects, so distinct from our own as the American, but it is scarcely possible to conclude without referring to the fact that the pages teem with expressions which are anything but congenial to the English ear. As examples may be taken the following:—"On the side where it rests, above the temporal muscle, it goes to be lost on the cheek." "If a pin be stuck in on front of the ear." "It is evident that the protection against dislocation of the odontoid is very perfect, and in execution by hanging there is far more likely to be fracture of the axis, etc." "The opening of the superior longitudinal sinus into the nose in childhood accounts for the greater tendency to nose-bleed at that age, and it is doubtless a great safeguard, but it is usually closed in adult life." We should be sorry to vouch for the correctness of the last explanation.

The chapters deal with regions and districts in summary—one being devoted to the brain; another to the mouth, cheeks, and chin; another to the external ear; another to innervation, and so on. At the end of the book are six carefully executed and very clear lithographed plates, representing as many frozen sections, mostly perpendicular and somewhat oblique, which are undoubtedly the most valuable part of the production.

GENERAL CORRESPONDENCE.

ANIMAL VACCINATION IN BELGIUM.

Letter from Mr. Thomas Wilson.

[To the Editor of the Medical Times and Gazette.]

Sir,—A moment like the present, when small-pox is raging in and about London with conspicuous virulence, seems favourable to inviting further attention to possible improvements in the process of vaccination. As medical officer of health, Poor-law medical officer, and public vaccinator of nearly twenty years' standing, besides being engaged in extensive private practice, I have had frequent occasion to combat opposition on the part of intelligent parents to the vaccination of their children, grounded on the fear of the impurity of the lymph about to be employed.

However irrational such fears may be in the vast majority of instances, the possibility of contamination or lesion by the introduction of impure matter into the blood is now generally admitted by the profession. Effectually to obviate the possibility of an accident confessedly fraught with such serious evils, I beg leave to solicit attention to Dr. Drysdale's letter to the *Daily News* of the 3rd inst., describing the system adopted with perfect success in Brussels for securing an unlimited supply of pure lymph from calves specially inoculated for the purpose. The adoption of a similar system in England would, in my opinion, at once dispose of all reasonable objections on the part of parents to the vaccination of their children.

Of 1000 medical men practising vaccination in Belgium, we are told by Dr. Warlomont, of Brussels, that no fewer than 768 applied for vaccine points at the Government Institute at Brussels in 1875, showing how completely Belgian practitioners have become convinced of the superiority of that form of vaccinating infants and revaccinating adults from this source; and we are told that vaccination of infants made with points of animal vaccine succeeded in 96 per cent. of all cases, whilst revaccination of adults succeeded in 62 per cent.

Again, Dr. Warlomont reports that out of more than 10,000 children vaccinated by this lymph, from 1865 to 1870, and passing through the terrible epidemic of small-pox of 1870, not a single one was attacked by small-pox, and that the same held true for all persons successfully revaccinated.

These important facts relating to this department of public hygiene I trust will not fail to attract the attention of our own Government, and that at least a Commission will be empowered to inquire into the question. I am, &c.,

Thomas Wilson, Medical Officer of Health.

Alton, Hants, January 3.

"SELF-RETAINING EAR-SPECULUM."

Letter from Messrs. Arnold and Sons.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your journal of to-day, under the heading of "New Inventions," appears a "Self-retaining Ear-Speculum"; the advantage claimed—"being divided down the centre in equal halves which are connected by a piece of watch-spring." A speculum identical in every particular was invented by ourselves many years ago, and in verification we refer you to our Illustrated Catalogue for 1873, page 165, where you will find Arnold and Sons' "spring ear-speculum."

We much regret trespassing on your valuable space, but in justice to ourselves can scarcely allow the instrument in question to be called a "new invention."

We are, &c., Arnold and Sons.

35 and 36, West Smithfield, January 5.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 6.

WILLIAM OVEREND PRIESTLEY, M.D., President, in the Chair.

IDIOTS.

DR. WILTSHIRE exhibited two children, both of whom were idiots. Both were first children, and both boys. In the first case the mother had been three days in labour, but was delivered without the aid of instruments or ergot. There was a perfectly healthy family history. The idiocy seemed due to prolonged parturition. In the second case there was a history of a long and difficult labour. Craniotomy was performed in a subsequent lying-in, and induction of labour, with turning, on the third occasion. Both the children exhibited were microcephalic.

DIRECT TRANSFUSION FROM VEIN TO VEIN.

Dr. ROUSSEL, of Geneva, demonstrated on the living subject the application of his apparatus for this purpose. The object of it was to prevent coagulation of the blood that was drawn, and to avoid the necessity of defibrination. The apparatus was constructed entirely of hardened pure caoutchouc, which has no influence on the blood. It consisted, in principle, of a Higginson's syringe with numerous ingenious devices, such as have been recently described in the medical journals. Dr. Roussel stated that he had operated in over fifty cases. Eight or ten ounces of blood were generally sufficient. Marked interest was shown in the demonstration.

The PRESIDENT congratulated Dr. Roussel on the perfection of his instrument, and conveyed to him the thanks of the Society for his instructive demonstration.

CÆSARIAN SECTION.

Dr. GALABIN showed a specimen of a uterus and the adjoining parts where the whole circumference of the cervix was the seat of malignant degeneration. A lengthy history of the case was read. Both mother and child were lost.

EXTREME HYPERTROPHIC ELONGATION OF THE CERVIX.

Dr. BARNES exhibited the uterus of a woman who had died after premature labour. The os externum had protruded beyond the vulva, with complete eversion of the vagina. The patient died of pyæmia, connected possibly with the injuries sustained during the labour by the abnormal state of the canal the child had to pass through. The specimen was another illustration of that form of dystochia which was described in the Society's *Transactions* for 1874 by Dr. Roper.

MONSTROSITY.

Dr. ROPER exhibited a fætus, born at the seventh month, which lived for half an hour. The right thigh was entirely wanting. The left leg below the knee terminated in a spike. Both thumbs were absent, as also apparently the radius of both arms.

Dr. ROGERS, in reference to Dr. Galabin's specimen, again alluded to the cases he had seen recover where no sutures to the uterus had been used.

Dr. BARNES cautioned against accepting the conclusion that Dr. Rogers' statement pointed to. The bare facts that in certain cases the uterus had been stitched up and death followed, whilst in certain other cases no sutures were used, and recovery followed, did not warrant the inference that the sutures had anything to do with the result. Cases that did not require sutures were those in which the uterus closed naturally by contraction. These cases were just those which were most likely to recover. On the other hand, the cases that required stitching were those in which no contractile power existed, and were therefore cases which were likely to prove fatal under any mode of treatment.

Dr. ROUTH asked how long the wound in the uterus had been kept open before it was closed. In Dr. Edmunds' case three-quarters of an hour were allowed, the uterus being irritated all the while by the fingers until firm contraction ensued, and then no ligatures were needed.

Dr. GALABIN, in reply, stated that iron had been applied when death from hæmorrhage seemed imminent. Only a small amount of watery fluid was found in the peritoneal cavity, post-mortem.

THE OBSTETRICAL ASPECTS OF IDIOCY.

Dr. J. LANGDON DOWN read a most interesting paper on this subject. His observations extended over eighteen years, and included over 2000 cases. Primogeniture seemed to play an important part, no less than 24 per cent. of all the idiot children observed being primiparous. No doubt this may largely be attributed to the exalted emotional life of the mother, not forgetting the anxiety inseparable from marriage of the male parent, but increased difficulties in parturition seemed to be an important factor. Suspended animation occurred in no less than 20 per cent., and apparently exerted much influence in the production of idiocy. As to the effect of instruments, in only 3 per cent. of the cases had forceps been employed. Prolonged labour was more compromising to the life-prospects of the child than a judicious and timely application of the forceps. Only 2 per cent. of the last thousand cases were twins. A very potential cause in the production of idiocy was the physical health of the mother during gestation, especially prolonged sickness, fright, intense anxiety, and great emotional excitement. A marked preponderance in the number of male over female idiots existed—more than twice as many,—due probably to the larger size of the cranium giving rise to prolonged and difficult parturition, continued pressure, and suspended animation, as well as the greater tendency to infantile convulsions among male children. The data for judging of the influence of ergot during parturition were not sufficiently full or reliable to enable any deduction to be drawn. The diagnosis and prognosis of idiocy were then entered into, *developmental* being distinguished from those of *accidental* origin. Congenital idiocy was more amenable to training than post-congenital, an ill-developed brain being more hopeful to deal with than a damaged brain. The prognosis being inversely, as the child was comely, fair to look upon, and winsome.

Dr. F. C. CORY remarked that, in a practice extending over twenty-five years, he had noticed no ill-effect upon the intellect of the child from the employment of ergot during labour.

Dr. J. BRAXTON HICKS thought the paper most interesting, and of exceeding importance, not merely collaterally, but directly, to obstetricians.

Dr. R. BARNES thought the members were much indebted to the author for his contribution, importing into the *Transactions* and discussions new elements or aspects of obstetric practice. He regarded the paper as an able statement of a very interesting question by one thoroughly competent to deal with the subject. He considered much further investigation and cross-examination were required before we could accept the conclusion pointed out—that obstructed labour, attended by suspended animation of the child, was an important cause of idiocy. His own experience included many such cases, but he could not call to mind any facts to show that idiocy was traceable to obstructed labour. Dr. Little, in a paper read before the Society some years since, had advanced similar opinions to those advocated by Dr. Down.

The PRESIDENT thought suspended animation must not be regarded too exclusively as produced either on the one hand by the pressure of a too prolonged labour, or on the other by the compression of the forceps when they had been employed. Suspended animation was likely to occur whenever a child was born with an imperfectly developed nervous organisation; and it was well known that small, feeble children, expelled with great ease from the maternal passages, were often difficult to resuscitate. Referring to one of the idiot children shown by Dr. Wiltshire, the speaker said it would be well not to attach too much importance to its difficult delivery as a cause of its mental weakness, because it was obvious that the mother, who stood by, was an imperfectly developed creature in every respect, and, according to the theory of natural selection for healthy progeny, should never have been a mother at all.

Dr. FLETCHER BEACH remarked that his experience at the Clapton Idiot Asylum to a great extent bore out the remarks made by Dr. Down.

Dr. J. BEVERIDGE SPENCE stated that he had noticed at Earlswood that cases associated with tedious birth and suspended animation manifested great improvement in their mental state during their residence at the Asylum, and were generally capable of receiving and benefiting to a considerable extent by the instruction imparted to them. Well-marked choreic movements were generally observed.

Dr. WESTMACOTT inquired whether drunkenness in the parents was not a frequent cause of idiocy.

Dr. BRUNTON would like to ask the experts how soon after birth they could discover the presence of imbecility in an

infant. Children born healthy, but subject to artificial and improper feeding, suffered from diarrhœa, and convulsions often ensued; suspended animation with disturbance of the cerebral functions resulted, and imbecility as a consequence.

Dr. Hayes thought a more minute classification was requisite. No safe conclusions as regarded prolonged or obstructed labour, instrumental interference or non-interference, could be arrived at without this.

Dr. Routh inquired as to the degree of consanguinity among the parents. In America the influence of this had been noticed.

Dr. Graily Hewitt considered Dr. Down's facts and suggestions most valuable and interesting, but they needed confirmation. In regard to the connexion between obstructed labour, with pressure arising therefrom, and idiocy of the offspring, the facts must be examined attentively before admitting that such a connexion subsists. He could hardly believe that if obstructed labour had a distinct effect of this kind it would so long have escaped the attention of obstetric practitioners.

Dr. Edmunds thought that the statistics were worked out into a fallacious form; the numbers of first-born, second-born, etc., formed a rapidly decreasing series. Taking the average number of children in a family at four, there would obviously be in the community 25 per cent. of first-born children, a proportion practically identical with those shown as first-born among these 2000 idiots. As to the influence of pressure upon the fœtal head as a cause of idiocy, he had never noticed this, and yet he had observed some 2500 cases.

Dr. Langdon Down, in reply, said he was much gratified by the discussion which his paper had called forth. He regarded Dr. Little's paper, referred to by Dr. Barnes, as a valuable corroboration of his own researches. There were generally several factors in the production of idiocy. Given a neurotic tendency, the tedious labour and suspended animation might determine the catastrophe. He had on this occasion adopted the classification he considered most practical —viz., accidental and developmental.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, December 15.

Dr. Buchanan, President, in the Chair.

In opening the proceedings, the President alluded to the absence of Dr. Vinen, the indefatigable Secretary, and while regretting the circumstance which necessitated this absence, he took the opportunity of suggesting that this was a most fitting occasion for recording the sentiment of the members with reference to the very valuable services rendered to the Society by this honorary officer.

Mr. Liddle proposed that a testimonial be presented to Dr. Vinen as a permanent recognition of the Society's obligation to him as acting Secretary for a period dating back as long as the Society had been in existence.

Dr. Tripe seconded the proposal, adding, as a rider, that a committee be appointed to consider the best way of carrying this into effect, and to invite subscriptions from members of the Society. The proposition was unanimously agreed to. Mr. Jessop, of Cheltenham, was balloted for and elected as a member of the Society.

Mr. Leigh F. Colborne was proposed as an extra-metropolitan member.

The Secretary (Dr. Corfield) announced that no reply had yet been received from the Northern Counties Association relative to the resolutions respecting "tenure of office" of health officers passed by the Society at the solicitation of that Association. The Council had agreed to take no immediate action upon Dr. Tidy's resolution for the registration of all cases of infectious disease, because Mr. Jacob had given notice of moving a counter-resolution to that passed at the previous meeting. Drs. Tripe and Tidy considered that the counter-resolution was practically the same as that passed at the previous meeting. Mr. Jacob being called upon to state the grounds upon which he wished to have Dr. Tidy's resolution rescinded and his own substituted, thought it better to leave it an open question, to be referred to the Council for decision, as to which member of the Government should be requested to receive the deputation. He thought the word "contagion" open to doubt, as it might be taken to include venereal disease. The Public Health Acts are framed so as never to make use of this word, but only "infection." Then, again, Dr. Tidy's resolution speaks of certain pains and penalties upon the householder for neglect of due precautions. As a very searching measure is proposed, Mr. Jacob considers that the Society ought to deal very carefully with the subject, all recent legislation being eminently tentative. As a society it would be better not to invite opposition by dictating to the Government. It would be well to leave it to the Council to invite other learned bodies, such as the Social and Sanitary Science Committees and the Parliamentary Committee of the British Medical Association.

Dr. Tidy, in his reply, said that if it was thought that the question of penalties would impede the progress of the application, he would, with a view of promoting unanimity, willingly withdraw it.

Dr. Tripe, in an animated speech, said that he considered it most undesirable in such an important matter to go forward in "crab fashion." If certain things were desirable, we ought to require that they should be done compulsorily. Are we to moderate our language because frightened to face the public with a stringent but protective measure? He objected to appeal to the Local Government Board. The whole history of the behaviour of this department to the medical officers under their control was anything but satisfactory.

Dr. Bond considered that Mr. Jacob had quite understated the grounds of his objections. He thought it a very novel objection to cry out against the Local Government Board; in effect all sanitary legislation must pass through the hands of the President of this department. There are at present no recognised means of providing isolation for patients with infectious diseases, and this is one among others of the objections to be considered. The term "person in charge" is so ambiguous that a magistrate will not give a definite decision. We ought to go to the Government and urge them to amend existing Acts, with a view to enforce the necessity of inquiry respecting the natural spread of infectious disorders. He thought it well to act in concert with other important bodies. If we can get a Governmental inquiry it will be better to wait for such evidence, and then to move for a comprehensive measure of sanitary reform. He concluded by proposing an amendment to this effect.

It was agreed to rescind Dr. Tidy's resolution, and to adjourn the debate on this subject to an early date; the President and Secretaries to fix an early day for the special consideration of this important subject.

Dr. Thursfield's paper, entitled

Regulations of the Public Elementary Schools in reference to Sanitary Progress,

was then read, of which a summary is here subjoined :—

The Regulations of the Public Elementary Schools are so framed as to work in direct antagonism to the dictates of preventive medicine, and, as a matter of fact, directly favour the spread of, and in rural districts are a chief cause of, epidemics. The above somewhat sweeping statement would be unjustifiable if made with reference to any special locality or particular group of schools, but it is here put forward as the result of some years' personal experience of epidemic disease in various counties and in the districts of several school inspectors. It will suffice to refer to four only of the diseases which are constantly prevailing in the epidemic form somewhere in this country—viz., enteric fever, small-pox, diphtheria, and scarlatina. Measles is excluded, because all that is said of scarlatina may be considered to hold good of measles. Of these four diseases, two only—diphtheria and scarlatina—are, with rare exceptions, at the present time found to prevail as epidemics in purely rural districts. As a preliminary to the proposition that schools act as the chief hindrance to the extinction of epidemic disease in rural districts, it is necessary to assume that such extinction is possible, and that we possess sufficient knowledge of the modes in which infection spreads, other than by means of infected persons or things, to enable us to control it, and that we have the same power of exercising that control at all times. Such an assumption can only be based upon definite ideas as to the etiology of disease and the spread of infection, and it will be well to state very briefly what those are upon which it is based. We know that occasionally individual susceptibility is heightened, and the same may be the case with a community. It would also be in accordance with experience to suppose that at times certain

cosmical causes favour the development of infectious elements. In numerous epidemics of typhoid fever, scarlatina, and small-pox, and frequently during the zymotic activity of the latter disease, abundant opportunities occur of noticing how cases, imported from the midst of an epidemic into localities presumably under the same influences, have been isolated by the ordinary means, and from that he inferred that zymotic activity can never be so strong as to resist proper measures of isolation in the case of those disease which spread by personal infection. *Diphtheria*, like other infectious diseases, occurs as an isolated outbreak, or as an epidemic. Sporadic diphtheria has, in its origin or mode of development, the closest connexion with enteric fever. He had frequently seen the two diseases developed in the same house, simultaneously or at intervals, under the same conditions of filth. The mode of dissemination of the two diseases is, however, essentially different. In diphtheria the epidemic form follows the sporadic, simply as there are or are not present on the spot special facilities for the spread of the infection by personal means. To this, of course, there is the exception, when a number of individuals residing in different houses are simultaneously exposed to the same exciting cause, as in at least four outbreaks, which he attributed to the manifest contamination of the air of the schoolrooms with offensive latrine emanations. In the epidemics of diphtheria of which he had had experience, he formed a decided opinion that they were disseminated by schools. In most instances, the sequence of events has been something like the following:—A youth, employed as an indoor servant at a small farm, was engaged spreading night-soil, which had been removed from a neighbouring town in which there was an epidemic of enteric fever. He felt sick, went to his home some little distance off, and in a day or two was laid up with diphtheria, which proved fatal. It may be interesting to state that a man working on the same farm was at the same time taken ill with fatal enteric fever. During the youth's illness his sister continued her attendance at a school nearly two miles distant—at least, during the early part; and although no cases had been in the locality before, within a very short period some ten children died, all in houses from which children had been attending the school, the disease not entering any other houses but these. The school was at once dissolved. No powers of breaking up a school could, in this instance, have availed; and similar occurrences will only cease when, by education or law, people have learnt the risk of sending children to school from houses in which there is infectious disease. The explanation of the great liability of diphtheria to spread through school agencies is, probably, that as infection is generally diffused from the throat in expiration, it is very liable to be inspired by others; and this diffusion is much aided by the fact that in diphtheria the disease often proceeds to a very advanced stage without disabling the child from attending school. Moreover, the infectious element in this disease seems peculiarly liable to attach itself to walls and coverings. In one instance in which a school was broken up for six weeks in consequence of an outbreak of diphtheria, the disease entirely disappeared, but broke out again in a week after its reassembling, in consequence of the infection lurking in the wall-covering, which was of absorbent material, and, as it could not be removed without considerable expense, could be only superficially cleansed. *Scarlatina:* Here the ordinary vehicle of the infection, or at least what we assume to be such, is of so imponderable a nature that this would seem a disease most liable to be diffused by the wind; and the occasionally apparent connexion between the great mechanical scavenger of the air, an increased rainfall, and a diminution of scarlatina would seem to confirm such views, though the two facts may be merely expressions of a coincidence. The regulations to which he referred at the commencement of the paper are briefly as follows:—The Government grants in aid of the funds of the Public Elementary Schools are made entirely on the principle of payment for results, and in the large majority of cases go to augment the salary of the master, which is thus made, to a certain extent, to depend upon these results. This grant, which may amount in the aggregate to nearly 20s. per head, is obtainable as follows:—Firstly, a capitation fee, varying from 4s. to 6s. per head, on the average number of attendances on the days on which the school has been open throughout the year. For this part of the grant no consideration whatever is made on the ground of illness, and the teacher is naturally anxious to keep the average attendance as high as possible—in fact, has a direct pecuniary interest in doing so, except in the occasional instances where a fixed salary is paid. Where there is a school board the influence of the board officer is also used in the same direction; and as he is generally left entirely to his own discretion in this matter, he acts to the best of his judgment according to his light. In a comparatively small town, there were recently at one time more than 200 cases of scarlatina, and during the whole period of the epidemic the average attendance of a large school situated in the centre of the district most affected has been kept up. Those entitled to form an opinion on the subject state that this can only have been done by receiving children who ought not to have been received; and the reason alleged by the parents is said to be fear of the school board officer. In districts where there is no such official it is a common practice to send out what are known as "absent cards," and in cases where children have undoubtedly returned too soon to school after scarlatina, the receipt of one of these absent cards was brought forward as an excuse. Secondly, subject to certain conditions of examination, a capitation fee of from 3s. to 10s. is paid for every scholar present on the day of examination. To show the vicious working of this system he related an instance which had occurred within the last few days. Visiting a first case of scarlatina in a row of cottages, he cautioned the mother against sending the child to school as soon as it should have recovered. She replied she would not, but stated that a school official had called there the day before, and asked her to send the child, naming an early day, if the child should be at all well enough, as the inspector was coming on that day, and it was important to have a large attendance. This could not have been done in ignorance, as the nature of the disease was well known to the mother, and a circular had been sent to the school a short time previously, requesting special care to be taken in cases of sickness during the prevailing epidemic. One of the conditions required to be complied with, before a grant can be given, is that the school shall not have been open less than 400 half-days in the year, and that each scholar for whom a grant is claimed has attended not less than 250 half-days; and here we meet with the only provision for illness; so framed, however, as to be practically useless. The provision is to the effect that if a school has been closed on account of a local epidemic, a proportionate reduction may be made in the above number of meetings, and of individual attendances otherwise required. This amounts to stating that a school should not be closed until all the mischief likely to be done has been done. This provision for epidemic disease is completely and practically stultified in another way. The major part of the grant is made to depend upon the children passing certain standards of examination, which are rigidly defined, and the code contains no provision for relaxing this standard where the school has been closed some time on account of an epidemic. Whether the inspecting examiners make some allowance he could not say, but schoolmasters invariably say the examiners have no such discretionary power, and, as a matter of fact, do not make any allowance. For the above reasons the public elementary schools are seldom closed until the outbreak has become an epidemic, and then, in some cases, advantage is taken of the provision in the regulations only because, owing to illness, the average attendance has become so small as to render it more advantageous not to count the days for the annual average. No provision is made in the regulations for the reopening of the school. The medical officer of health is generally asked for a certificate that the school has been closed on account of epidemic disease, but there is no rule. He knew of a medical officer of health who stated that if a certain school was reopened as soon as proposed he should decline to give a certificate; but a more complaisant doctor was available for a certificate, and, although the chairman was strongly opposed to the premature reopening, he was out-voted. What are the remedies for the present most undesirable state of things? 1st. All schoolmasters in our public elementary schools should be paid by salary. 2nd. Absence from school on account of illness should be allowed to count for average attendance for the purposes of the grant, whether the school is dissolved or not. School examiners should avowedly be allowed to relax the standards of examination when a school has been closed for any time on account of prevalent disease. 3rd. It should be made a statutory offence, which it is not at present, to knowingly send a child to school from a house in which there is any one of a certain number of dangerous infectious diseases. 4th. The absence register kept by the

teacher should state, in addition to the word "sickness," the assigned nature of the complaint; this would, to a certain extent, check false or indefinite information. 5th. It should be the duty of the school board officer to prevent children coming to school who might bring infection with them. 6th. Absence on account of sickness in the family should be held to be a reasonable excuse, as well as personal sickness; and the most stringent rules should be enforced as to evidence of disinfection, by dry heat or boiling water, of the clothes of convalescents before returning to school. 7th. The annual holidays might be taken at any time if sickness prevailed. 8th. A school board should have the power of introducing sanitary clauses into its by-laws. *The School Buildings:* Everyone must readily admit that, where there is anything of the nature of compulsory attendance at a school, the utmost care should be taken that the construction and arrangements of the building be such as not to be liable to prejudicially affect the health of those assembled in it. The statement of the Chairman of the London School Board, that "much of the work at present is carried on at grave disadvantage in ill-built, badly drained, and imperfectly ventilated rooms," may be extended to a wider area than London. The new code of 1876 certainly requires that before any grant is made to a school the department must be satisfied that the school premises are healthy, well-lighted, warmed, drained, ventilated, and supplied with suitable offices. A school is, of course, a house for the purposes of the Sanitary Acts, though in some very recent by-laws that have been sanctioned they are exempted, because sanctioned by a department of the Government. Schools are exceptional institutions, and should be made the subject of general regulations for their maintenance in due sanitary condition as well as for their construction. On more than one occasion he had attributed attacks of rheumatic fever to damp school-buildings; and if a damp condition of dwelling and the breathing of expired air are any factors in the production of our great endemic disease—consumption,—he had seen those combined influences most potentially at work in several schools. Schoolroom walls are, as a rule, covered with plaster, distemper, or other absorbent material, or with common whitewash. All such walls should, however, be faced with a non-absorbent washable material, which would admit of thorough cleansing by washing. The minimum air-space of eighty cubic feet (of which eight square feet must be floor-space) per head on the average number attending is too little, even with perfectly ventilated rooms, and with children thoroughly clean in clothes and person. The following description is that of a school erected during the past year:—The only openings into the room are the door, the window, and a chimney-flue of very small capacity. The room is dark, damp, and dismal, the window of fluted green glass, with an opening space of three square feet only, and the base of this opening space is sixteen feet from the ground; the room is intended for thirty-five children, and with a less number than this it becomes most offensive after half an hour's use.

In the debate following the reading of the paper, Mr. Liddle remarked that very little attention was paid to the opening of windows belonging to schools, either during or in the interval of school-hours. It would be well for Dr. Thursfield's recommendations to be communicated to the London School Board, who were generally careful in their selection and construction of schools. There ought, in fact, to be a medical officer of health attached to the School Board, with powers of visitation and to report any existing defects requiring alteration.

Dr. Tripe thought that the area of infection in the case of scarlet fever was not comparable with that of measles, because the distance of infection for the latter was probably much greater than for the former. It has certainly never been shown that anything is given off by the skin in measles to propagate the disease. He did not agree with Mr. Liddle in his commendations of the School Board of London. In one school recently approved by that Board he found only two closets for 200 or 300 children, and none for the teachers. For the purposes of disinfection, boiling water was not enough; a dry heat of 230° to 240°, with sulphur fumigation, is required.

Dr. Bond had listened with special interest to the paper, as scarlet fever is very prevalent in his district. He thought it would be most desirable that Dr. Thursfield should forward a copy of his paper to the Education Department of the Privy Council.

The President proposed a vote of thanks to Dr. Thursfield for his admirable paper, and suggested also that a copy be forwarded to the Education Department in Scotland, because it often happens that our Scotch friends have initiated legislation for matters of education.

Dr. Dudfield's paper on "Pleuro-pneumonia" was postponed to the next meeting.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 19.

Mr. George Pollock, F.R.C.S., President, in the Chair.

Scirrhus of the Diaphragm.

The report of the Morbid Growths Committee on Dr. Walker's specimen of scirrhus of the diaphragm (see *Medical Times and Gazette*, vol. ii. 1876, page 610) was read. The growth had the general characters of scirrhus, and involved the two surfaces only of the diaphragm; the muscular tissue was healthy, except that it was reduced in places. The disease was probably a secondary cancerous infiltration rather than the primary, which might have escaped observation.

Transposition of the Viscera.

Dr. Lees brought forward a living subject with this abnormality, a boy of eight years, who had been suffering simply from loss of flesh and debility. The cardiac apex-beat was in the right nipple-line, and the liver dulness on the left instead of on the right side. An area of dulness, probably splenic, was found on the right side. Only six cases of this nature occurred in recent English literature; and of these, four only were discovered *intra vitam*. In the present instance the right testicle was lower than the left, and the boy was right-handed.

Dr. Green asked whether the effect of transposition of the viscera on the duration of life, if any, were known.

Dr. Douglas Powell said that he had seen an instance in a boy of twelve, who was simply out of health. He knew no reason why life should be shorter than in the ordinary subject. Dr. Hare had recorded an example in a gentleman who had served as an officer in India. It was remarkable that those persons were not left-handed, inasmuch as the right testicle was the lower, and the viscera displaced. His patient was right-handed. The spleen in these cases was found split-up into splenuli.

Mr. Wagstaffe asked whether there was any alteration in the arrangement of the great vessels of the neck in these cases; and whether this might not influence the hemispheres, and so the exercise of the limbs.

Dr. Irvine lately saw an instance in the body of an infant of eleven months: every organ was transposed. The vena cava and the aorta were transposed, and the innominate was on the left; the cerebral arteries could not be examined. The child had been killed by gin and aniseed.

Dr. Ord asked whether there was any difference in such cases in the distribution of the nerves, and in the decussations—for example, of the anterior pyramids.

Dr. Lees replied, stating the ages of the various examples of transposition on record: they were very various, up to old age.

Dr. Pye-Smith also spoke upon the question of the relation of right-handedness to the distribution of the cerebral vessels.

Cancer of the Tongue, etc.

Mr. Gould exhibited, for Mr. Heath, a patient from whom the entire tongue, the centre of the jaw, and the sublingual muscles had been successfully removed for cancerous disease. There was no return of the growth, and fair recovery of articulation.

Secondary Sarcoma of the Mediastinum.

Dr. Coupland showed a recurrent tumour from the region of the sciatic nerve, and secondary growth from the mediastinum. The primary growth involving the sciatic nerve was exhibited last session. The patient lived two years and a half after the operation, but died after being confined to bed for two months. The recurrent sciatic tumour extended from the old cicatrix eight inches up the nerve, which was spread on its surface. The external popliteal nerve presented a second spindle-shaped tumour. The secondary growth from the mediastinum occupied nearly all the left pleural cavity, and projected into the pericardium. The costal pleura and the mediastinal glands were infiltrated.

Mr. Balding, under whose care the patient had been, said

that the mother had been the subject of an enormous tumour on the back for twenty-five years. It was a large, hard mass, with no firm adhesions, but apparently starting from the scalp. The patient died of cancer of the mamma, and no post-mortem examination was allowed.

Biliary Calculi in Peritoneal Adhesions.

Dr. Coupland also related the case of a man of forty, in whose body adhesions were found between the liver and the duodenum and stomach, and embedded in these small biliary calculi. The gall-bladder was contracted, and filled with minute calculi. The case showed that small calculi could escape, give rise to adhesions, and not necessarily cause fatal peritonitis.

Aneurism of the Aorta.

Dr. Goodhart showed, for Dr. Marshall, of Nottingham, a specimen of aneurism that had been situated immediately under the pillars of the diaphragm, pushing up the central tendon. It likewise involved the cœliac axis; and proved fatal by hæmorrhage. The subject was a man of thirty-three, who had suffered from radiating pains in the back, and left side and leg for two years.

Urinary Calculi.

Dr. Ord showed specimens of calculi that had been passed without pain or much hæmorrhage by a gentleman of upwards of eighty. Many of them were irregular in form, and could be seen to be segments of a large spherical body; and they had probably been broken up in the bladder, where they received a fresh alkaline covering. The reaction of the urine therefore appeared to have changed; and this would account for the absence of nucleus in many of the specimens, which, being generally composed of fibrinous material, would swell and burst with the alteration. The history of the patient went to show that his habits had been suddenly changed from active to sedentary; but there had been nothing like a sense of an explosion experienced in the bladder, nor was there any history of mutual crushing of the stones in the bladder; and fragments of crushed calculi were not radial in appearance like these. Mr. Southam had suggested the possibility of the explosion of calculi by gas or by swelling; but only one specimen of "spontaneous disintegration" was to be found in the Hunterian Museum. Dr. Ord exhibited three other specimens of calculi, small, and composed of carbonate and phosphate of lime; they had been passed after symptoms of prostatic irritation, and had probably been formed in that organ. A third series of specimens of calculi shown by Dr. Ord consisted of two carbonate of lime stones from a horse. Dr. Ord believed that the presence of organic matter in the urine, whether as mucus or as albumen, had much influence in determining the character of the calculi.

Mr. Wagstaffe referred to a specimen exhibited by himself some years ago, and described as a carbonate of lime calculus. He had now to state that its composition was doubtful.

Tricuspid and Mitral Stenosis.

Mr. Gould showed a heart presenting these lesions. A woman of forty-two had suffered for two years from ordinary cardiac symptoms; she had never had rheumatism or other disease of consequence. On her admission there was a systolic and presystolic thrill at the left apex; systolic murmur in three situations—viz., both apices and left base,—and at times a presystolic murmur. Post-mortem the segments of the right auriculo-ventricular valve were found unnaturally adherent, admitting between them only the tip of the little finger; the left auriculo-ventricular opening was a mere chink, not admitting even the finger-tip; the pulmonary valves were healthy; the left auricle and the right cavities were dilated and hypertrophied. Tricuspid disease was rare, and was generally associated with disease of the mitral.

Calcareous Degeneration in the Pericardium.

Mr. Gould also exhibited a specimen of this nature. A man of forty-six was admitted for cancer of the liver. He had not had rheumatism or any acute disease. The cardiac dulness was normal, and the apex low; the sounds were difficult to distinguish, but there was no murmur. Post-mortem, a mass of putty-like substance was found in the pericardial cavity, surrounded by a calcareous wall. The pericardial cavity remained healthy and unobliterated near the apex. The walls of the heart were hypertrophied. The case was probably one of recovery from pericarditis, with alteration of the pus. Similar cases had been reported.

Dr. Goodhart referred to a somewhat similar specimen of his own, exhibited last year, but of the nature of an old hydatid cyst. The absence of acute symptoms in the history supported the opinion that the present case might be of the same nature.

Diphtheritic Membrane.

Dr. Greenfield showed a specimen of fresh diphtheritic membrane. A child of five died of rapid and severe diphtheria, with epistaxis. The microscopic sections showed that the proper tissue-substance was not involved, but the epithelium was altered. The structure of the membrane itself consisted of a highly refractile substance, with nuclei in the interstices. When quite fresh it appeared composed of cells, and these were still visible in some places. It was, therefore, a specimen of the change first described by Wagner. The deep structures were greatly hyperæmic, but not involved otherwise.

Dr. Barlow referred to a recent case of his own, in which he was able to trace the patches of membrane to the mucous glands. Probably in all cases it might begin in the glands, first appearing as small caps on their openings. In a case of membranous ophthalmia he had similarly been able to trace the patches to the Meibomian glands.

Adenoma of the Liver.

Dr. Mahomed showed specimens of adenoma of the liver. In a patient that died of aneurism of the right ventricle, with cardiac symptoms, the liver was found to weigh three pounds, was nutmeg and fatty to the naked eye, and presented no disease of the ducts. In its centre was found an encapsuled growth, without puckering, pale, lobulated, and gland-like on section. Microscopically it appeared as liver substance, with disorderly arrangement of the cells; the capsule was of connective tissue, sending in septa, which produced the lobulated appearance. The cells were of various shapes and sizes; the vessels were few; and it contained no ducts. The second specimen was from the body of a soldier, aged twenty-eight, who had had syphilis, and died with jaundice. Post-mortem the liver presented many tumours of various sizes, one of which projected into the vena portæ; and consisting, microscopically, of fibrous stroma and tubules lined with cylindrical epithelium, while others were more alveolar in appearance. The disease might be called multiple adenoma (Rindfleisch) or cylindrical-celled epithelioma. Dr. Mahomed said that these specimens belonged to two of the several types of adenoma of the liver, which he described at some length. (The specimens were referred to the Morbid Growths' Committee.)

New Members.

Dr. Griffiths, of Swansea, and Mr. J. T. Nicholson were elected members of the Society.

The Norfolk and Norwich Hospital.—The appeal made to the public for funds to extend the Norfolk and Norwich Hospital, under the auspices of His Royal Highness the Prince of Wales, has been abundantly responded to—£22,942 has been received. This amount so far exceeds the anticipations of the Managing Board, that the rebuilding of the Hospital is a probability. The Earl of Leicester, Lord Lieutenant of Norfolk has offered £13,000 to an endowment fund. This is in addition to the £22,942.

Composition and Quality of the Metropolitan Waters in December.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	20·76	0·128	0·165	0·003	0·009	13·2	3·8
West Middlesex .	22·61	0·100	0·165	0·006	0·009	14·3	4·6
Southwark and Vauxhall .	21·14	0·114	0·150	0·002	0·008	14·3	4·6
Chelsea .	19·18	0·132	0·135	0·006	0·010	12·1	4·6
Lambeth .	19·46	0·110	0·150	0·001	0·007	12·7	4·6
Other Companies.							
Kent . .	26·73	0·007	0·216	0·000	0·002	19·4	5·1
New River .	19·28	0·092	0·160	0·000	0·004	14·3	4·2
East London .	23·21	0·052	0·135	0·002	0·006	15·4	3·4

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be slightly turbid in all cases but the following, when it was clear—namely, in that of the Kent and the New River Companies.

OBITUARY.

JOHN DOUGLAS LAWRIE.

We regret to have to record the death, at the early age of thirty-four, of Mr. John Douglas Lawrie, of Bradford. The deceased gentleman had attained some eminence in his profession, having recently been appointed one of the Honorary Surgeons of the Bradford Infirmary, and being at the time of his death President of the Bradford Medico-Chirurgical Society. His death resulted from blood-poisoning, contracted in performing a surgical operation a short time since. Mr. Lawrie studied at Leeds; he was a Member of the Royal College of Surgeons of England, and a Licentiate of the Society of Apothecaries of London; and he had also passed the preliminary examination at the London University. He will be much and deservedly regretted by a large circle of friends and patients who are left to mourn the untimely death of a most promising young surgeon.

MEDICAL NEWS.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Matheson, F., M.B., C.M.—Assistant-Surgeon to the Royal Dispensary for Diseases of the Ear, Frith-street.

Pollard, Frederick, M.D. Lond., formerly Medical Registrar to St. Thomas's Hospital—Assistant-Physician to the Liverpool Infirmary for Children, *vice* R. Caton, M.D. Edin., resigned.

Pritchard, Urban, M.D., F.R.C.S.—Senior Surgeon to the Royal Dispensary for Diseases of the Ear, Frith-street, *vice* William Harvey, F.R.C.S., deceased.

BIRTHS.

Kendall.—On January 2, at Kidsgrove, North Staffordshire, the wife of Walter B. Kendall, L.R.C.P. Edin., M.R.C.S. Eng., of a daughter.

Macauley.—On December 31, at Hatfield Broad Oak, Essex, the wife of W. R. Macauley, L.K.Q.C.P. Ire., of a daughter.

Morris.—On January 9, at 13, Somers-place, Hyde-park-square, the wife of James Morris, M.D. Lond., Fellow of University College, of a daughter.

Whitmarsh.—On January 3, at 1, Clapton-square, Lower Clapton, the wife of J. Lloyd Whitmarsh, L.R.C.P. Edin., of a son.

MARRIAGES.

Andrew—Haigh.—On January 4, at St. Mary's Church, Scarborough, James Andrew, M.D., F.R.C.P., of Edinburgh, to Fanny, daughter of the late John Haigh, Esq., J.P., and Deputy Lieut. for the West Riding of Yorkshire.

Broxholm—Forrester.—On January 4, at St. Martin's Church, Haverstock-hill, Frederick Giles Broxholm, M.D., of Richmond-road, Barnsbury, to Kate, younger daughter of the late Charles Robert Forrester, Notary Public, of the Royal Exchange, London.

Bruce—Mitchell.—On January 4, by special licence, at Lisburn, James Bruce, Esq., of Thorndale, Belfast, to Mary Hogg, widow of the late G. Mitchell, Esq., Rathfern, and only daughter of Wm. Thompson, M.D., of Lisburn.

Holroyde—Whalley.—On January 3, at St. John's Church, Liverpool, the Rev. James Holroyde, M.A. Cantab., elder son of Elkanah Holroyde, F.R.C.S.E., J.P. for the West Riding, to Isabella Katharine, only daughter of the Rev. Thomas Whalley, incumbent of St. John's Church, Liverpool.

Newington—Stephens.—On December 9, at Calcutta, Douglas Philip Davidson, third son of H. F. H. Newington, L.R.C.P.Edin., of Ticehurst, Sussex, to Caroline, youngest daughter of P. Stephens, Esq., of Kingstown, Ireland.

Parsons—Dolman.—On January 2, at the parish church, Dawlish, Arthur Daniell Parsons, L.R.C.P., of The Lawn, Dawlish, to Susan Charlotte, eldest daughter of Frederick Dolman, Esq., of The Bartons.

Shaw—Ridgway.—On January 3, in the Chapel Royal, Savoy, Thomas Claye Shaw, M.D., M.R.C.P., Medical Superintendent of the Middlesex County Asylum, Banstead, Surrey, to Hannah Gratrix, daughter of Isaac Ridgway, of Kytes, near Watford, Herts.

DEATHS.

Beck, Thomas Snow, M.D., F.R.S., at No. 7, Portland-place, on January 6, aged 63.

Maclean, Arthur John, only child of John Lindsay Maclean, M.D., at Bath, on December 24, aged 12.

Murphy, Edward William, A.M., M.D., late Professor of Midwifery, University College, London, at 3, Nottingham-place, Regent's-park, on January 4, aged 74.

Pickstock, Jane Elizabeth, wife of Geo. Newport Pickstock, M.D., M.R.C.P. Lond., at Rye-lane, Peckham, S.E., on January 6.

Sharp, Hugh, A.M., M.R.C.S. Eng., at Seafield-street, Cullen, N.B., on January 4, aged 66.

Sillar, Zechariah, M.D., and J.P. for the County of Lancaster, at Bath House, Sydenham, on January 3, in the 82nd year of his age.

Snewin, Alfred George, M.R.C.S., of York-place, Portman-square, at Back-hill, Hatton-garden, on January 5.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Addenbrooke's Hospital, Cambridge.—House-Physician and a Dispenser. The salary of the House-Physician is £65 a year, and he will have to reside and be boarded in the institution. The salary of the Dispenser is £100 a year. Applicants are required to be members of the Pharmaceutical Society, and are requested to state whether they are married or single. Candidates must be duly qualified. Testimonials as to ability and character to Fred. Barlow, Secretary, on or before January 17.

Chelsea Infirmary, Call-street, Chelsea.—Assistant Medical Officer and Dispenser. Candidates must be duly registered, not over forty years of age, and must possess the qualifications required by the Local Government Board. Applications and testimonials to William Miller, Clerk to the Guardians, Arthur-street, Chelsea, S.W., on or before January 16.

Hospital for Women and Children and Lying-in Institution, 76, West-street, Brighton.—Honorary Surgeon. Candidates must be Fellows or Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and duly registered under the Medical Act 21 and 22 Vict., c. 90. Applications and testimonials to the Chairman of the Committee of Management, 76, West-street, Brighton, on or before January 17.

Newcastle-on-Tyne Dispensary.—Resident Medical Officer. Candidates must be graduates in medicine of any university recognised by the General Council of Medical Education and Registration of the United Kingdom, or Licentiates of the Royal College of Physicians of London, and shall also be graduates in surgery of any university above referred to, or a Fellow or Member of the Royal College of Surgeons of England. Candidates must be duly registered in their several degrees and qualifications. Applications, with testimonials, to John J. Potts, Hon. Sec., on or before January 25.

Royal South London Dispensary, St. George's-cross, Lambeth-road, S.E.—Two Honorary District Surgeons. Applications to Mr. Hentsch, at the Dispensary, on or before January 31.

St. Thomas's Hospital Medical and Surgical College.—Surgical Registrar. Applications to Dr. Ord, No. 7, Crook-street, Grosvenor-square, or to Mr. Whitfield at the Hospital, on or before January 19.

Swansea Hospital.—Assistant Resident Medical Officer. Candidates must be registered in medicine and surgery. Applications to Jno. W. Morris, Secretary, on or before January 16.

The Great Northern Hospital, Caledonian-road, London, N.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons. Applications, with copies of testimonials, to the Secretary on or before January 26.

Tunbridge Wells Dispensary and Infirmary.—House-Surgeon and Secretary. Candidates must be unmarried, Members of the Royal College of Surgeons of London, Edinburgh, or Dublin; also Licentiates of the Royal College of Physicians, London, or the London Company of Apothecaries. Applications, with proofs of qualification, to Cleland Lammiman, Secretary, on or before January 17.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Glanford Brigg Union.—Mr. Robert H. Paterson has resigned the Scunthorpe District; area 8362; population 1917; salary £28 per annum.

King's Lynn Union.—Mr. Edwin Woodward has resigned the Workhouse; salary £60 per annum.

Portsea Island Union.—Mr. Pike has resigned the Southsea District; salary £70 per annum.

APPOINTMENTS.

Central London Sick Asylum District.—Arthur C. Horner, M.R.C.S. Eng., L.S.A., as Assistant Medical Officer and Dispenser at the Cleveland-street Asylum.

Belper Union.—Richard G. Allen, M.R.C.P. Eng., L.R.C.S. Edin., to the Heage District.

Lincoln Union.—George S. Boulton, M.R.C.S. Eng., L.S.A., L.R.C.P. Lond., to the Ninth District.

A sensible resolution has just been adopted by the Corporation of Rochester. They have ordered an ambulance *especially* for the removal of small-pox patients. It has also been decided to erect a hospital for infectious patients in the suburbs.

Supply of Milk for the Paris Hospitals.—The Assistance Publique has ordered an investigation to be made into the quality of the milk supplied to the Paris hospitals. The quantity furnished in 1876 amounted to 1,047,675 litres, and 1,065,350 litres are contracted for during 1877.—*Gaz. Hebd.*, December 22.

Vaccination.—On Tuesday, the 9th inst., at the request of her Majesty, a number of the members of the Royal Household were vaccinated at Windsor Castle by Dr. Fairbank, the Queen's surgeon. Those who had had small-pox, or who had been vaccinated within the last seven years, were exempted. The remainder of the Royal Household were vaccinated on Thursday, the 11th inst.

PROF. MOLESCHOTT.—The distinguished professor of physiology of Turin has just been made a Senator of the Italian Kingdom, a distinction doubly appreciated by a German *savant* who has so identified himself with the interests of Italy. The students presented a congratulatory address to the Professor.—*Wiener Med. Woch.*, No. 49.

HOSPITAL FOR SICK CHILDREN, MANCHESTER.—The vacant appointment of Assistant-Physician to this Hospital has been filled up by the election of Dr. Henry Humphreys, Medical Registrar at the Middlesex Hospital, London. We heartily congratulate the committee on their choice: it would indeed have been difficult to have passed over a man with the qualifications which Dr. Humphreys possesses; so that though there was a very large number of applicants for the post, the task of selection was comparatively easy. Not less is Dr. Humphreys to be congratulated on having been appointed to an institution so liberally appointed, and one affording such rich opportunities for clinical work as does the Hospital for Sick Children, Manchester.

CLINICAL LECTURES ON INSANITY IN FRANCE.—These lectures, which a few years since were arbitrarily and suddenly stopped by one of the Préfets de la Seine, are under the now more enlightened *régime* to be re-opened. Upon the intervention of the medical senators and deputies, the Minister of the Interior has communicated to the Préfet that he authorises clinical lectures on Mental Pathology to be delivered at the St. Anne Asylum, at Bicêtre, and at Salpétrière. Those who wish to attend them must apply for permission, which will be granted to students who have passed the third examination, to medical practitioners and magistrates on presenting their cards, and to advocates on presenting their certificates.—*Gaz. Hebd.*, No. 49.

ACADÉMIE DE MÉDECINE.—At the first meeting of this learned body for 1877, M. Bouley, the distinguished veterinary professor, took his seat as President. In his address, he observed that this was the first time the Academy had ever accorded the honour of its presidency to a member of the Section of Veterinary Medicine. He then passed in review, as if to justify its action on this occasion, the progress achieved by veterinary medicine since the period of the creation of the Academy, as well as the services rendered by it to human medicine—a progress and services to which the successive members of the Veterinary Section had greatly contributed. The loud applause of the audience acknowledged the justice of the claim. At the same meeting of the Academy, Prof. Jaccoud was elected into the Section of Medical Pathology by the votes of sixty-two of the seventy-nine members present.

THE FRENCH BUDGET FOR PUBLIC INSTRUCTION.—Those who have read a remarkable article in a recent number of the *Athenæum*, by M. E. About, giving an account of the successful enterprise which the great publishing houses of Paris have exhibited during the past few years, and are still exhibiting, will regard this as one of the most hopeful signs of progress of modern times. Works of the most elaborate and costly description find purchasers readily at high prices, their getting up being worthy of the best days of French bibliography. Serial works also on an almost colossal scale, and beautiful reprints of classical authors, fetch prices that are amply remunerative. Referring to our own branch of science, the two Medical Dictionaries published by Masson and Baillière, which will probably reach respectively sixty and thirty volumes, stand alone absolutely without rivals, not only in England but in Germany. The Government is no less in earnest in the matter, for, according to the *Gazette Hebdomadaire*, the Budget for Public Instruction has so rapidly increased within the last six years, that whereas it was 24,000,000 fr. in 1870, there have been voted more than 49,000,000 fr. for 1877—*i.e.*, more than double.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Received with thanks—Dr. F. D. Edgerton; Dr. William H. Rose.

F.R.C.S.—Mr. John Gay delivered the Lettsomian Lectures in Surgery in 1867, the subject being "Varicose Diseases of the Lower Extremities."

The Ghost of Sir William Blizard.—Mr. Walter Rivington, of the London Hospital, and Mr. T. P. Pick, of St. George's Hospital, are both Fellows of the College by examination, their diplomas as such bearing date respectively June 12, 1863, and December 13, 1866.

Enquirer.—Mr. Miller has succeeded Dr. Hawkins as Registrar; the office is removed from Soho-square to 315, Oxford-street.

A Very Old Subscriber.—You will find the case fully reported in vol. xvii. of the *Medical Times*.

Trinity College, Dublin.—We never decide bets; but in 1767 it was enacted that "no person should be appointed physician to any county infirmary unless examined and certified by the King and Queen's College of Physicians in Ireland." Licentiates of that institution are not, as we have already stated, entitled to dub themselves "M.D." Mr. J. L. is only "Dr. L." by courtesy.

M.R.C.S., Gainsborough.—Your application for registration should be made to "The Registrar, General Medical Council, 315, Oxford-street." In your case the fee will be £5.

E.C.—It is too late to send in your essay—the time expired on Saturday, the 30th ult. The subject for the Jacksonian prize for the present year is "The Disease of the Lymphatic System, known as Hodgkin's Disease or Lymphadenoma."

University College.—The late Robert Liston was surgeon to the institution; he was a great favourite and constant visitor of the late Marquis of Anglesey. Lord William Lennox mentions the snug dinner-parties at Uxbridge House, where every profession was well represented; he speaks of "Liston the surgeon, the cleverest operator, an excellent yachtsman, and the best fellow in the world."

Dr. R.—The late Mr. Hawes practised in your neighbourhood. It is said that Theodore Hook, in driving down to Epsom, saw the brass plate, "Hawes, Surgeon." "That reminds me," said the wit, "of two lines I made on a saw-bones of that name during the severe frost of 1814—

"Perpetual freezings, and perpetual thaws,
Though bad for *hips*, are good for *haw(e)s*."

Speaking of Gowland's lotion, he expressed his surprise "that they don't wash Mount Etna with it, in the hopes of preventing an eruption."

Dr. Campbell, R.N.—A bust of the late Sir William Lawrence was completed shortly before his death, and has since become the property of the College of Surgeons, where you can see it; a cast, no doubt, can be obtained of Mr. Henry Weekes, R.A., the sculptor.

Chirurgeon, Fowey, Cornwall.—The celebrated John Hunter was the first surgeon who operated for popliteal aneurism, in 1785. The preparation is in the Museum of the College of Surgeons.

Mr. Williams.—The distinguished electrician, Sir William Snow Harris, F.R.S., was educated at the University of Edinburgh, and admitted a member of the London College of Surgeons in December, 1813, where he was so little known or appreciated that for many years preceding his death his name appeared in a supplemental "List of Members who have made no return of their respective places of residence," and, in consequence, supposed to be defunct.

Zoologist.—George Marcgrave, who has been designated the "father of Brazilian zoology," was born in 1610, at Liebstadt, in Meissen, Upper Saxony. He was brought up to the medical profession, but he distinguished himself by his knowledge of natural philosophy, and was selected by the eminent Pisou to accompany him in the suite of Prince Maurice of Nassau-Siegen in the Dutch expedition of 1636 to the Portuguese Settlements. On the return of Prince Maurice to Holland, he undertook a voyage to the Coast of Guinea, where he died a victim to the climate in 1644.

THE "MISSING LINK."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to a paragraph in the *Medical Times and Gazette* of the 6th inst. on the existence of a race of "tailed men," it may be interesting to your readers to know that such a race is alleged to exist in the Island of Haïnan on the southern coast of China. The Chinese have possession of the seaboard, but their authority does not extend beyond a few miles inland. The aborigines are said to have tails about four or five inches long. The belief that they really have tails is quite a matter of course with the Chinese on the coast, though, owing to the warlike character of the Haïnese, there is no communication kept up between the two races. My information was obtained from a mandarin at Yu-lin-Kan, and others in the same district, but as I never saw a specimen I must decline to endorse the accuracy of the fact. I am, &c.,

St. Mary's Hospital, W., January 8. J. SWAIN SCRIVEN, R.N.

A MEDICINE TAX.

The number of packets and boxes of medicine stamped in the year ended March 31 last was no less than 15,873,934. The duty is 1½d. where the price is 1s. The amount of revenue received on patent medicines during the year was £123,136 9s. 10½d.

LUNACY AND REPUBLICAN AND IMPERIAL GOVERNMENTS, FRANCE.

The *Français*, on the lunacy returns for France for 1875, appears to be of opinion that Republican and Imperial institutions encourage the increase of insanity, but whether among the opponents or the partisans of these forms of government it does not state. But, says the *Français*, while the total cases of insanity increased rapidly during the First Empire, they declined again during the Monarchy, only to increase again in regular proportion during the Second Empire and the Third Republic. It appears also that, while up to 1860 there was more insanity among females than among males, the proportion has since been reversed. From 1861 to 1870 there were 53 men to 47 women, and since 1870 the proportion has been 55 men to 45 women. In 1875 no fewer than 2059 persons were admitted into the lunatic asylums of the department of the Seine, as against 351 dismissed cured. Of the total number admitted, 1438 belonged to Paris, 218 to the rural communes of the department, 250 to the rest of France, and 153 to foreign countries.

PATENTS FOR SEWAGE.

According to the appendix of the report of Mr. Sclater-Booth's Committee on the disposal of town sewage, upwards of 400 patents have been taken out "more or less connected with sewage and manures," from 1856 to 1875. The number of patents for sewage disposal, etc., has greatly increased since 1869. During the six years 1869-1875, 190 patents were registered.

COMMUNICATIONS have been received from—

Dr. SQUIRE, London; Messrs. MARSHALL and SNELGROVE, London; Messrs. ARNOLD and SONS, London; Messrs. OETZMANN and Co., London; Dr. HANDSELL GRIFFITHS, Dublin; Dr. WOODWARD, Worcester; Mr. THOS. WILSON, Alton; Messrs. C. H. MAY and Co., London; Mr. GODLEE, London; OMNIA SANITAS; Dr. MILNER FOTHERGILL, London; Dr. SHEARMAN, Rotherham; Dr. DOLAN, Halifax; Mr. STONE, London; Mr. B. SQUIRE, London; Mr. POWER, London; THE SECRETARY OF THE HARVEIAN SOCIETY, London; Dr. HITCHCOCK, London; Dr. WARNER, London; Dr. C. T. WILLIAMS, London; THE SECRETARY OF THE PATHOLOGICAL SOCIETY, London; Mr. T. HOLMES, London; Dr. J. DUDGEON, Glasgow; Mr. I. T. W. BACOT, Devon; Mr. C. F. MAUNDER, London; Surgeon-General FRANCIS, Sutton, Surrey; Dr. FRANCIS OGSTON, Aberdeen; Mr. J. CHATTO, London; Mr. J. W. HULKE, London; Dr. BARLOW, London.

BOOKS AND PAMPHLETS RECEIVED—

Jonathan Hutchinson, F.R.C.S., Illustrations of Clinical Surgery, Fasciculus 6—Bentley and Trimen's Medicinal Plants, part 16—Horace Dobell, M.D., Annual Reports on Diseases of the Chest, vol. ii. 1876—Braithwaite's Retrospect of Medicine, July-December, 1876—Samuel R. Percy, M.D., What Physiological Value has Phosphorus as an Organismal Element—Ely McClellan, M.D., Lessons to be learned from the Cholera Facts of the Past Year, and from Recent Cholera Literature.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Obstetrical Journal of Great Britain and Ireland—Annales d'Oculistique—British and Foreign Medico-Chirurgical Review—Practitioner—Journal of the Scottish Meteorological Society—Students' Journal and Hospital Gazette—Indian Medical Gazette—Revue des Sciences Médicales—Dublin Journal of Medical Science.

APPOINTMENTS FOR THE WEEK.

January 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

15. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Dr. Sansom, "Cases illustrating Anomalous Conductions of Mitral Murmurs." Dr. Leared (short communication), "On the Treatment of Tapeworm." Dr. Dowse (short communication, "On Gangrenous Stomatitis and its Clinical Resemblance to Charbon."

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

PATHOLOGICAL SOCIETY, 8½ p.m. The Evening will be devoted to the Exhibition of Specimens illustrating the Pathology of Visceral Syphilis. Specimens will be shown by Mr. J. Hutchinson, Drs. Clifford Allbutt, Greenfield, Gowers, Goodhart, Barlow, and others. The Microscopic Specimens will be arranged ready for inspection at eight o'clock.

ROYAL INSTITUTION, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

17. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

METEOROLOGICAL SOCIETY (25, Great George-street, Westminster), 7 p.m. Annual General Meeting.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Mr. Ashburton Thompson, "On Goa Powder as an Internal Remedy."

ROYAL INSTITUTION, 3 p.m. Dr. Wright "On Metals, and the Chief Industrial Uses of these Bodies and their Compounds."

19. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

ROYAL INSTITUTION (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. Tyndall, "A Combat with an Infective Atmosphere."

MEDICAL MICROSCOPICAL SOCIETY (The Century Club, 6, Pall-mall-place), 8 p.m. Annual General Meeting. President's Address.

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 6, 1877.

BIRTHS.

Births of Boys, 1456; Girls, 1363; Total, 2819.
Average of 10 corresponding years 1867-76, 2147·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	804	703	1507
Average of the ten years 1867-76	811·7	823·6	1635·3
Average corrected to increased population ...	...	...	1750
Deaths of people aged 80 and upwards ...	...	...	50

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	5	1	3	2	2	...	2	...	3
North	751729	54	2	8	2	8	...	2	1	4
Central ...	334369	1	7	...	1	1	...	1	...	...
East	639111	18	6	6	1	11	1	3	2	5
South	967692	38	12	8	6	10	2	6	2	6
Total	3254260	116	28	25	12	32	3	14	5	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·109 in.
Mean temperature	46·8°
Highest point of thermometer	55·5°
Lowest point of thermometer	35·3°
Mean dew-point temperature	43·1°
General direction of wind	S.W.
Whole amount of rain in the week...	1·34 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 6, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Jan. 6.	Deaths Registered during the week ending Jan. 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2819	1507	55·5	35·3	46·8	8·23	1·34	3·40
Brighton	102264	43·4	61	48	55·0	37·7	48·1	8·95	2·45	6·22
Portsmouth ...	127144	28·3	77	51	...	...	...	...	...	...
Norwich	84023	11·2	54	22	55·0	36·0	46·0	7·78	1·02	2·59
Plymouth	72911	52·3	40	26	55·5	38·5	49·0	9·44	2·78	7·06
Bristol	202950	45·6	157	81	53·2	34·9	46·1	7·84	2·22	5·64
Wolverhampton ...	73389	21·6	47	32	...	...	...	...	...	...
Birmingham ...	377436	44·9	340	162	53·0	33·4	43·8	6·56	2·89	7·34
Leicester	117461	36·7	103	48	52·2	33·5	41·1	6·73	1·57	3·99
Nottingham ...	95025	47·6	79	38	53·2	32·8	43·9	6·61	2·23	5·66
Liverpool	527083	101·2	379	274	52·0	33·1	41·7	5·39	2·29	5·82
Manchester ...	359213	83·7	244	203	51·0	30·0	41·2	5·11	1·71	4·34
Salford	141184	27·3	142	80	53·3	26·4	41·7	5·39	1·81	4·60
Oldham	89796	19·2	68	35	...	...	...	...	...	...
Bradford	179315	24·8	139	75	50·6	30·8	40·1	4·50	2·64	6·71
Leeds	298189	13·8	244	128	52·0	31·0	40·8	4·89	2·51	6·38
Sheffield	282130	14·4	208	106	52·0	29·5	40·1	4·50	2·76	7·01
Hull	140002	38·5	119	50	52·0	29·0	41·1	5·06	1·39	3·53
Sunderland ...	110382	33·4	83	59	51·0	28·0	39·5	4·17	1·82	4·62
Newcastle-on-Tyne	142231	26·5	112	71	...	...	...	...	...	...
Edinburgh	218729	52·2	120	103	48·0	25·0	36·1	2·28	3·25	8·25
Glasgow	555933	92·1	422	280	...	...	...	...	...	...
Dublin	314666	31·3	151	194	53·5	30·5	43·0	6·11	1·58	4·01
Total of 23 Towns in United Kingdm	8144910	38·3	6211	3673	55·5	25·0	43·0	6·11	2·13	5·41

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·11 in. The lowest reading was 28·57 in. on Monday morning, and the highest 29·58 in. on Tuesday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XIV.

WOUNDS.

Under the term homicide it will be convenient to include all those effects which result from various acts of violence to the person which are apt to lead to loss of life. A strictly philosophical arrangement would demand that the term should be restricted to those injuries which are either directly or more remotely attended with *fatal consequences;* but in *practice* such restriction is not always possible. The amount of violence offered is not in every instance the best test of its danger to life, as accidents, which are usually regarded as of but minor importance, in persons of unhealthy habit of body, or in those strongly predisposed to disease, may now and then terminate fatally. In this class of cases it is not unfrequently a point of importance, for the interests of the public or of individuals, if death follows an injury received, to determine whether the death had taken place purely from violence, or from natural disease; or what share either, or both of these together, may have had in the result. Hence in these circumstances it frequently happens that the medical jurist comes to find himself in a situation of great difficulty and responsibility—of difficulty, on account of the intricate questions, often involving points of extreme delicacy, which he may have to decide regarding the cause of death; and of responsibility, on account of the very important effect of his opinion to an accused person, whose life may be perilled by his decision.

Amongst the various forms of homicidal violence as thus understood, a prominent place must be assigned to *wounds*, as understood in legal medicine. In legal medicine the term is made to include all those local alterations of any part of the body which are produced by violent means, whether the cause has been directed against the body, or the body against the wounding cause. Hence such wounds are classed *incisions, lacerations, contusions, concussions, fractures, dislocations, sprains*, and *burns*, whether by *fire* or by *escharotics*.—("Watson on Homicide," page 18.)

The adoption of this arrangement having been found to be attended with certain obvious advantages in practice, has caused it to be retained, though liable to some objections. Thus it will be observed that it comprehends certain injuries which are excluded from the class of *wounds*, as this term is *made use of* in ordinary *surgical language*. According to the ordinary acceptation of the term, a wound "denotes an accidental solution of continuity of the soft parts, more or less recent, generally bloody, and occasioned by a mechanical cause"; and as it varies with its cause, it "may be that which is termed a scratch, excoriation, puncture, cut, contused wound, gunshot wound, bite, laceration, venomous wound, and the like."—(*Ibid.*, pages 18, 19.)

Again, *the law* interprets the term "wound" somewhat differently from either the medical jurist or the ordinary surgeon. Whatever the injury done to either the soft or hard parts of the body, or the extent to which the solution of their continuity may have been carried, "*unless the continuity of the skin be broken*," it is not held to "constitute a wound in law." It even appears, "from several recent decisions," that an abrasion of the cuticle is not to be understood as a breaking of the continuity of the skin; the cutis or true skin must participate in the injury, and probably the cellular membrane beneath."—("Taylor's Manual," page 282.)

In these circumstances it is not to be wondered at that, "owing to the unsettled meaning of the word *wound*, it has happened on more than one occasion that medical witnesses have differed in their evidence, and that some difficulty has arisen in the prosecution of criminal charges."—(*Ibid.*)

To obviate these *inconveniences*—to give them the mildest term,—different suggestions have been made, the most feasible of these being those of Drs. Taylor and Guy. But, to meet the case in hand, not only must the proposed nomenclature be in itself free from reasonable and obvious objections; the terms suggested would also require the support of both our legal authorities and our surgical brethren in order to be available in medico-legal practice. Till this is obtained, all the requirements of our position may be readily met by the adoption of *brief descriptions* in place of definitions, or by *short explanations*. For example, we may speak of a division of the soft or hard parts, enumerating the parts divided; or we may speak of a *bruise* or contusion, *shock* or concussion, a *fracture, burn, dislocation*, etc.; or, retaining the term *wound* in its usual surgical and *generic sense*, we may couple it with its appropriate *specific qualification*, and speak of an *incised, punctured, lacerated, contused*, or *gunshot* wound.

In this way we leave it to the lawyers to settle amongst themselves whether they are to consider a solution of continuity of the soft parts as a wound or otherwise when the true skin has escaped division; or whether the term wound is to be held as applicable to one form, and denied to another form of the same injury, when the only distinction which can be drawn between them is, as in the case of fractures, that the skin has or has not been involved in the separation of the tissues.

With these necessary explanations premised, I now proceed to advert to *those points* connected with the large and important classes of injuries which have been specified bearing upon *legal medicine;* restricting myself to such of these as are either altogether overlooked in purely surgical works, or whose importance is chiefly or entirely derived from their connexion with medico-legal inquiries. This will lead me to speak, *first*, of the distinctive characters, or *the diagnosis*, of wounds and other allied injuries, with certain inquiries arising out of these; *secondly*, of *their prognosis*, or the characters as regards their relative importance which their extent, the parts of the body in which they are situated, and the organs which they may have involved, may cause them to assume in particular instances; and, *lastly*, of *the post-mortem inspection* of fatal cases, which will afford me an opportunity of considering some points common to all or many of these various injuries.

And, first, of the diagnosis of *wounds in the medico-leg acceptation of the term*. I begin with—

1. *Penetrating Wounds*.—Such wounds (hence also termed *punctured*) are usually caused by pointed instruments—such as a sword, bayonet, knife—thrust in as a wedge, and not used as a saw. Consequently their *depth* will be much greater than their *superficial extent*. In general their margins will be found apart, not in close contact. The regularity and evenness of their edges will be affected by the sharpness or dulness of the weapon or agent by which they have been produced. Thus, penetrating wounds following thrusts with *instruments*, properly so-called, may usually be distinguished from those caused by glass, crockery, nails, etc., by the cleanness of their edges, their freedom from contusion, and their amount of retraction, or the reverse. Such wounds almost never heal by the first intention. However occasioned, they bleed but sparingly, either outwardly or inwardly, unless about the female genitals; when the larger vessels of the neck are divided; or when they have penetrated the larger cavities, in which case, from the absence of the support of muscles and firm sheaths, as in the limbs, the wounded vessels are apt to bleed copiously. The difficulty, too, in this last case, with which the blood coagulates out of the reach of the air, adds to the importance of such wounds of arteries within the cavities of the body. Hence it is that trifling wounds of the liver, spleen, lungs, etc., which have involved none of the larger bloodvessels, frequently prove fatal from the resulting hæmorrhage. Some instructive cases of this sort I will have occasion to bring forward in another connexion by-and-by.

Although a *bayonet wound* may *usually* be distinguished from *a small sword wound*, it is a mistake to suppose that in this class of wounds the solutions of continuity *always* take the shape of the instruments by which they were produced. This was first pointed out by Dupuytren. From cases and experiments on the dead body it was proved by him that cylindrical pins produce elongated openings with two very distinct angles, the direction of the wound varying with its situation. In the neck, at the armpits, and in the linea alba, the direction of the wounds were *parallel to the axis of the body—transverse* on the sides of the chest, and *oblique* on the sides of the abdomen. When at any part of an otherwise cylindrical instrument there were *projecting angles*, the wound, he states, was seen to take the form of these angles.—(Orfila, "Méd.-Lég.," vol. i. page 506.)

It has since been found that, independently of the region of the body and the shape of the instrument, penetrating wounds

differ with "the tissues divided as well as the state of tension or relaxation of the skin, and the direction" in which the thrust is made. "Thus, when the weapon has penetrated in an oblique direction through the tissues, or when the latter are irregularly stretched, the shape of the wound will not correspond with that of the weapon. Thus punctured wounds made by the same instrument may differ in shape, and be either triangular or oval," according to the circumstances just indicated.—(Wharton and Stillé, page 548.)

It is to be remembered that wounds made by penetrating instruments are seldom so large as the instrument which caused them, from the instrument having rather produced a *separation* of the fibres of the tissue than their *division*. The *bones* do not form in every case an exception to this, as has been affirmed. Thus—

Several years ago a young man in town, while shooting, had the head of the breech-pin of his gun lodged in the frontal sinus from the bursting of the barrel. The opposite extremity or point of the nail projected from the forehead, but, though movable, it could not be withdrawn without removing previously a portion of the outer table of the skull by the trephine.

In the case of penetrating wounds the defence is not unfrequently set up, that the injury may have arisen in consequence of the person falling against some projecting body—as the corner of a chair or table, a nail in the wall, a sharp stone, or broken glass or earthenware.

A defence of this sort was set up here in 1846, on a trial for a murder at Ellon, by a penetrating wound in the genitals of a female; and again in the case of a woman at Kebbaty, for which her master was tried here for homicide in 1855. To the former of these I shall have to recur in another connexion afterwards. The second trial was, in several respects, a curious and instructive one, in which counsel of the first eminence was employed for the defence. The victim, who was of very intemperate habits, had died of hæmorrhage from one or two minute penetrating wounds involving the frontal branch of the left temporal artery. These wounds, it was argued on the defence, must have been caused by the deceased, in drink, falling accidentally against the heads of two nails projecting from the front board of a wooden bed, near which the body was discovered. Several objections, however, stood in the way of the adoption of this theory: First, a pair of round-pointed scissors, the points of which were bloody, were found in the apartment. Secondly, the distance betwixt the two wounds did not correspond with that between the two nails. Thirdly, the nails were so close to an angle formed between the board in question and a folding-door in front of the bed, that the woman's head could not have come in contact with them without a good deal of manœuvring on her part, in the recumbent posture. Fourthly, no such nails were observed in the board at the time of the post-mortem, though blood upon it had been observed and noted down; while the friends of the accused had had possession of the key of the cottage for some time previous to the trial. Lastly, we had satisfied ourselves at the inspection of the body that the wounds had been inflicted *in, not out of the bed*—a conclusion founded on our finding abundant traces of blood in the bed, in the passage leading to the kitchen, and on seats in the kitchen, with absence of blood on the floor in front of the bed; the woman, apparently, after the receipt of the wounds, having risen from her bed, wandered along a pretty long passage to the kitchen, been seated there, and afterwards had found her way to the bed to die.

The examiner, then, I repeat, should be careful in such a case to inspect the locality, and thus be in a condition to meet the suggestion which may be set forth on the defence as to the possibility or probability of the purely *accidental origin* of the lesions causing death. Another lesson taught by the occurrence of such a case as the above is the propriety of noting the distance of wounds from each other when more than one is found in the same locality. In the Kebbaty case, the distance betwixt the two wounds and the two nails did not correspond. In further enforcement of the same lesson, I may be permitted to refer to the case of a female tried here in 1844 for child murder by an irregular wound in the neck of her infant. On the defence a medical man had suggested that the wound on the front of the child's throat had been of purely accidental origin: the woman, in dividing the umbilical cord, had allowed the point of the knife to pass into the neck. The measurement of the portion of the cord at the post-mortem did not tally at all with this ingenious theory.

But to proceed. In instances of the sort we are considering, independently of the absence of any efficient wounding cause—a point of some importance,—a little attention to the appearance of the wound will often suffice to obviate the plea of its accidental and indirect origin. Thus, wounds made by coming against foreign bodies are seen to be more or less *contused* and *lacerated* if the body is *blunt*, while if *sharp* their edges will be irregular and uneven—circumstances commonly the reverse of what is known to happen after the entrance of penetrating instruments. Besides, wounds produced in the former way seldom penetrate far below the surface.

In penetrating wounds, the openings made by the instrument in *the clothes* before entering the body are, as a rule, usually smaller than the weapon which produced them. In passing through the clothes, such instruments, however, do not invariably leave distinct traces of their course. Thus, when their diameter is small, the instrument may merely *separate*, without dividing, the threads of the cloth, as in the case of woollen garments, which are possessed of considerable elasticity; or the cloth—as where the wound has but little depth—may have been carried in by the point of the instrument, and been drawn out again, without injury to it, by the movements of the body. This last circumstance, however, has never, it is believed, been encountered in the case of a sharp-pointed instrument.

Once more, a wound partly partaking of the character of an incised, partly of that of a punctured one, may be met with, appearing externally as one incision, and two or more internal divisions of the tissues or organs, the whole inflicted at one time by the same weapon. This may be effected by the weapon having been only partially withdrawn after the superficial or incised wound was made, and then plunged further into the body in another direction, as is often the case in a close struggle. Thus, in a case related by Bayard, the deceased presented a single gaping wound in the breast, out of proportion to the weapon found at the spot where the murder was committed; but the left ventricle of the heart was perforated through and through, and its walls wounded likewise at a different part.—(Briand, "Méd.-Lég.," page 317.)

I lately met with an instance of the same sort in a different part of the body. The corpse of the man was found in a wood at Nigg last summer (1875). Beside it lay one of those triangular knives used by shoemakers for cutting leather. With this weapon it appeared that an irregular superficial wound, two inches in length, and presenting the character of an incised wound, had been made in front of the cricoid cartilage near its middle. From this wound the knife seemed to have been thrust downwards, nearly in a vertical direction, dividing across the thyroid cartilage and the first three rings of the trachea.

One other circumstance in connexion with punctured wounds may be noticed here, in conclusion. Such wounds, even when inflicted by a sharp knife, are not invariably characterised by a straight cut, but sometimes are seen to have sent off a spur somewhere in their course, like the two lines of the Greek letter γ. This seems to me to be explicable on the supposition that, in withdrawing the knife, the wrist of the assailant is turned half round to facilitate the removal of the instrument, while the assailed, from shrinking, may change posture. I mention this because, on more than one occasion of this sort, my colleagues at the inspection had some hesitation in deciding that such a gamma-shaped wound admitted of explanation, without the necessity of conceiving that the instrument had only been once projected into the body. Such appearances occurred here last year (1875), in the case of several stabs having been given on different parts of the trunk. It may not be without interest to notice, further, the fact that in this instance the woman's dress, loosely worn, exhibited more cuts than the sum of the corresponding wounds from the knife—a sharp-pointed kitchen one—having passed twice through folds of her dress in order to reach more than one of the wounds.

(*To be continued.*)

CLINICAL LECTURE

ON A CASE OF INTRACRANIAL SARCOMA.

By J. W. HULKE, F.R.C.S.,
Surgeon to Middlesex Hospital.

GENTLEMEN,—There died in Forbes ward, on October 28, a patient who for nearly nine months had been under observation, first at the Royal London Ophthalmic Hospital, and

latterly here. I have often called your attention to him at my visits to the wards. The tumour, removed by Dr. Coupland from his body after death, is before you, and I propose to-day to review his case.

On February 19 last, when he first came under my notice, I wrote this memorandum:—"W. J., aged thirty-nine, a worn-looking, pale boot-clicker, complains of confusion of sight, hindering him from working. The confusion is an incomplete diplopia; the double images partially cover one another, except at the outskirts of the visual field. Marked palsy of the musculus rectus externus, and slighter palsy of the musculi recti superior and inferior. Slight proptosis. Myosis. Blunted tactile sensitiveness of the left side of face, corresponding to the distribution of all three divisions of the fifth nerve (most marked in the parts supplied by the first and second divisions), with formication and a sensation of numbness. Loss of tactile sensibility and also of taste in left side of tongue from tip almost to root. Wasting of left temporal and masseter muscles, which are contracted, and act less forcibly than the right muscles, and, as he expresses it, with a feeling of stiffness.

"A sore on penis seven years ago, with knots in both groins which did not suppurate; and some time later (within one year) ulcerated throat, and rash on trunk and arms. June, 1875, toothache, for which four teeth were pulled out without relief. At Christmas confused sight."

The diplopia, the patient's chief distress, plainly arose from derangement of the concerted movements of the two eyes, for, as you know, single vision with two eyes requires that they shall both be so moved together and directed towards the object that the image of this shall fall upon identical or corresponding parts of the two retinæ. This derangement of their consensual movements obviously proceeded from palsy of the musculi recti, which, in turn, meant impairment of the third and sixth nerves. The association of myosis (contracted pupil) with palsy of the upper and lower rectus muscles, supplied by the third nerve, seemed at first puzzling, for, as you will remember, this same nerve supplies the sphincter pupillæ, the dilator deriving its supply from the sympatheticus. You would therefore expect that dilatation (not contraction) of the pupil would accompany palsy of those external ocular muscles to which the third nerve is distributed; and this is the rule. The apparent anomaly here had its explanation in the implication of the fifth nerve, for section of this nerve at the Gasserian ganglion produces contraction of the pupil which is even greater than that which follows section of the sympatheticus alone. The myosis, together with the concurrent implication of the whole of the fifth, and also of the third and sixth nerves, fixed the situation of the disease in the neighbourhood of the cavernous sinus. As to its nature, his syphilitic antecedents made it not unlikely that it was a gumma of the dura mater or bone pressing on the nerves. He was therefore ordered iodide of potassium three times a day, in doses of eight grains, which were later increased to fifteen grains. In spite of this, the proptosis and the paralysis increased, and the hollowness of the temple was replaced by an unnatural fulness. The malar region, too, became fuller. At the end of April his tongue, when protruded, deviated very positively to the left, indicating that the hypoglossal nerve had become involved in the disorder. He then began to suffer extremely from excessive pain in the temple, and his strength became so reduced that he could no longer struggle on with work, and was glad at the middle of May to become an in-patient. By this time the fulness of the left temple was very conspicuous, and the protrusion of the eyeball considerable. It was now evident that this latter was due to the invasion of the back of the orbit by a tumour, and that it was not simply a consequence of the want of tonicity in the palsied muscles. Taste was now lost in the left half of the root of the tongue, indicating implication of the glosso-pharyngeal nerve. The hearing of the left ear was not so acute as that of the right, but as no previous comparison had ever been made, the precise value of this as a sign of extension of the disease to the portio mollis of the seventh pair could not be fixed. The left facial muscles were not at all palsied, but rather in a state of slight tonic spasm. The course of the malady had plainly shown that we had not to deal with a simple syphilitic gumma, and made it probable that it was a periosteal sarcoma beginning inside the skull and extending into the orbit, and through the outer wall of this or through the sphceno-maxillary fissure into the zygomatic and temporal fossæ. The sight of the eye had become much impaired, with congestive swelling of optic nerve disc; and, at the middle of June, ophthalmia with dulness of the cornea supervened. Thinking the latter might be due to the exposure of the insensible eyeball, and the intrusion of foreign bodies, dust, etc., of the presence of which the man had no warning, the eyelids were brought together with a strap and covered by a light compress; this gave some relief, but it could not be efficiently applied owing to the protrusion of the eyeball between the eyelids, which steadily increased, till by August it was so far advanced that a needle might have been pushed behind it, between it and the orbital margin. The lower eyelid was now everted, and a large roll of swollen conjunctiva filled the angle between it and the eyeball. The pain in the left temple had grown so severe that the patient required several times a day a hypodermic injection of morphia. On October 3, upon my return from my autumn vacation, I found all his symptoms increased, and he had, added to his other troubles, difficulty in swallowing. Whatever he took stuck, he said, in his gullet, beyond which it would not go, but returned by the nares, and occasionally got into his larynx, threatening to choke him. The vagus was involved. From this time life was supported by enemata, but the rectum at length became irritable, and no longer retained them. Finally, his breathing became embarrassed, and he sank on the 28th of the month, his mind being clear to the last.

At the post-mortem examination this sarcomatous tumour was found. Originating apparently at the tip of the petrosal bone, it had involved and destroyed the Gasserian ganglion and the third, fourth, and sixth nerves. It had entered the orbit through the sphenoidal fissure, filling the apex of this cavity, displacing the eyeball forwards, and wasting and thrusting up the roof, so as to project into the anterior fossa of the skull as a considerable hummock, which had wasted and flattened out the inferior frontal convolution. From the orbit it had spread into the zygomatic fossa, but it had not ascended, as we had thought during life, into the temporal fossa. The temporal muscle had a very curious appearance—it was swollen, of a pale buff colour, and, when cut across, the section was translucent and of a jelly-like consistence. The rough characters were strikingly like those of myxoma; yet a closer examination did not confirm this, but showed merely an extremely wasted muscle thoroughly soaked with serum, thoroughly œdematous—a condition which depended doubtless on the obstruction of the deep temporal and of veins in the zygomatic fossa. The cavernous sinus was destroyed. From the tip of the petrosal bone, where the tumour formed a considerable knob, it had extended downwards and backwards, and involved the eighth nerve and the hypoglossal as they enter the foramina by which they respectively leave the skull. Dr. Coupland tells me that the finer structure of the tumour places it amongst the sarcomata.

Here, then, there was a considerable tumour projecting into the anterior and middle fossæ of the skull, wasting the corresponding portions of the cerebral hemispheres, revealed only by the palsies of the several nerves which it successively destroyed. No hemiplegia, no fits, no disorder of mind marked its existence; not even aphasia was present, although the inferior frontal convolution, particularly its posterior part, was wasted by it. Such absence of brain-symptoms is by no means infrequent. It is a negative evidence which counts for nothing when, in considering in any given case of external tumour attached to the skull, the question of an operation, where the propriety of interfering or of abstaining depends on the integrity or penetration of its walls. We have in our museum a myxoma of the size of a small orange, which grew from the orbit into the right middle fossa of the skull, and thoroughly wasted the temporo-sphenoidal lobe, without any cerebral symptoms denoting its presence until a few hours before death, when a persistent epileptic condition supervened. This is by no means exceptional. I have seen more than one other of the same kind, and I have no doubt that many have been recorded.

Here the question of direct interference never arose, because it was evident, when I first saw him, that the disease, which in its progress had caused the proptosis, had begun behind the orbit, and therefore inside the skull.

The ophthalmia and the ulceration of the gums bear on the still vexed question of the trophic influence of the fifth nerve, apparently proved by the well-known experiments of Majendie, and refuted by the exceedingly ingenious experiments of Snellen. I have so often seen the ophthalmia quickly disappear, and corneal ulcers heal, where the eyeball has from

disease of the fifth been absolutely insensible to touch, when some small foreign body has been taken away, and the eyelids closed with a strap of isinglass-plaster covered with a compress to prevent fresh intrusions and to protect against exposure to cold, etc., that, without absolutely denying the fifth any influence over the nutrition of the tissues, I am forced to think that this influence is less than was long believed. With respect to the mouth, although the ulcerated parts could not have been reached by the teeth, they might have been scalded by too hot liquids, of the excessive heat of which his insensible gums would not have informed him. Very considerable injuries may sometimes arise in this way. Last summer I saw a boy whose hand, after a very severe compound fracture of the arm, was perfectly anæsthetic. Whilst toasting a slice of bread, he had, without knowing what was going on, roasted deeply his fingers.

The first diagnosis—syphilitic gumma,—which I always looked upon as provisional, was disproved by the progress of the case. The error was justified by his history, and it was without influence on the result. Of all forms of primary tumours of the skull, sarcoma is by far the most frequent. I have seen a very considerable number originate in and about the orbit. Mostly starting from the periosteum, they invade the bones, and extend rapidly from one to another, the sutures offering no effective barrier. Their tendency to grow again after extirpation is very strong, and unless they begin in a situation which is freely accessible, and where their thorough destruction can be effected (often with the assistance of the actual cautery and escharotics after excision), the prognosis is highly unfavourable.

ORIGINAL COMMUNICATIONS.

ON REDUPLICATION OF THE CARDIAC SOUNDS.(a)

By JAMES BARR, M.B., L.R.C.S. Edin.

(*Continued from page* 31.)

It may be easily gathered, from what I have previously stated, that I differ from Dr. Balfour and Dr. Sansom in ascribing the primal elements of normal reduplication of both sounds to the right heart, whereas they attribute them to the left.

This subject was vividly brought under my notice about three years ago, when performing a series of experiments with a different object in view. After chloroforming a cat, I laid open her chest, when the lungs at once collapsed, driving out not only the breathing and the reserve, but also in great part the residual air, and thus produced a mechanical obstruction to the pulmonary circulation. At first both sides of the heart acted in harmony, but gradually asynchronism between the engorged right and the unreplenished left side became established, until the following rhythm was observed.

The right auricle began to contract before the left, and the end of its systole—the left auricle still contracting—was followed immediately by the contraction of the right ventricle. When the left auricle had completed its contraction, the left ventricular systole began. We had thus the right auricle and ventricle acting in advance of the corresponding parts of the left side, and each side of the heart had more or less independently its own peristaltic action. Although the right ventricle had completed its contraction before the left, yet the time occupied by its systole was longer than that of the left ventricle, and consequently the asynchronism was more marked at the beginning than at the end of contraction. The heart was acting slowly, so I had no difficulty in discerning what I *à priori* expected—viz., four sounds in the place of two. I satisfied myself that the primal elements of both these reduplicate sounds arose from the right heart. This experiment I have frequently repeated, also with modifications, such as artificial respiration, and always with a more or less similar result. In some instances where the action of the heart was so rapid that no reduplication could be distinguished, and no asynchronism could be observed by the eye, yet by tactile perception the right heart was easily recognised to act in advance of the left. This I have had verified by others.

(a) Read before the Liverpool Medical Society.

I need scarcely say that I consider the foregoing experiment to strongly support my views, and to be at direct variance with those of Drs. Balfour and Sansom.

In morbid conditions reduplication of the first sound is rare, whereas a double second sound is of comparatively common occurrence. This, I believe, is explicable by the much greater length of time occupied by the first than by the second sound; and hence there is required a correspondingly greater want of synchronism between the closure of the tricuspid and mitral valves than between the closure of the pulmonic and aortic semilunar valves, to produce a reduplication.

For the sake of simplicity I have hitherto only recognised one cause of sound—viz., valve-tension; but the first sound is much more complex, and consequently prolonged, so the amount of asynchronism which in the case of the semilunar valves would produce a reduplicated sound, in the case of the auriculo-ventricular valves only produces a protracted sound.

The valve theory of the reduplication of the sounds is at once the clearest, simplest, and, to my mind, the only correct one; but Dr. Hayden, in one of the latest (and the best) works on "Diseases of the Heart"—while he adopts it as regards the second sound, advocates another theory to account for doubling of the first sound. He says: "The first sound of the heart coincides with the impulse and the first two-thirds of the ventricular systole; it is the product of a twofold cause—viz., the impulse of the ventricles, and the sudden tension of the auriculo-ventricular valves and chordæ tendineæ . . . and it seems to be composed of a 'thud' and a 'click' due respectively to the above causes. . . . Reduplication of the first sound is the result of its resolution into the above-mentioned two elements."

From this explanation I must dissent. As I have before stated, I believe reduplication of the first sound to be due to a want of synchroniety in the closure and tension of the right and left auriculo-ventricular valves; or, in other words, in the initial stage of contraction of the right and left ventricles.

As the impulse begins with the muscular rigidity, which gives rise to the intra-ventricular pressure, and this in turn to valve-closure and tension, with the resultant "click," it is evident that under no circumstances can the "click" *precede* the "thud."

Again, as the impulse continues almost throughout the whole ventricular systole, and certainly beyond the period of greatest intra-ventricular pressure, it is plain that the "click" cannot *succeed* the "thud." No doubt the first sound is often recognisable to the ear as a compound, but this resolution into its component elements of impulse and valve-tension can never be looked upon as a reduplication. In short—as will be seen by the inspection of any cardiographic tracing—the impulse includes the closure of the auriculo-ventricular valves, and, consequently, the "thud" includes the "click."

In my opinion, the strongest arguments used by Dr. Hayden in support of his theory are the terms "thud" and "click," which differences of sound could not arise from any dissimilarity in the tricuspid and mitral valves; but if such terms are really based on facts, they can only be properly explained by supposing the "thud" to be due to impulse and valve-tension, and the "click" to be only due to the valve-tension of the opposite side of the heart.

We have before seen that the loaded ventricle initiates the systole; and the following simple experiment shows that the loaded or primarily contracting ventricle causes the impulse: hence the dull element is always the primal one. If you place your finger on the apex-beat, and then suspend respiration as long as you are able in the state of expiration, you will find that the impulse becomes more and more feeble, until at last it ceases to be perceptible. Then place your hand over the right ventricle, and you will find a diffused pulsation.

In a very interesting lecture in the *Lancet* of May 13, Dr. George Johnson advances the theory that "*the contraction of a dilated, and especially of a hypertrophied auricle becomes sonorous, and that the first division of the double first sound in the cases under consideration is the result of the auricular systole.*"

He plausibly assumes that, because the rhythm is somewhat similar to that of the triple pericardial friction-sound, and of the auricular systolic murmur of Professor Gairdner, therefore the explanation of the origin should be similar; but this is a *non sequitur*. If with Dr. Johnson you call the second element *systolic*, then a very good name for the first would seem to be *presystolic*; but this is no proof whatever that it is auricular systolic in origin.

According to the theory of asynchronism, the one element

follows the other in quick succession, and that because the one ventricle begins contraction before the other.

Even Dr. Johnson's description of the reduplicate sounds "Rat—a——Tat" inveighs against his theory; for if the auricle produced the first element, then, it being weaker than the ventricle, we would expect, instead of "Rat—a——Tat," "a—Rat——Tat," thus:

Rat	Auricular Systole	a
a	Ventricular Systole	Rat
Tat	Ventricular Diastole	Tat

Any suggestion that the auricular systolic murmur is coarser than the ventricular systolic is inappropriate, as direct murmurs are always rougher than indirect.

The fact that "reduplication of the first sound in cases of Bright's disease is usually most distinctly heard between the mamma and the sternum in the third left interspace," Dr. Johnson admits is in accord with either theory, but he fails to see that the fact of the reduplication being often absent at the apex militates against his explanation. The auricular systolic murmur, which he says is analogous to the *first* element, invariably centres about the apex, and this is also the site of the greatest intensity of the first sound, which, according to the same writer, is represented by the second element. If, therefore, his theory were correct, we would expect the reduplication not only not to be absent at the apex, but to have that as its point of maximum intensity. He says, "The assumed asynchronism of the ventricular contraction is a theory unsupported by evidence," but I think I have previously shown the contrary.

It seems to be an axiom in Dr. Johnson's mind that the primal element is auricular systolic in origin, which he then goes on to prove by an ostensible generalisation of those conditions under which the auricular systole gives rise to sound, viz., mitral constriction; auricular surface roughened by lymph; to which he adds—"As a result of obstruction in the systemic arteries, and consequent distension of the left auricle, either with or without hypertrophy of its walls, we have, as I believe, an audible auricular systole, constituting the first division of the reduplicate first sound, in cases of Bright's disease." The peripheral obstruction—which is assumed to be so potent a cause in producing dilatation and hypertrophy of the auricle—in the first place only calls forth increased power on the part of the left ventricle. And so long as the compensatory hypertrophy is sufficient to meet the demand, and the mitral valves remain competent, there is no extra strain thrown on the left auricle. Even dilatation—which is a sign of failing nutrition—of the left ventricle does not take place so long as the hypertrophy is sufficient to meet the requirements. Dr. Fothergill says, "When from any cause there is deficiency in the compensatory nutrition, a species of balance is again struck, but of a lower order, viz., dilatation.

When the ventricular walls begin to ineffectually perform their work, and dilatation takes place, or when the mitral cusps become insufficient to close a dilated orifice, then, and not till then, we get dilatation and hypertrophy of the auricle. So, if Dr. Johnson's theory were correct, we would expect reduplication to occur at a late stage of Bright's disease, whereas it occurs more frequently before than after any strain has been thrown on the auricle. I have not been so fortunate as Dr. Johnson in finding reduplication of the first sound common in emphysema and other obstructive lung diseases; and I have ascribed its rarity to the early dilatation of the tricuspid orifice which is so apt to occur—the so-called "safety-valve action" of Wilkinson King.

On December 4 I saw a boy suffering from a severe attack of acute rheumatism of seven days' standing. On the following evening his temperature was 104° Fahr.; he had great cardiac distress, and double pericardial friction was audible. On the 8th there was evidence of pericardial effusion; no friction; sounds were much muffled and not attended by any murmur; rhythm regular, but at the base the action was cantering owing to a reduplication of the second sound. Pulse 116, full, moderately soft, and the individual beats were rather prolonged and dwelt under the finger. Two days later there was double pleurisy, with slight effusion into both pleuræ, especially into the right, which gave rise to impeded pulmonary circulation and abolition of the reduplication of the second sound. Pulse 124; respirations 54; temperature 104°. The double pericardial friction was again present.

For the next four days he improved: pulse fell to 90, respirations to 30, temperature to about 100°; but on the 15th he had an attack of endocarditis, attended by a soft ventricular systolic mitral murmur, with pulse 124, respirations 40, temperature 101·2°. Again, two days later the mitral murmur was very loud and coarse; the double friction at the base had assumed a peculiar relation to the cardiac rhythm—viz., the first part occurred before, with, and somewhat masked the first sound; while the second part came before, and was shut up by, the second sound. Great effusion into the right pleura. On the 19th pulse 120; respirations 40. Heart's action increased; other signs as before. There is great effusion into right pleura, the dull percussion extending to the left border of sternum, and as high as the third costal cartilage and ninth dorsal spine. Over this area the respiratory and vocal phenomena are negative, but coarse friction of cardiac rhythm is audible, which is evidently due to deposit between the outer layers of the pleura and pericardium, as it is much rougher than that heard over the heart when the patient is in the sitting posture, and extremely rough when he is recumbent. Slight tactile friction fremitus.

On the 23rd, pulse 118; respirations 32. Suspicion of tricuspid regurgitation, owing to difference in the tone of the systolic murmur at different points. On the 26th there was distinct pulsation of the veins of the neck, synchronous with the cardiac beats. On the 28th, in addition to the signs last noted, there was retraction of the intercostals with the systole.

January 13: Has steadily improved since last note. Temperature normal; pulse 66 to 72; respirations 22 to 24. The fluid in the right pleura has almost disappeared. The right ventricle of the heart has returned to its normal condition, while the left is evidently dilated. Apex-beat diffused and felt in the fourth and fifth interspaces within the nipple-line. Over the greater part of the cardiac surface, but heard most intensely at the apex, there is a loud blowing ventricular systolic murmur, having the following relation to the sounds:—The first sound is short, clear, and sharply defined; then almost immediately follows the murmur, which is at first comparatively low, but quickly increases in intensity, reaching its acme about the middle of the interval between the first and second sounds; it then begins to fall, and runs up to the second sound, which shuts it abruptly. Along the upper part of the sternum the first sound is slightly prolonged. The pulmonic second sound is accentuated.

The explanation of this case I believe to be as follows:—The reduplication of the second sound, in the first instance, was due to a tardy and prolonged contraction of the left ventricle, with corresponding delay in the consecutive reaction of the aorta; but when obstruction to the pulmonary circulation took place, there was equivalent protraction of the right ventricular systole, with consequent abolition of the reduplication. Then mitral, and eventually tricuspid, regurgitation took place, with their resultant murmurs, during which time both ventricles were well supplied with blood, so that the stimulating effects of distension in causing contraction acted equally and synchronously; and as presumably each ventricle was able to dispose of its blood in the same time, there was also no reduplication of the second sound. When convalescence set in, and the pulmonary obstruction was removed, then the right ventricle and tricuspid orifice returned to their normal size; but the left ventricle remained dilated, owing to the mitral regurgitation. The normal right ventricle was sooner filled, and the inhibitory action of the vagus was more quickly overcome than in the case of the dilated left ventricle. The effect of this disturbance in the blood-supply to the two cavities was manifested by a pseudo-reduplication of the first sound, the second element being masked by the indirect mitral murmur.

In another case I witnessed a "post-systolic" mitral murmur of Walshe and Hayden become "systolic" on dilatation of the right ventricle and tricuspid orifice.

(*To be continued.*)

FATAL CASE OF PEMPHIGUS (FOLIACEUS).

By T. C. FOX, M.B. Lond., B.A.

In the *Medical Times and Gazette* of last week attention is called to the fatal issue of a case of pemphigus, and to the extreme rarity of such an occurrence. The following particulars of a somewhat similar fatal case, which occurred under my brother Dr. Tilbury Fox, and which I watched

throughout its course, will no doubt be of interest to your readers. The patient was a woman who died in University College Hospital some time since, and the particulars are as follows:—

Mrs. R., aged thirty-eight, married, and attends solely to household duties. Has had nine children (one stillborn) and three miscarriages: six of the children are living; the youngest is sixteen months old, and only quite recently weaned. Had a very bad time during her last confinement, and considerable flooding. Family history very good. Four years ago she lost a good deal of her hair; but she never had any eruption, sore throat, or other evidence of syphilis. No history of scarlet or rheumatic fever. Home damp and crowded. Food poor in quality and quantity, meat being an exceptional article of diet.

Until her last confinement she was in fair health, but subsequently has been getting gradually more and more debilitated. The present illness commenced shortly after receiving a severe mental shock on hearing of the death of a brother by drowning, about the end of January, 1875, by the formation on the right ankle, after much burning and itching, of a bulla as large as a hen's egg. This was soon followed by other similar ones successively on the right arm, back, and face. From these centres the formation of bullæ spread, but chiefly over the face, back, and chest. They quickly burst and dried up, exposing an inflamed surface. In this condition she came to the skin department of University College Hospital, and continued to attend with partial relief until Tuesday, April 6, 1875, when a message was sent to say she was too ill to come. At my brother's request I visited her about 5 p.m., and found her lying on her back in bed in a state of extreme prostration, with a dry and pungent skin, a temperature of 104·8°, complaining of tinnitus aurium. Carotids conspicuously pulsating; pulse very soft, 112; heart beating forcibly, with a well-marked breezy systolic murmur, heard loudest at the left, but distinct at the right apex, and not well conducted round the axilla. No increase of cardiac dulness, and no pain in any joint even on movement, though some general body-pains were complained of. Lungs healthy; bowels constipated; urine high-coloured and crowded with urates.

April 8.—Condition unaltered; temperature 103°, pulse 108.

10th.—Admitted into University College Hospital, under Dr. Tilbury Fox. Since the 6th the disease has spread very rapidly, covering the lower part of the chest and abdomen, legs, and head, but making less progress on the arms.

13th.—At Dr. Fox's visit the whole surfaco of the body was involved, with the exception of part of the forearms and the feet; some commeneing ulceration on the buttocks. The hair was removed, as it was impossible otherwise to deal with the mass of incrustation on the head. Temperature 104°. Here it may be mentioned that the temperature pursued a most regular course almost to the termination of the case, rising to the highest point recorded in the twenty-four hours (generally about 105·2°) in the afternoon, and sinking to 100° or 101° about eleven in the morning. The systolic apex-murmur not equally distinct with every heart-beat, loudest at the end of expiration, but general character unaltered. No increase of cardiac dulness, and no joint-pain. Exhalations from the body excessively offensive, notwithstanding assiduous attention. Prostration extreme. No albumen in the urine; copious deposit of lithates.

14th.—A systolic murmur developed at the base over the aorta, higher pitched and rougher than the one at the apex. Bowels constipated; general condition of skin unaltered. Patient so ill that she was with difficulty even superficially examined.

19th.—Diarrhœa set in. The surface of the body now completely involved; no bullæ in the mouth. The condition of the heart unchanged, excepting that the basic murmur is louder. The evolution of blebs was followed with great difficulty, as they appeared suddenly and rapidly burst. Apparently they formed mostly when the temperature was highest; certainly the itching and burning were more intense then, even though the surface was not allowed to dry up. Every two or three days there was a noticeable increase for a few hours in the formation. A perfect bleb was with much difficulty caught, but the contents of those examined gave an acid reaction, and were full of pus-cells and bacteria.

22nd.—The diarrhœa at last stopped, but vomiting set in after all nourishment taken. Patient sensible, and complained of great general pain. Formation of blebs ceased. Lowest temperature recorded at 11 a.m. this day (98·8°), and highest at 3 p.m. (102·8°). Slight trace of albumen in the urine. Patient died at nine o'clock at night.

Treatment.—I have been unable to note the remedies the patient took whilst attending as an out-patient, but in the hospital frequent small, and occasional large doses of quinine were exhibited; and later on, remedies to control the diarrhœa and hourly doses of perchloride of iron. Special attention was given to the feeding with milk, eggs, brandy, concentrated beef-teas, etc. Locally, the point aimed at was to keep the surface as cleanly as possible, and at the same time, by the linimentum calcis and carbolic oil, prevent it from ever getting dry and cracked.

Post-mortem Examination (nineteen hours after death).—The body was well nourished. The lungs were much congested, and the organs presented the signs usual in febrile cases, otherwise they were not diseased. No signs of endocarditis, recent or old, were present, nor was there any indication of inflammation of the serous membranes. No bullæ were found anywhere internally; externally the fingers were the only parts not involved. The nervous system showed no lesion, the spinal cord being apparently normal on microscopic examination.

Remarks.—The case must undoubtedly be regarded as an instance of true pemphigus. It commenced as ordinary chronic pemphigus, and, existing as such for a time, rapidly assumed the aspect of severe pemphigus foliaceus. If anyone will take the trouble to refer to Hebra's account of this disease, he will find that the case I now record answers almost completely to his description of similar cases which he has met with, both as regards the eruption, the febrile condition, and the general course and termination. There was no reason to think that any special zymotic or septicæmic poison originated the disease. When the case was in University College Hospital it was lying in the next bed to a second case of pemphigus *foliaceus*, which forms the subject of a clinical lecture by Dr. Tilbury Fox, published in the *Medical Times and Gazette*, November 4, 1876, page 510.

CASES ILLUSTRATING

SOME OF THE LESS FREQUENT FORMS OF KERATITIS AND CYCLITIS;

WITH SHORT REMARKS.

By EDWARD NETTLESHIP, F.R.C.S.,
Surgeon to the South London Ophthalmic Hospital.

(*Continued from page* 36.)

In Group III. are placed the cases to which special reference has already been made under the title of "scrofulous sclerotitis." I have not had under my own care many well-marked examples of this disease, in which the iris, cornea, and sclerotic all suffer. Its leading symptoms are the occurrence of localised deposits in the sclerotic or episcleral tissue, and in the margin of the cornea, these being sometimes continuous with the sclerotic and sometimes quite separately placed in the cornea. The deposits often ulcerate, but, in some cases when carefully watched from the beginning, it is found that neither breach of surface nor loss of substance ever takes place. The attacks are almost always prolonged, and, although the eye becomes quiet for a time, I believe that the corneal deposits are seldom completely removed; relapses often take place, more and more of opacity remaining after each attack. The affected parts of the sclerotic generally yield more or less after a time, and ciliary staphyloma results. The staphyloma is usually composed of several parts, showing different degrees of protrusion, and on the surface little patches are often seen of opaque whitish or yellowish colour, the permanent remains of inflammatory deposits. One of the best marked cases of this kind that I have watched from the outset has been already given in Group I. (Case 4), and probably further observation may show that the disease more often begins with central disturbance of the cornea than is supposed. Another perfect case for illustration is still under care, the patient being a young woman (Case 13) who came up to London as a hospital nurse some months before I saw her; she is strongly impressed with the belief that the free ventilation of the hospital has caused her ailment—a great liability to "take cold" having always been present. These are the cases which, in their earlier stages, often resemble persistent phlyctenular ophthalmia; or, perhaps, it would be more correct to say that the marginal pustules on

the sclerotic and sclero-corneal junction, which they often present, correspond in adults to the simpler forms of phlyctenular ophthalmia which, as a rule, are seen in children.

None of these patients are noted as having suffered from any of the common forms of strumous disease, but in two (Cases 10 and 13) the circulation is stated to be sluggish, and in both of these the disease was probably brought on in the first instance by exposure to cold or damp. The other two (Cases 11 and 12) are stated to be rheumatic. Iritis occurred in two (Cases 12 and 13), and the iris acted imperfectly in Case 10. There was more or less ulceration in three of the four, Case 11 being the only one in which this did not occur. In the case already given in Group I., however, and which afterwards presented changes quite like those here described, no ulceration ever took place (Case 4). In two cases (Cases 11 and 12) pain is noted as a prominent symptom; but Case 10, although a severe case, was not painful. Two were men, and two women, the women being much the younger. The patients remained under care in all cases for many months.

In regard to treatment, in the few cases recorded below atropine seemed to be followed by more improvement in the congestion than was observed after the employment of any other remedy. Repeated blistering, the use of the yellow oxide of mercury ointment, and (in Case 13) the internal administration of mercury, were the other means employed.

It seems not unlikely that the cases here placed in Groups I. and III. may be nearly identical in essential features, or, perhaps, different stages of the same malady, the cases, as a whole, showing a decided preference for women below middle age.

Case 10.—*Relapsing Cyclo-Keratitis, with Marginal Deposits and Slight Ulceration, and Episcleral Deposit—Imperfect Action of Pupil to Atropine—Slight Iritis* (?)—*Patient an Elderly Man, not Strumous.*

William H., aged fifty-four, had a severe attack of inflammation of the right eye, lasting ten months, in 1874. It began during the severe fog of December, 1873. He was treated at Moorfields. He came to me with a second attack on May 5, 1875, and remained under care till the end of November (six months), when he was well. There was superficial ulceration at the upper and outer part of the cornea, with, besides, several hazy patches not ulcerated; and also great congestion and general subconjunctival thickening at the corresponding half of the globe (episcleritis). The ciliary region bulged decidedly at the inflamed part; the anterior chamber was deep. There was very little pain.

He improved steadily under the yellow oxide of mercury ointment, with repeated blistering during the first few weeks (about four batches of two or three blisters). As the episcleral thickening disappeared, a well-defined zone of dusky ciliary congestion was brought into view.

On August 21 he was "nearly well," but continued to use the ointment for another three months more or less regularly.

There were no iritic adhesions visible, but the pupil was small, and did not dilate under the repeated use of the strongest atropine solution carefully applied. He was very susceptible to atropine, and had severe atropine irritation after a four-grain solution had been applied only three times on a single afternoon at the hospital. He showed no signs of strumous tendency, nor was there any scrofulous or phthisical history in his family. He considered that the eye had been "weak" ever since an illness ("low fever") twenty-five years previously. He once had a slight gonorrhœa, but no other venereal disease. He was florid, and appeared in good health, but possibly his circulation was sluggish.

Case 11.—*Cyclitis and Partial Marginal Keratitis, without Ulceration but with Steamy Surface, in One Eye only, of several months' duration—History of some Attack in same Eye five years ago—Patient a Rheumatic Young Woman.*

Martha P., thirty-two, married, admitted August 4, 1875, with keratitis and cyclitis of five months' duration in one eye. General lilac ciliary congestion; a crescentic patch of diffuse haze, with steamy surface at lower part of cornea; slight bulging or thickening of sclerotic at corresponding part; no ulceration. In each eye a well-marked arcus senilis at upper and lower borders of cornea, the lower one being included in the hazy crescent in the inflamed eye. T. n. History of an inflammatory attack in same eye five years before, cured after a fortnight's treatment. Considers herself rheumatic, and suffers much from neuralgia at back of head.

Soon relieved of pain under iodide of potassium and blisters; but congestion not diminished till atropine ordered, when it rapidly improved. Under care five weeks, and was nearly well at last visit.

Case 12.—*Vascular Keratitis, nearly Marginal, with Slight Ulceration and Iritis, in a Middle-aged Man subject to Articular Rheumatism—Attack prolonged—Only One Eye affected.*

John J., forty-two, engineer, attended from September 25 to November 13, 1875, on account of his left eye. There was a crescentic patch of haze at the lower edge of cornea, with some patchy vascularity, the corneal surface over it being dull; there had probably been ulceration. Pupil sluggish, and iris not quite clear. After atropine a single synechia at inner part of pupil. It had been inflamed for three months, and the pain and intolerance were described as having been severe for a time. He quickly improved under atropine and tincture of aconite, aided by three blisters to begin with.

On October 30 he was discharged well, but only four days later he came back with a patch of vascularity of cornea close to the seat of the former disease, and with ciliary congestion and slight pain. The vascularity was now superficial, and the surface of the affected part slightly rough.

On the 13th the cornea was nearly clear, and congestion had all but disappeared. There was some atropine irritation at one time from the use of a two-grain solution. He was sometimes rheumatic enough in hands and knees to make him limp, but there was no arthritic family history. Twenty-four years ago he had had gonorrhœa, but his rheumatism did not begin till many years later. Hair black; in good health.

Case 13.—*Cyclo-Iritis, with Corneal Deposits and Ulceration, in a Young Woman who is very liable to take Cold, and is probably Strumous—The Eye Disease and other Symptoms attributed to Living in Draughty Rooms.*

Mary C., aged twenty-seven, unmarried, a hospital nurse, was sent to me by Dr. Whitmore, with well-marked cyclo-keratitis and iritis of her right eye. Dr. Whitmore told me that the case was at first like an ordinary rather severe phlyctenular keratitis, and that there had been some marginal ulcers. On admission there was considerable thinning and duskiness of the sclerotic at the upper-inner half of the ciliary region, with slight irregular thickening of the superjacent conjunctiva in some parts. The scleral thinning was partly in the form of small patches. In the corresponding part of the cornea were numerous patches of haze from interstitial deposit; they were rather abruptly margined, but there was also slight haze of the intervening corneal tissue. None of these, which she said were the most recent spots, were ulcerated, nor was the surface over them in the least irregular. At the lower part of the corneal margin were two or three other spots of haze, said to be of older date, and these looked as if they had formerly been ulcerated; one of them was continuous with the sclerotic. There was much congestion. A well-marked iritic adhesion was present at the lower part.

Under the use of the yellow oxide ointment, atropine, and very small doses of grey powder, the eye quickly improved, congestion disappearing, and the cornea becoming somewhat clearer, but she has come to the hospital several times since with slight relapses, and is not at present in a permanently safe state.

She had lived all her life at Abergavenny until about nine months before I saw her; she then (May, 1875) came to London as nurse in one of the workhouse infirmaries. Since coming to London she has felt the cold very much; has been constantly "catching cold in the head," and has been hoarse almost the whole time. She attributes the colds, sore throat, and eye affection entirely to working in the draughty wards. She had previously been subject to slight "colds" in the eyes (they would be red for a day or two), but never had anything like this until she came to London. She had formerly lived at home, sometimes going to nurse in private families.

She is a stout, florid woman, with abundant subcutaneous cellular tissue and sluggish circulation; she suffers much from cold hands and feet. There are no positively scrofulous signs about her, but she cannot eat much fat. Some years ago she had erysipelas of the face; her gums then became sore, and have remained tender and retracted from the teeth in places ever since. During her attendance she had an abscess in her right ear. Her father is subject to chronic rheumatism, and has been laid up by it. There is no family history of gout nor of phthisis or scrofulous complaints. She is the only one in the family who has had bad eyes.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE HULL GENERAL INFIRMARY.

THE SURGERY OF 1875.

(Reported by Mr. HENRY THOMPSON, House-Surgeon.)

(*Concluded from page 677 of last volume.*)

Excision of Tongue.

Two cases: one a man aged fifty-two (Dr. King), in which the disease (epithelioma), being limited in extent, the right side of the anterior part of the tongue was cut off with a bistoury. In the other case (Mr. Craven) the disease was much more extensive. J. P., aged thirty-six; twelve months before admission first noticed a small spot on right side of his tongue. This gradually increased in size up to time of admission. Tongue first became ulcerated about three months ago. On admission, whole of tongue, extending almost to epiglottis, was converted into a hard warty mass, with deep ulcerations on dorsum. Operation on November 20. Chloroform administered. Mr. Craven made a vertical incision through the lower lip opposite to the symphysis, then divided the symphysis with the saw, and forcibly separated the two sides of the jaw from one another. After that he pulled out the tongue to the full extent, and passing the wire of the écraseur round the extreme base, divided it. The two fragments of jaw were afterwards fastened together with a curved ivory peg. Considerable hæmorrhage occurred, and several vessels required ligaturing. The patient never thoroughly rallied from the shock of the operation, and died on November 22.

Removal of Male Genitals.

This operation was performed by Mr. Craven on account of an immense epitheliomatous mass, involving nearly the whole of the penis and scrotum. W. L., aged thirty-seven, was first admitted in September, 1874. At that time the disease, which was almost confined to the glans penis, was thought to be syphilitic. Various remedies were resorted to, both locally and internally; but it was not until the whole of the growth was destroyed by the free application of potassa fusa that any amendment took place. He was discharged from the hospital in April, 1875, apparently quite cured, but having lost the whole of the glans. In July, 1875, he was readmitted. By this time the whole of the penis and upper part of the scrotum were converted into a brawny ulcerated mass, with very fetid discharge. The operation was performed on July 31 (ether administered). Mr. Craven first dissected back a portion of the skin of the scrotum, in order to leave as much covering as possible; he then dissected out the spermatic cords with their accompanying vessels, tied the cords with whipcord, and cut them off below. This being done, the whole of the mass was removed by the galvanic écraseur. Of course this left a large surface to heal by granulation; but the patient made a rapid recovery, and was discharged cured at the end of five weeks. Up to the present time (September, 1876) there has been no recurrence.

Lithotomy.

Four cases, ages 4, 5, 55, and 74. The first two cases (Dr. King) occurred in two strumous boys. They both made a complete though rather protracted recovery, owing to obstinate diarrhœa setting in shortly after the operations. In the case of the man, aged fifty-five, lithotrity had been performed in the hospital on several occasions about a year previous. He left the hospital, however, before the cure was completed. As he was a nervous, excitable man, the bladder irritable, and the stone large, Dr. King thought it advisable to perform lithotomy. Operation on July 7. Ether administered. Lateral operation. Very free hæmorrhage took place, and the wound, in consequence, was firmly plugged with a petticoat of lint round a large elastic catheter. At the time of his leaving the hospital (at his own request) there still remained a considerable urinary fistula. The fourth case (Dr. Lunn) was that of an old man, aged seventy-four, who, for some three or four years, had been more or less an imbecile from cerebral softening. He suffered such agony from the presence of the calculus that it was deemed advisable to operate. For a few days after the operation he appeared to improve; but an exacerbation of the head symptoms came on, and he died on the tenth day after the operation. Post-mortem showed numerous patches of brain substance in a state of softening, and the arteries highly atheromatous.

Lithotrity.

Of this operation there has been only one example during 1875, occurring in an old man aged sixty (under the care of Mr. Craven). The calculus was of phosphatic nature, and was crushed on four occasions. At the first sitting it was crushed once, at the second twice, at the third six times, and at the fourth six times. Shortly after the last sitting a sound was passed, and no fragments being detected, he was discharged.

Colotomy.

Colotomy was performed on a woman on account of obstruction arising from stricture of the rectum. A. H., aged thirty-two, admitted under the care of Dr. King on June 1. Patient has suffered from gradually increasing difficulty in defæcation for eight or nine months. Bowels not moved in the slightest degree for four days before admission. Stercoraceous vomiting for twelve hours before admission. Abdomen tympanitic and painful. Woman extremely emaciated and feeble. Admitted at 9 p.m.; operation at 12 p.m. She died about three hours after. Post-mortem showed stricture of the rectum (probably syphilitic); general peritonitis, with a small abscess in neighbourhood of anus.

Excision of Neck of Uterus.

F. D., aged thirty-four (Dr. King). Stated that twelve months before admission she first began to suffer from attacks of uterine hæmorrhage, which since last July have been accompanied by great pain in the back and down the thighs. Was under the care of a medical man for some months before admission, who applied various caustics. Prior to commencement of hæmorrhage had menstruated regularly. Has had three children, the youngest being nine years old. Neck of uterus enlarged, hard, and tender to touch, having one or two deepish ulcers on lips; movable; bleeds on slightest touch. Operation on October 30. Ether administered. Neck of uterus divided by galvanic écraseur close to the body of uterus. Discharged cured on November 27.

Ovariotomy.

Two cases; one complete, the other incomplete. The first case was that of M. A., aged forty-eight, admitted under the care of Mr. Craven on March 13. Has been married twenty-five years, but has never had any children or miscarriages. She commenced to menstruate when fifteen years old, and continued to do so regularly until eight or nine years ago. Menstruation always caused her great pain in region of ovaries. She first noticed "that she was getting stout" about eighteen months ago. The enlargement of the body commenced evenly, and not on one side more than on the other. About fifteen weeks before admission she was seized with severe darting pain in the left side of the abdomen. This confined her to bed, where she remained up to time of admission. During this period the abdomen has increased rapidly in size. On admission, woman rather spare, but healthy-looking. Abdomen much enlarged; contour not regular, the left side being more enlarged than the right, especially at the lower part. Dulness on percussion over lower part of abdomen, extending above umbilicus. Intestines pushed upwards by tumour. No distinct fluctuation to be felt anywhere, but in left flank an indistinct waviness is perceptible. Tumour feels firm, but is rather tender to the touch. Nothing abnormal per vaginam. Circumference round umbilicus thirty-nine inches. Length from symphysis pubis to ensiform cartilage eighteen inches. On March 17, ether having been administered, and the urine drawn off, Mr. Craven made an incision from the umbilicus to the pubes through the skin. Having dissected down to the peritoneum, he divided it on a director, and the tumour was then seen exposed. After that he passed his hand into the cavity of the abdomen, round the tumour, and with his fingers broke down a few slight adhesions that were present. He then introduced the trocar into the tumour, but only a little jelly-like material escaped. As this led him to think that the tumour would have to be removed *en masse*, he enlarged the incision, carrying it upwards almost to the sternum. By this means he was able to get the whole tumour outside the abdominal wall, except the pedicle, which was very short and broad. Whilst he was engaged tying some vessels in the adhesions, the pedicle gave way, leaving the tumour free. This being removed, he proceeded to tie the numerous vessels, which bled very freely and took a long time to secure. The

wound was then stitched up with deep and superficial sutures, carbolic oiled lint was applied, and a many-tailed flannel bandage. Patient was much exhausted during the operation, and had to be freely plied with brandy. In the evening she had a great deal of pain, and was very feeble. One-sixth of a grain of morphia was injected hypodermically. Champagne and ice, and an enema of beef essence and brandy, were given. On March 18 had passed a bad night; constant vomiting. Died at 11 p.m.

The second case was that of M. T., nineteen, admitted under the care of Dr. King, March 30, 1875. Twelve months previously patient first noticed slight swelling of the abdomen (she thinks first on the right side). The swelling was accompanied by sensation of weight in the pelvis, together with swelling of the feet at night. Six months after, it began to grow rapidly. She began to menstruate at fourteen; she menstruated regularly until six months before admission, since which time it has entirely ceased. On admission she appeared a well-nourished, healthy girl. Abdomen nearly even; no flattening of sides. Just below the ribs on the right side a circumscribed firm portion can be felt. Distinct fluctuation through the abdomen in all directions, universally dull except in hepatic region, where the intestines appear to be pushed up. Heart displaced a little to left. Measurement from pubes to xiphoid seventeen inches and a half; circumference round lower ribs thirty-six inches, round umbilicus forty-one inches and a half, round crest of ilium thirty-six inches. On April 3, after chloroform had been administered, Dr. King made an incision from umbilicus nearly to pubes. Having dissected down to the peritoneum, he divided it on a director, and found that the cyst-wall was intimately adherent to it in all directions. An immense quantity of dark greenish fluid escaped (probably two and a half bucketfuls), deluging the floor and the patient. On passing his hand into the abdomen he found that it was impossible to separate the cyst-wall from the peritoneum. The circumscribed firmness before described was found to be two or three small cysts; these were tapped, and two or three vessels being ligatured, the wound was stitched up, carbolic dressing with a flannel bandage applied, and the woman put to bed. The wound healed by the first intention, but at the time of discharge (April 25) the fluid was re-collecting.

Herniotomy.

During 1875 herniotomy was very unsuccessful. In all nine patients were operated on, and five of them died, viz.:— Males, inguinal hernia, six, with three deaths; femoral hernia, one, who died. Females, two cases, both inguinal; one died, one recovered. In every case the sac was opened. The causes of death were peritonitis, two; exhaustion, one; bronchitis, one; and gangrene of gut, with consequent rupture of intestine and extravasation of contents in abdomen, one.

Trephining.

During the year two patients were trephined for depressed fracture of the skull; one of them recovered, the other died.

W. B., aged fifty-one, admitted under the care of Dr. King at 5 p.m. on October 27, 1875. Whilst engaged in removing an anchor by means of a crane was struck on the forehead by the revolving handle, which had escaped from his grasp. Admitted with an oblique wound of about two inches and a half on right side of forehead, in which a depressed portion of bone could be felt and seen. The man was conscious when admitted, but suffering from severe shock. About 6 p.m. symptoms of compression came on, with stertorous breathing; left pupil dilated and fixed. At 6.30 p.m. he had a violent convulsive attack, which caused a large spurt of blood and clots to escape from the wound, and then he again became conscious. Operation at 8 p.m.: Ether administered. Dr. King removed a large number of fragments of bone, including part of the orbital plate of frontal bone. After the *débris* had been cleared away, a small lacerated opening was noticed in dura mater. The wound was left exposed, and an ice-bag was applied to the head. For the first two or three days after the operation, though perfectly conscious, the patient was very restless and excitable, and consequently was kept under the influence of chloral with bromide of potassium. On November 1 an effusion of coagulated lymph completely filled the cavity between the brain and the external wound. The brain could be seen to pulsate beneath this. Temperature had been as high as 103° at night for first two or three nights, but was now beginning to moderate. Temperature on the 6th normal both night and morning. Hernia cerebri forming. In consequence of this, pressure by means of a small bag of shot was applied; patient, however, could not bear it, and consequently a graduated pad of lint was applied instead. On November 12 the pad was found to have answered admirably, there being now no protrusion beyond the level of the skin. The wound is gradually contracting and cicatrising. The patient was discharged on January 21, 1876, with the wound perfectly healed, and level with the surrounding parts. Not a trace of paralysis or any other after-effect.

The second case occurred in S. B., aged forty-two, who was admitted under the care of Dr. King on December 29, 1875. Shortly before admission, patient was struck on the top of the head by a revolving winch-handle. Condition on admission: Sensible, but suffering from shock; talked quite rationally. Walked into the ward from a cab. Examination showed a large contused wound on the vertex of skull, and through the wound could be felt a ridge of bone, with a depressed portion in close contiguity. Both eyes and both eyebrows were ecchymosed, and there was also slight bleeding from the left ear. No paralysis. Symptoms of compression shortly after coming on, Dr. King proceeded to trephine. Chloroform administered; wound enlarged, trephine applied twice, and then a depressed portion of skull, one inch and a half by one inch and a quarter, was removed. Sharp hæmorrhage took place during the operation. From the time of operation up to December 31 the patient has been perfectly rational when awake, but wandered during asleep. Swallows with difficulty. Legs partially paralysed, especially the right. Grasp of left hand stronger than right. Rather deaf since the operation. Passes urine involuntarily. The progress continued fairly satisfactory until January 3, when the temperature began to rise, and the paralysis to extend higher. Respiration on that day was almost entirely thoracic. Sensation in legs not affected, but they are now completely paralysed. On January 5 the jaws closed rigidly. Slight risus sardonicus, but no muscular twitchings. Right arm now completely paralysed. Pupils equal and of natural size, but they do not act with light. Takes no notice on being spoken to. Temperature of left leg two degrees higher than that of right, which is normal. On the 6th the pulse was found to be failing. Spasmodic twitching of muscles of neck and of muscles of inspiration occurred, and the patient died on January 7. At the post-mortem, made by Mr. Playton, the pathologist, on the 8th, body thin; eyelids ecchymosed; large wound on vertex. On removing scalp, the remains of wide extravasation of blood were at once seen in its substance; edges of wound suppurating. On removing skull-cap, pus was found round the edges of the vacant space in bone, and extending an inch down the sagittal suture to apex of occipital bone, between bone and dura mater. On the right side of the median line, in site of wound, is a small wound in dura mater, and below this is softened brain substance of the right hemisphere. Purulent lymph extended over arachnoid for three inches around the wound in the dura mater; and a thin layer of blood covered the whole of the right hemisphere. Both apices of anterior lobes of cerebrum pulpy at the base, as well as the inferior surface of the left half of the cerebellum. There were no fissures extending round the vertex of the skull. Both orbital plates of the frontal bones were fractured, and from the right a scale of bone half an inch square was detached.

Holt's Operation for Stricture.

The case of stricture cured by Holt's operation is worthy of record as showing the value of rapid dilatation of the urethra. J. F., aged forty seven, admitted under the care of Dr. King. History: He dates the commencement of his troubles from an attack of gonorrhœa fifteen years ago, since which time he has "never passed water freely." In April, 1875, had a severe attack of extravasation of urine, and the scrotum and perineum were in consequence freely incised. Since then up to admission had been more or less constantly under surgical treatment, but with little benefit. On admission he was passing a very small stream, and the urine was constantly dribbling away from the unhealed incisions. The scrotum is marked all over with cicatrices, and numerous small urinary fistulæ exist. On several occasions after admission Dr. King succeeded in passing a very small elastic catheter, but no improvement took place. Accordingly, on August 14, he was placed under the influence of chloroform, and Dr. King succeeded in passing Holt's dilator, and dilating the stricture to the full extent. A No. 10 catheter was then tied in. The stricture was situated just above the triangular ligament. Very little constitutional disturbance followed, and the catheter

was removed on the 18th. On August 21, bougies 10 and 12 were passed without difficulty. From that time up to discharge from hospital on September 14, bougies were passed at regular intervals of about seven days. At the time of his discharge the fistulæ had all healed up. He continues to come occasionally to have a bougie passed, and is in perfect health.

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Medical Times and Gazette.

SATURDAY, JANUARY 20, 1877.

INFANT MORTALITY IN AN ORPHANAGE.

There appeared in the *Times*, one day last week, under the heading of "Mortality in a London Orphanage," a most saddening, but equally instructive, story, which should be read and studied by all mothers, and by all those benevolent ladies who in any way have to do with institutions in which children are taken care of. The tale is a very clear and simple one. In June, 1859, the establishment in question was opened in Carlisle-place, Westminster, in connexion with a convent of the Sisterhood of St. Vincent de Paul, for the reception of destitute children from birth to the age of twelve or fourteen. It is said that several Roman Catholic ladies of distinction take an active part in its management; and the benevolence and kindness of the Sisters of St. Vincent de Paul are of world-wide fame,—so that the institution might well be supposed to be a particularly fortunate and good one. But it happened last summer that the Guardians of St. George's, Hanover-square, were invited to entrust to its care some of the children under their control; and one of the Guardians having some doubts about its management, the Guardians resolved, at his instigation, to make some inquiry into its state before sending to it any of the children from their parish. Mr. Barnard Holt was accordingly requested to visit the institution; and he reported that twenty-seven children had died in it between December 25, 1875, and June 1, 1876. This was brought to the notice of the Home Office at the end of August last, and the result of that step was that Dr. Ballard was directed by the Local Government Board to inquire into all the circumstances of the case. He reported that the establishment is, he understood, "maintained principally at the expense of the ladies who conduct it"; that destitute children at all ages, from birth to twelve or fourteen years, are received, clothed, boarded, and educated, and finally put out to appropriate situations, arrangements being made also for the reception of five or six infants; that at the date of his visit, on November 20 last, there were in the institution 119 girls of various ages above one year, some of whom had been in the place from their infancy, and that they were all clean, healthy-looking, and evidently well cared for; but there were also four infants under twelve months of age, and these looked weakly and ill-nourished. He then states that "since the opening of the establishment 1528 children have been admitted; of these 489 were received at ages varying from one day to twelve months. Of these 1528 children, 503 have died; 402 of these deaths occurred among the infants under twelve months of age. It is this high mortality (402 out of 489 infants received) which is the subject of my inquiry. In inquiring into the causes of this excessive mortality I have not thought it necessary to go back further than the beginning of last year." He accordingly gives the names and ages on admission of all the infants received since January 1, 1875, the dates of their admission, and of the deaths of those who have died in the establishment, and the cause of death of each as certified. This black list contains the names of fifty-three infants, of whom twenty-five were received at the age of one month and under, two being only five days old. Of these fifty-three infants five were still in the house, four had been removed (of whom one died subsequently), and the remaining forty-four died in the establishment after an interval varying from six days to three months. The causes of death, as certified, were as follows:—"Two died from whooping-cough, one measles, one syphilis, one bronchitis, one some congenital malformation, two diarrhœa, one convulsions, two struma and debility, while the remaining thirty-three are certified as having died from marasmus, due, in the belief of the medical attendant, Dr. Macdonald, to deprivation of breast-milk."

It is seen, then, that the mortality among the infants admitted since the establishment was opened had been at the terrible rate of 82 per cent.; and that of the forty-four cases in which the causes of death were specially stated, thirty-three were attributed by the medical attendant to marasmus, caused by the deprivation of breast-milk. Dr. Ballard notices the circumstances that "appear to have contributed to this high mortality." First, the infants are said to have been for the most part in an unfavourable condition—"either on account of the illness or death of their mothers, or from some other cause, they had been deprived of their natural nourishment, and of maternal care for longer or shorter periods; and almost invariably they were brought in debilitated from this cause, and more or less emaciated." But all this must have been expected, and only demanded more exceptionally great care and skilled management. The second cause was "The almost insuperable difficulties attending the rearing of such infants upon the ordinary substitute for breast-milk. The financial resources of the establishment forbid the engagement of wet-nurses. At the present time they are fed upon cow's-milk, with the addition of lime-water when necessary." And the third—"The inappropriateness of the room used as a nursery. It is so situated and arranged as to be incapable of ventilation." Would it be possible to present, or imagine, a more piteous story, or a more telling proof of the fact that

> "Evil is wrought
> From want of thought,
> As well as from want of heart"?

There can be no doubt about the excellent intentions that led to the establishment of the institution, of the benevolence and kindness of the ladies who managed it, or of the tender-

ness with which the infants were nursed and cared for. Dr. Ballard tells us, "each has a nice little cot; everything about the infants is very clean, and an experienced" (he does not say educated or skilled) "nurse is engaged to attend them. She receives assistance from the Sisters themselves, and from some of the elder children." But two of the prime necessities of life—a sufficiency of pure air, and appropriate food—were wanting; and the poor infants died at the rate of eighty-two in the hundred! We fear that "ladies of distinction," whether Roman Catholic or not (and, indeed, ladies of no distinction also), are not seldom unwilling to nurse their own children, or, at least, to submit to the self-denial and inconveniences that would enable them to do so properly and well; and they refuse to believe in the injury they may thus do their children; and a still greater number of mothers, even in these days of education, recognise far too imperfectly the importance of good ventilation in their day and night nurseries. They do not, or will not, think of these things. But in this special instance we suspect that the "want of thought" more particularly regarded the mortality that was going on. The institution was established to rear and educate destitute children —not merely to provide for the survival of the fittest; and it is very difficult to believe that, had the ladies who spent money and care on it, or the Sisters, once calculated the frightful rate of mortality that obtained among the infants they had taken the charge of, they would not have either declined to receive any more, or have remedied, at any expense, the defects in the management.

We fear, however, that it is not only to the ladies and the Sisters that want of thought must be imputed. What was the medical attendant doing all this time? Dr. Ballard, in his plain, unvarnished tale, says Dr. Macdonald stated that "the feeding of the infants had been a source of constant anxiety to him"; and that "it had more than once occurred to him that it would be better to abstain from receiving any more infants until a more fitting nursery could be provided." But if he had realised the real state of things, if he had really thought about the mortality caused by the want of ventilation and the want of proper food, would he not have been instant in his representations of these defects to the managers? Would he not have wearied them by his importunity? And, if he failed to get things altered for the better, would he not have resigned his post? *Ought* he not to have done this?

We have no wish to be hard on the ladies, the Sisters, or the medical attendant; but there is nothing new in the results of the care of infants in the Westminster Orphanage. The lesson it teaches has been learnt over and over again in foundling hospitals, and in badly managed crèches or infant nurseries. In foundling hospitals, at home and abroad, the infants are now sent into the country, and provided with wet-nurses (the latter surely might have been done at the Orphanage); and crèches are successful only when the infants are received on the condition that their mothers come so many times a day to nurse them. All this is, or might have been, well known. How many more times is it to be taught by such terrible stories as that of the Westminster Orphanage?

It was reported that this establishment is under the patronage of Cardinal Manning; but at a late meeting of the Board of Guardians of St. George's, Hanover-square, Colonel Freemantle stated that he had had an interview with the Cardinal on the subject, and that his Eminence stated that the Orphanage was not one of his institutions. The only connexion he had with it was that he was a Roman Catholic, and that the ladies who founded it belonged to that religion; and he added that he would have nothing to do with an institution of the sort unless it was placed under Government supervision. No one doubts that this is a very wise and right rule; or that the Guardians were right in passing the resolution that "all institutions which undertake the complete maintenance of infant children belonging to the poorer classes should be placed under Government supervision"; and in forwarding this opinion to the Home Secretary.

SAFEGUARDS AGAINST SMALL-POX.

It was with a feeling of something like discouragement that we read the letter we inserted in our columns last week from Mr. Thomas Wilson, a respectable officer of health and public vaccinator. In it the writer draws attention to a letter by Dr. Drysdale in the *Daily News*, on the subject of heifer vaccination in Belgium. Mr. Wilson seems to think, as apparently does Dr. Drysdale, that the subject of heifer vaccination as an alternative for vaccination from the human subject, is perfectly new in this country, though it is one we have not ceased for years to advocate; and had our views been carried out, much of the present opposition to the vaccination laws would never have arisen. When vaccination was made compulsory on all, its merits had been so well tested that the promoters of public vaccination were, through their very great anxiety to see it universal, induced, perhaps, to look at the process and its results through too rosy spectacles. They saw only one side of the shield; they looked only on the lives saved and the faces unscarred by the ravages of small-pox. They forgot, or did not believe, that, without the greatest precautions, the practice of vaccination might possibly give rise to disorders almost as serious as, if not more so than, small-pox itself. Hence the stringency of the laws. But since that time it has been proved most indubitably, by Mr. Jonathan Hutchinson and others, that syphilis may be inoculated into the system along with, or instead of, the true vaccine virus. And this is no longer among the things which are doubtful; it has been absolutely and to the satisfaction of all who have seen the cases irrefragably proved. In Dr. Seaton's "Handbook on Vaccination" we do not think the possibility of such a thing is even hinted at, certainly not admitted; and as Dr. Seaton has been the authority consulted, directly or indirectly, by the Government authorities, we can hardly blame officials for refusing to take any steps to remedy an evil that was evidently deemed chimerical. That the risk is not chimerical, but that the danger is real, and likely at a time such as the present to become serious, has now been sufficiently shown, and it will become the duty of the members of our profession, as well as of the public at large, to enforce the prominence of this danger on the notice of the Government authorities, as well as to insist on the fulfilment of demands which are in themselves reasonable.

That the risk of syphilitic contamination by means of vaccine fluid was not long ago more widely known seems to depend, as Mr. Hutchinson has pointed out, on the fact that the subjects of vaccination are only, as a rule, seen twice by the vaccinator —once when vaccinated, and again a week after when they come up for examination. Now, in the case of children, we all know that at or about the usual period of vaccination they may look fat, plump, and in fine condition, whereas seen later they may present all the well-known and unmistakable signs of congenital syphilis. Healthiness of appearance, therefore, as far as the vaccinifer is concerned, cannot be taken as an absolute test of the purity of the vaccine lymph. Neither is it until those infected with syphilis by vaccination are followed to their homes, and their subsequent history studied, or it may be that some accident brings such patients again under the eye of the surgeon, that the true history of the results of impure vaccination or revaccination is to be discovered.

Arm-to-arm vaccination is undoubtedly the best; but, except the whole history of either subject (especially of the vaccinifer) be known, it is also, as far as risk of syphilitic contamination goes, by far the most dangerous. The risk is, moreover, unusually great at times like the present, when the demand for revaccination is great. Under such circumstances the

vaccinifers are likely to be less carefully selected. Much of the vaccine lymph used for vaccination and revaccination is transmitted from one practitioner to another in tubes, so that there is no opportunity of studying the appearance of the vaccinifer. Moreover, there is at such times a tendency to abstract as much lymph from any one subject as possible. All this renders revaccination at such periods of excitement unusually risky. During the last epidemic of small-pox, when the demand for revaccination was even greater than it now is, we have heard of vaccine virus being artificially produced by introducing a small quantity of croton oil into glycerine. Certain it is that there were to be seen many exceedingly bad arms, some of which were months in healing, and where a scar has been left truly, but not anything like a vaccine mark.

All these things are serious,—they are not to be dismissed with an idle jest, or a pooh-pooh!—but they derive still greater force from the letter, which we may venture to call extraordinary, from Dr. Frederick Churchill, which we publish in another column. This gentleman applied to the Government authority for some lymph, and in due course received, instead of the expected supply, a circular signed by Dr. Seaton, to the effect "that the objects of the Establishment were to supply lymph for primary vaccination only, or for revaccination only to a very moderate extent. That if the vaccinator was to use his supply of lymph for revaccination, and not to keep it up by primary vaccination, he must not rely on new supplies from the central depôt." Surely we have here the "high horse" with a vengeance. As is well pointed out by Dr. Churchill, all men have not the means of keeping up their supply of vaccine lymph; and whether they have or have not, it is universally conceded that, as a measure of precaution, revaccination is almost as important as primary vaccination. And it is high time for us and the public to turn round and ask Dr. Seaton what he draws his very handsome salary for, if it be not to provide for the public weal.

If the National Vaccine Establishment be not equal to the demands upon it, surely it were better to abolish it altogether, and to endeavour to create an institution less likely to succumb in an emergency. The remedy is not far to seek. Heifer vaccination has been tried before in this country. It succeeded well; but when the demand for vaccination and revaccination ceased, it was found impossible to carry on the experiment here in London with merely private means at the command of the experimenters. Consequently, in no long time, Dr. Blane, who had kept up, for the benefit of the public, a supply of pure heifer vaccine, was forced to desist. Government, as we then understood, refused to carry on the necessary series of operations, and the scheme dropped. It is difficult to absolve the medical advisers of the Crown from complicity in this miscarriage, but it is on this account all the more necessary to insist on their awakening to a proper sense of their duty at such a time as the present. In Belgium, heifer vaccination has been, as indicated by Dr. Drysdale and Mr. Wilson, singularly successful, and the same may be said of the method as pursued elsewhere. Some time ago we published the excellent results obtained by a private body at Milan, intended to foster vaccination from the heifer. These efforts have been most valuable; but, after all, they emanated from private bodies, not from the Government. Here in England we have stringent vaccination laws, which many (ourselves among the number) would be glad to see made more stringent, but only on condition. No one has a right to enforce on another an operation which may be fraught with such consequences as the use of impure vaccine lymph implies, in the vaccination of infants or the revaccination of adults. Nor are the means awanting. There is at Hampton Court an establishment known as her Majesty's Stud, the condition of which is described by those most interested in the improvement of the breed of race-horses as miserable in the extreme. The cost of this establishment is very greatly in excess of the sum brought in by it in this way. Its abolition would do harm to no one; its place might well be taken by a national heifer vaccination institute, which would be fully up to the requirements of any sudden demand for vaccination, and would satisfy the just demands of those who object to the risks of contamination implied by the use of vaccine lymph, the history of which is absolutely unknown.

VISCERAL SYPHILIS AT THE PATHOLOGICAL SOCIETY.

The consideration of this very important subject, in accordance with previous announcement, was commenced last Tuesday evening. The newly elected President, Dr. Murchison, was in the chair. A large and influential gathering of members met together in anticipation of an interesting meeting.

The discussion was opened by the exhibition of a child, aged six months, who was the subject of congenital syphilis. The speciality of the case was, that although under treatment all the visible signs of the disease had subsided, yet there was considerable enlargement of the spleen. Dr. Barlow, who exhibited the case, pointed out that this form of splenic enlargement in the early stage of congenital syphilis had been described by Dr. Gee ten years ago.

Dr. Gee's observations were communicated in a paper read before the Royal Medical and Chirurgical Society (which paper, however, was not printed in the *Transactions* of that learned body). The principal conclusions were—that in half the cases of early congenital syphilis there was palpable enlargement of the spleen; and that in one-fourth the enlargement was considerable. "The degree of the splenic enlargement may be taken as an index of the severity of the cachexia, with this qualification, viz., that the spleen does not diminish *pari passu* with the cachexia, but remains—it may be for years—more or less enlarged, a monument of what the cachexia has been." It was in support of this proposition that the child was brought. Dr. Gee had further shown that occasionally this enlargement was the only sign of an active syphilitic cachexia.

Dr. Barlow had been led to believe that Dr. Gee had understated rather than overstated the proportion of cases in which this splenic enlargement occurred. Out of twenty-eight cases under twelve months old it was found in twenty-two. With regard to the persistence, Dr. Barlow had found that this obtained in the cases where the enlargement was considerable. When the enlargement was only slight it subsided along with the other symptoms—or, at all events, only lagged slightly behind them. With regard to the nature of this enlargement, little is known. Dr. Barlow had only seen one case *post mortem:* there was neither amyloid nor gummatous change. It appeared to be "simple enlargement, with hardness." In one of two cases seen *post mortem* by Dr. Gee, there was considerable thickening of the capsule.

Dr. Greenfield showed a very extensive and very interesting series of specimens illustrating various stages of visceral lesions; they were mostly vascular—that is, around or in vessels. Two specimens of syphilitic disease of the cerebral arteries were shown among others. The first was from a small artery in the pia mater in the neighbourhood of a gumma in the brain, which presented the appearance of a whitish fibrous cord. The section showed that the walls of the vessel were greatly thickened, only a narrow channel remaining. The outer coat was infiltrated with a cellular growth, especially marked around the vasa vasorum. The middle coat was but slightly affected, whilst the inner was greatly thickened, forming a large mass, which nearly occluded the vessel. Under higher powers this growth in the inner coat was found to resemble that of a fully developed gum-

matous growth, with capillaries of new formation running through it—traces of a process of organisation being evident. The growth was separated from the blood-channel by a distinct endothelial layer. Dr. Greenfield thought the change identical with that described by Heubner in his monograph on the subject. The other specimen, from a case of very advanced and general disease of the cerebral arteries, was a section of a small artery of the cerebellum, in which the vessel was very nearly filled up by the thickening of its walls. This thickening seemed to involve all the coats, and to consist of a hyperplastic change in them, but it was doubtful whether the inner coat was not mainly involved. The condition might probably be regarded as a more advanced stage of disease similar to the first. After sketching the mode of origin and growth of gummata as seen in various organs, and pointing out the comparatively high degree of organisation attained by the growth, and its sudden decadence, he stated that this degeneration appeared, from a comparative examination of various organs, to be due to partial occlusion of some of the small arteries and capillaries by proliferation of their endothelium; and this, he thought, furnished a clue to the peculiar form and mode of degeneration.

Dr. Gowers, in the examination of a considerable number of syphilitic growths in the brain, had found changes in the walls of the vessels, similar to those originally described by Heubner,(a) and alluded to by Dr. Greenfield. He laid great stress upon the fact that syphilitic growths in the brain-substance only occurred by extension inwards from the membranes along the vessels.

Dr. Gowers showed, perhaps, the most important specimen of the evening—viz., a gumma of the dura mater, occurring in a child aged twelve years. In reply to a pertinent question from Mr. Hutchinson, Dr. Gowers was, unfortunately, unable to give such clinical details as would establish the case to be congenital, and not acquired, syphilis. Dr. Hughlings-Jackson, however, had been satisfied with the evidence.

Dr. Barlow and Mr. Nettleship showed specimens of meningitis, arteritis, and choroiditis from a case of congenital syphilis occurring in a child ten months old. Stated briefly, the history showed that the pathological lesions were out of all proportion to the symptoms observed during life. Choroiditis disseminata in the early (exudation) stage was practically *the* feature which led to the suspicion of meningeal disease. There was found fibroid thickening of the pia mater, with abundance of well-formed nucleated cells, diffused generally, without special relation to vessels, and in this way quite different from the molehill-like groups seen in tubercular meningitis. In the walls of some of the smaller arteries Heubner's changes were well-marked. Dr. Barlow regarded the essential feature as an intra-vascular rather than a peri-vascular change. This was also Mr. Nettleship's view. The changes in the choroid consisted especially in groups of cells situated in the chorio-capillaris having no evident relation to vessels, and not in the deeper layers of the choroid. In these respects the changes differed essentially from tubercle.

The subject will be continued at the next meeting of the Society.

(a) *Vide* the *Medical Times and Gazette*, April 15, 1876.

THE WEEK.

TOPICS OF THE DAY.

A MEETING, convened by circular, was held last week in Southwark, to take such steps as might be deemed necessary to induce the authorities to order the destruction of spurious teas now in bond, and in future to prevent the importation thereof; to fix the standard or testing-points of tea; and to lay down rules for placing the trade on a more satisfactory basis. Dr. J. W. Tripe, Medical Officer of Health for Hackney, and public analyst, was voted to the chair. After a discussion, in which the injurious effects to the public health from the sale of adulterated tea was freely commented on, and the question of the relative value of compressed and "loose" tea was entertained, the following motions were put and carried:—"1. That in the opinion of this meeting the amount of adulterated and unsound tea in this country is such as to cause serious apprehension, not only on the part of the public, but in the mind of the retailer. It is therefore imperative that the present state of the trade should be brought under the notice of the sanitary authorities and the Board of Trade, to procure the destruction of all such tea now in bond, and to induce the Custom House authorities to prevent such tea being taken in bond for the future. 2. That some steps should be taken to place the tea trade on a sounder basis both as regards the retail profits and the standard of excellence. 3. That a critical examination be made of the merits of compression, with a view of eliciting whether the value of tea is thereby enhanced. 4. That a committee be formed to carry out the foregoing objects, and to report thereon."

Dr. Hardwicke held a long inquiry on the 9th inst. concerning the death of Alexander Simmonds, aged eleven years, of Chapel-street, Pentonville, who, it was alleged, had died from enteric fever owing to the unsanitary condition of the house in which he resided. The jury agreed to go and inspect the house. The Coroner said that if he were the Clerkenwell Medical Officer of Health, he should give an order at once to close the house altogether as a place unfit for human habitation; the Sanitary Department had done all they could, but apparently without practical effect. There was no doubt that this death was fairly attributable to unsanitary causes, and it was a question whether the landlord had not laid himself open to a charge of manslaughter. A juror said he did not desire to go so far. As there were some vestrymen of the parish on the jury, he would suggest that these gentlemen be asked to see that the work ordered to be done by the Medical Officer of Health for the district be thoroughly carried out. The gentlemen appealed to agreed to do so, and the jury returned a verdict of "Death from typhoid or enteric fever, caused by the unsanitary condition of the house in which deceased had lived."

The Admiralty Committee of Inquiry into the cause of the outbreak of scurvy in the late Arctic Expedition commenced its sittings last week, at 13, Delahay-street. The Committee will have before it all the papers relating to the Expedition, including the medical and other instructions for the maintenance of the health of the crews, the logs of the sledge-parties, the sick-lists and medical reports, and the special report of the Director-General of the Medical Department of the Navy on this subject, which has not hitherto been published. The first witness is Surgeon Colan, the chief surgeon of the Expedition. In addition to the examination of other officers of this Expedition it is understood that evidence will be taken from the officers of previous Arctic voyages, and also such scientific evidence as may be thought necessary.

It is in contemplation to present a memorial to the Home Secretary, requesting him to institute an inquiry for the purpose of investigating more fully than has already been done, the circumstances attending the death of Mrs. Francis, who, it will be remembered, was taken to the police-station whilst suffering from paralysis, under the impression that she was intoxicated. The memorialists point out, amongst other things, that the poor woman was detained in the police-cells about eight hours without any medical examination being made to ascertain her condition; and although we fear the result of an inquiry will bring but scant redress to Mrs.

Francis's relatives, it may be productive of public good when it is considered that many cases of illness are at once set down by constables to drunkenness, and valuable time is frequently lost by depositing the victim of paralysis or apoplexy in a police-cell, without medical assistance, under the sage impression that he will eventually "come round." The subject is undoubtedly a difficult one to deal with, but that is no reason why some rules should not officially be laid down for the guidance of the police in cases of this kind.

A somewhat singular grievance was propounded at the Guildhall Police-court last week. Mrs. Benbow, living at 32, New Bridge-street, applied for assistance in the following case:—No. 31, she stated, was a private school of anatomy; there had been a body there for two months, and the stench from it was unbearable. Some boards had been put up, as was said, to keep away the smell from the adjoining houses, but without effect. The magistrate referred her to the Commissioners of Sewers. Mrs. Benbow said, at her request, the sanitary authorities had been to inspect the place, but as it was licensed by the Home Office as a school of anatomy they could not interfere. The magistrate suggested an application to the Medical Officer of Health. Mrs. Benbow said she had been to Dr. Saunders, who, however, stated that he was powerless to act, as the place was duly licensed. Besides the body she had referred to, there were the carcases of a large baboon and of a rabbit, all emitting a most offensive smell. The magistrate said he would send an officer to see the premises, and if necessary he would himself communicate with the Medical Officer of Health. If Dr. Saunders certified that it was a nuisance and detrimental to health, he would then see if he could not give her a remedy.

At a special meeting of the Gainsborough Board of Guardians, held on the 10th inst., a voluminous report by Mr. Radcliffe, Local Government Board Inspector, on the alleged deaths from vaccination in this district, was read. The inspector stated that no evidence had been given before him showing that the lymph conveyed the infection of erysipelas, from which the children had died; but that certain details connected with the operation of vaccination by the public vaccinator had probably had an indirect effect in rendering the vaccinated children liable to erysipelas.

The Local Government Board have given notice of their intention to issue a provisional order to form the following sanitary districts, or some of them, into a united district for sewerage purposes—namely, Kingston, Surbiton, Molesey, New Malden, Teddington, Brentford, Heston, Isleworth, Ham, Twickenham, Richmond, and Hampton Wick. Colonel Ponsonby Cox will open an inquiry on the subject at the Town Hall, Kingston, on Tuesday, the 23rd inst., at half-past eleven, when the authorities and other interested parties will be allowed to appear, and state their views for or against the proposal.

It is satisfactory to learn that the movement adopted by the University of St. Andrews for the extension of its classes and lectures to Dundee makes progress. A circular issued by the Dundee Free Library Committee, and embodied in their annual report, speaks of "the very decided success which attended the establishment of systematic lectures on chemistry, geology, physiology, and literary subjects by the professors of the University" during the winter of 1875-76. The success appears to the Dundee Committee "to point to the erection, at no distant date, of a regularly organised branch of the University in Dundee." From all that can be gathered, it would seem that it will not be the fault of the University of St. Andrews if this important object is not realised. It is at present under the contemplation of the Senatus Academicus to institute matriculated classes in Dundee next winter, if practicable. Should the citizens of Dundee afford encouragement, there seems no reason why a fully equipped Faculty of Science, with subsidiary literary classes, fitted to prepare for the more advanced classes in the Faculty of Arts, should not be established in this large community, which, in the course of another year, will be joined to St. Andrews by the Tay Bridge, now approaching completion. The University has entered into the movement warmly, and some of its professors have directly promoted it at no inconsiderable self-sacrifice. The science classes have been instituted again this winter, and will be continued during the greater part of the session. It would seem, therefore, to remain with the community of Dundee to give permament form to the movement, and so make themselves direct sharers in the academical advantages which would come from the institution among them of a regularly organised branch of the University of St. Andrews.

Dr. Tripe, Medical Officer of Health for Hackney, last week presented an important report to the Hackney District Board of Works, on the small-pox epidemic, which has continued to increase. Although for the week ending December 20 only twenty-nine cases were registered, on New Year's-day there was a great increase, the cases on January 4 being forty-nine, and in the week ending 12th inst. sixty-nine, being the largest number recorded in Hackney. The total number of cases in the Hackney district since October 4 had been 566, of which forty-seven were recorded in October, 209 in November, 201 in December, and as many as 109 in the first eleven days of the present month. In consequence of the spread of the disease, Dr. Tripe has requested the London School Board to direct that their schools in the neighbourhood should be closed for the present. The duties of the Metropolitan Asylums Board at the present juncture are by no means easy. The accommodation at their disposal for small-pox patients is taxed to the uttermost, and fresh applications for suitable places to which to remove patients are continually showering in upon them; but no sooner do they fix on a suitable building than the local authorities rise up in violent remonstrance. A great indignation meeting has been held in Limehouse, consequent upon the action of the Board in purchasing a building in Dodd-street, to be opened as a temporary hospital for convalescent small-pox patients, and a resolution has been passed, a copy of which is to be at once forwarded to the Board. This opposition is very crippling to their exertions, and is scarcely justified by the result of their previous actions, as it does not appear that the opening of the Hampstead Hospital has produced any epidemic of small-pox in that neighbourhood.

The Southwark and Vauxhall Water Company on Monday last cut off their service from the town of Richmond. The Vestry have caused standpipes to be fixed in the streets for the use of the inhabitants until the several connexions between the water mains of the parish and the houses of the ratepayers are completed.

An inquiry was held on Monday last, at University College Hospital, relative to the death of Reuben Cuss, aged twenty-eight, who expired in the Hospital on Friday afternoon, while under the influence of chloroform preparatory to undergoing an operation. In May last deceased met with an accident, and had one of his arms amputated at the Hospital. He had been an out-patient since then, and on Friday last he went to see Mr. Heath, Surgeon at the Hospital, as to whether a bone in his arm, which gave him pain, could not be removed. It was decided to remove a piece of dead bone, and he died under the operation. The widow said she did not think the doctors were justified in administering chloroform, as deceased was not strong enough. Ether was used on the previous occasion, which she considered safer. Dr. Hunt, assistant to the House-Physician, said he was with Mr. Heath when the operation commenced; and as deceased screamed with pain, it was deemed advisable, with his consent, to give chloroform.

The anæsthetic was administered, and took effect in a few minutes, but when the bone was seized with the forceps deceased suddenly ceased to breathe, and he died almost instantly. Every effort to resuscitate him was in vain. A post-mortem examination showed fatty degeneration of the heart. It was held impossible to diagnose a fatty heart before death. Dr. Crocker, Resident Physician, said that Clover's apparatus was used for carefully administering anæsthetics in the case of ether, but not chloroform. His opinion was that this was a death from misadventure while the Hospital doctors were doing their duty. The jury agreed with Dr. Crocker, and returned a verdict accordingly.

THE ARTISANS' DWELLINGS ACT.

A DEPUTATION from the Commissioners of Sewers of the City of London had an interview with Mr. Cross, at the Home Office, on Tuesday, the 16th inst., respecting the mode in which they had carried out the Artisans' and Labourers' Dwellings Act in the City. Mr. Frederick Cox said that about that time last year they submitted a scheme to Mr. Cross for dealing with an area in the centre of the City; but from various circumstances it was found impossible to carry it out, the owners of property having dealt with it so that it did not come within the purview of the Act when Mr. Cross inquired into it. They were now present to lay before Mr. Cross a scheme embracing three different areas in the City. One was in the west of the City, the second in the northern part, and the third in the eastern end of the boundary—the Jewish quarter of the City. They first proposed to deal with Fetter-lane, consisting of some large houses, which had been for many years a source of great anxiety and trouble to their medical officer, and it was found practically impossible to eradicate disease from them. That scheme would deal with houses accommodating 260 persons, and it was estimated that the ultimate cost which would fall upon the Commissioners of Sewers for carrying out that one scheme would be £32,000. The second area was in the neighbourhood adjoining St. Luke's district, and was a much larger area than the first-mentioned one. It was proposed to remove houses that accommodated 1230 persons; and it was hoped that if that scheme should be eventually carried out by widening streets, it would add largely to the health of the district, and the metropolis outside the City would benefit. That would cost per estimate after recoupment £90,000. The third scheme was one in the well-known neighbourhood of "Petticoat-lane," or Middlesex-street, in the Whitechapel district, and it would remove houses accommodating 1150 persons. That would be much more expensive, being estimated to cost £162,000. Those three areas would entail an ultimate cost to the City of £284,000. Mr. Cox observed that he wished to point out that if the City had not separated by the Act from the metropolis at large, the scheme now proposed would have cost them much less. They would now have to pay under this scheme £284,000; whereas, had they been merged into the metropolis at large, their estimate of what they would have to pay was about £60,000. He thought, therefore, no one could accuse the City of acting on sordid or economical principles. And this scheme, he said, was only about a third part or one-half of what would have to be considered by the Commissioners. Mr. Cross complimented the City highly on the energy and public spirit shown in the matter, and observed that he would repeat what he maintained in Parliament during the discussions on the Bill—namely, that he believed the City of London would set an example to other corporations, and in a few years would show there was not a single place on which the Medical Officer could put his finger that could be called a plague-spot. Mr. Cross also stated that, at his request, the Metropolitan Board of Works and the Commissioners of Sewers had each sent him a rough sketch of what they proposed to do; and he had then "taken advantage of one or two spare days to go over the spots in question, and he did not think that there was a single corner in the City's scheme that he had not personally visited, or in the Metropolitan Board's either." He should immediately place the scheme now before him in proper hands to be inquired into, and, with the aid of his own knowledge, he hoped to arrive at a proper conclusion on the subject.

THE METROPOLITAN ASYLUMS BOARD.

THE usual meeting of the Metropolitan Asylums Board was held on Saturday, at Spring-gardens, Dr. Brewer presiding. Mr. Pell, M.P., stated that St. George's-in-the-East had made arrangements whereby provision would be found for fever and small-pox cases of the non-pauper class needing isolation. A letter was received from the Lambeth Vestry, asking the managers to extend their accommodation, and to take in patients of the non-pauper class if the Vestry undertook to pay the proportionate cost of those who came from this locality. Mr. Galsworthy moved that an answer should be sent, stating that the managers were not willing to undertake the care of patients of the non-pauper class. Sir W. Wyatt said he did not believe that the public health would be properly cared for until one Board had power to deal with all cases needing isolation, but the managers had no power to deal with other than pauper cases. Now that there was this great pressure upon the managers, the wants of the pauper class must be first considered, and the managers must make ample accommodation for all such cases. Mr. Galsworthy's resolution was carried unanimously. A letter was received from the inhabitants of Limehouse, objecting to the premises being taken in that locality for small-pox cases, and the Clerk was ordered to reply that the necessities of the metropolis compelled the managers to open the building for the accommodation of patients. Dr. Bostock, C.B., Chairman of the Stockwell Asylums Committee, recommended that the Lambeth Guardians should have their attention drawn to the fact that the same ambulance was used on one day for the conveyance to the Asylums of both fever and small-pox patients; and the recommendation was agreed to. The Limehouse Hospital is being actively prepared for the reception of patients.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

ON Saturday, January 13, the President, Vice-President, Secretary, Members of Council, Professors, and several of the Fellows of the College, waited on his Grace the Duke of Marlborough for the purpose of presenting him with an address on his assuming the office of Lord-Lieutenant of Ireland. His Grace made the following reply:—"Gentlemen, I accept with pleasure the congratulatory address from so distinguished a body as the Royal College of Surgeons on my arrival as representative of the Queen in Ireland. It is universally admitted that the objects for which your institution was founded—namely, the improvement of the science of surgery and the provision of properly educated surgeons for the service of the public in general, as well as for the army and navy—have been faithfully carried out. Year after year your College has sent forth men highly qualified to assuage the sufferings of humanity, and to alleviate the miseries of man both on land and at sea. The proper consideration of sanitary measures is of vital importance to the welfare of a country, and great credit is due to your College that, by establishing a chair of State medicine, it has led the way in improvements which are now attracting the continuous attention of the Imperial Parliament and of the Local Government Boards. The interests of the institution which you represent will ever command my sympathies, and I shall gladly recur to your advice and assistance with regard to any sanitary measures which may be beneficial in this country. It will give me great pleasure to visit your new buildings when they are completed,

and I cannot question for a moment that under your guardianship the high reputation which the Royal College of Surgeons has borne so long will be maintained."

THE WORCESTER PAUPER LUNATIC ASYLUM.

The Twenty-third Annual Report on the County and City of Worcester Pauper Lunatic Asylum has just been published. The Committee bear testimony to Dr. Sherlock's admirable management of every part of the Asylum, which, they state, conduces to maintain the institution in the very high position which it has for many years held amongst the asylums of this country. The excellence of the management granted, it will be very satisfactory to the ratepayers of the district to learn that there are now only three asylums in the kingdom whose weekly charge is lower than that of Worcester. In April last the Committee were enabled to reduce the weekly charge from 9s. 6d. to 9s., and again to 8s. 9d. per head per week from October 1 last. Including thirty private patients, twenty-nine contract patients, and one out-county patient, the total numbers in the Asylum on December 11 last were 350 males and 389 females, making a total of 739 in all. Dr. Sherlock again points out, as he has done in several former reports, how injurious it is to the prospects of recovery in persons of unsound mind to place them in workhouses for however limited a period, and he strongly recommends that those so afflicted should be brought direct from their homes to the Asylum, under the necessary orders, without being tentatively confined in workhouses. Cases, he says, undoubtedly occur from time to time, when friends of pauper lunatics beg that their relatives may be sent at once to the Asylum, but under various pretexts they have been taken to the workhouse, whence they only emerge when their insanity has become aggravated and intensified; thus their recovery is deferred for a time, and in some cases perhaps irretrievably lost, for actually the time for effective treatment may have passed, and the patient may probably remain for life a chronic lunatic chargeable upon the rates. Taken altogether, the Report of the Worcester Asylum for the year 1876 may be considered very satisfactory.

SMALL-POX IN LONDON.

The deaths from small-pox, which had been 97, 75, and 116 in the three preceding weeks, were 100 in the week ending Saturday, January 13, of which 34 were certified as unvaccinated, 31 as vaccinated, and in the remaining 35 cases the medical certificates did not furnish any information as to vaccination. In 29 of the 52 fatal cases of small-pox occurring last week in private practice in London, no information as to vaccination was given in the medical certificates. Medical practitioners are requested by the Registrar-General to add this information in all their future certificates relating to small-pox deaths. And he observes that "in comparing the numbers of deaths occurring among vaccinated and unvaccinated persons, it should be remembered that there are probably now in the London population fully nine times as many vaccinated as unvaccinated persons." The 100 deaths from small-pox included 39 in the Metropolitan Asylum Hospitals at Homerton, Stockwell, and Hampstead, 5 in the Highgate Small-pox Hospital, 2 in the Kensington Workhouse, and 2 in the North-street Infirmary, Poplar; the remaining 52 occurred in private dwellings. The proportion of hospital to total cases was the same as in the previous week. After distributing the hospital cases, it appears that 13 of the deceased small-pox patients had resided in Hackney, 11 in Lambeth, 7 in Stepney, 7 in Poplar, 6 in Wandsworth and Clapham, 5 in Kensington, 5 in Marylebone, 5 in Islington, and 5 in Camberwell. Excluding one hospital case, the previous residence of which was not stated, 11 belonged to the West, 26 to the North, 1 to the Central, 25 to the East, and 36 to the South groups of districts. The Metropolitan Asylum Hospitals, which have 900 beds available for small-pox, contained 873 patients on Saturday last, against numbers steadily increasing from 185 to 859 during the eleven preceding weeks. Many cases were necessarily refused admission during the week.

MILK-TYPHOID AT BURNLEY.

The outbreak of typhoid at Burnley, in consequence of the consumption of contaminated milk, is worthy of notice on account of the perfectness of the history of its causation and spread, as well as from its serious extent. The Medical Officer of Health, in reporting to the Chairman of the Rural Sanitary Authority on the 10th inst., says:—

"A farmer, called Wm. Farnell, of Blacko, in the township of Barrowford, and in the Rural Sanitary Authority, keeps twenty-one milch cows, and supplies about fifty families with milk in Blacko and Barrowford. The farmer has had typhoid fever in his house unknown to the sanitary authorities, and no precaution had been taken to prevent the spread of the disease. He continued to supply his customers daily with milk from the farm-house, and now there are fifty-five persons suffering from typhoid fever. All the cases are amongst the families supplied with milk from his farm, and there are no others in the district. Of the fifty families receiving their milk from Farnell's farm, thirty-seven of them have typhoid fever, so that there can be no question of the source of the infection. The great majority of the sufferers are either children or young persons. About one-half the cases are in the incipient stage, and I am glad to say that the type of the fever is mild, though one woman is dead. I accidentally discovered the existence of the fever, and traced it to its source. No suspicion of the real character of the epidemic seems to have existed. I took stringent measures to prevent any further spread of the infection at the farm, and in this the farmer very willingly aided. Disinfectants have been liberally supplied to the village, and instructions and advice given to those in charge of the sick."

It might, we venture to think, be expected in these days of innumerable local newspapers, and of the general spread of information, that farmers and dairymen had become acquainted with the possibility, to say the least, of milk becoming infected with the typhoid poison; and with the eminent danger and wrongness of concealing the existence of typhoid on their premises.

PROPOSED CONJOINT EXAMINATION FOR IRELAND.

The scheme recently proposed by a joint committee appointed by the Provost and Senior Fellows of Trinity College, Dublin, the President and Fellows of the King and Queen's College of Physicians in Ireland, and the Council of the Royal College of Surgeons in Ireland, is in danger of shipwreck. A growing feeling of dissatisfaction with its proposals prevails among the Fellows of the College of Surgeons; and even the Council have, it is rumoured, declined to consider them. It has not yet come officially before the College of Physicians, so it would be premature to speak of its reception by that body. Besides the internal dissension on the part of the College of Surgeons, the scheme is likely to meet with decided opposition on the part of the Queen's University in Ireland and Apothecaries' Hall, both of which licensing bodies are left out in the cold—the former voluntarily, the latter *nolens volens*.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

We have received a copy of a circular which is about to be sent by Mr. J. Wickham Barnes, the Honorary Secretary of the Poor-law Medical Officers' Association, to every Poor-law officer in the kingdom, soliciting co-operation and support. The immediate objects aimed at by the Association are—(1) The adoption of the dispensary system in all large towns and rural districts where practicable; (2) compulsory superannuation after twenty-five years' continuous service; (3) increased remuneration for services where clearly called for. These are objects which should commend themselves to the sympathy of every medical man holding office under the Poor-

law Board; but we regret to hear that a large number hold themselves aloof from the Association. "The greatest barrier to success," says the Secretary, "has been want of combination and of unanimity amongst our brethren of the service, which is to be attributed partly to want of time, apathy on the part of some, especially those who have personally nothing to gain, and the fear of offending authorities." The subscription is only five shillings per annum. Dr. Lush, M.P., has decided to act as President for another year, and as new offices at 3, Bolt-court, Fleet-street, have been secured, a large accession of new members is expected.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of January 13, Mr. Tyrrell showed the structures of a diseased knee-joint which he had excised. Thickening of the synovial membrane and complete erosion of the cartilages had occurred, but the bones were only slightly diseased. Dr. Nixon exhibited a specimen of mitral stenosis, with "funnel-shaped" mitral valve, in which, during life, the physical signs of this condition, as laid down by Dr. Balfour, were present—viz., a presystolic apex-murmur, followed by a sharply defined first sound. Dr. Finny presented a specimen of medullary cancer of the fundus of the stomach in a man, aged fifty-six. The points of interest in the case were—(1) the absence of tumour (Andral's sign of abdominal cancer); (2) the insignificance of the symptoms which were present; (3) the absence of apathy or emaciation; (4) the occurrence of death by hæmorrhage from a ruptured vessel, a branch of the splenic artery, which passed through the cancerous mass; and (5) the unusual site of the disease—namely, the fundus of the stomach. The liver was secondarily affected. The President showed a case of cirrhosis of the liver in a boy aged fourteen. There was an adherent pericardium, yet the heart was atrophied, owing to the cachectic state of the patient. The President also showed a remarkable example of calcareous deposit in the aortic opening and valves. The aortic regurgitation was signalised by a peculiarly ringing diastolic murmur.

"JAPAN FEVER."

Dr. Carmichael, in the medical reports contained in the *China Customs Gazette*, No. 29, 1876, makes the following remarks regarding a fever which has been introduced into Chefoo from Japan, and observed chiefly amongst the shipping of the port:—"All nationalities appear to be equally subject to its influence. The prominent symptoms are similar to those of typhus, but there is less regularity in its course than is observed in that disease. It is very contagious, often affecting a whole crew in the course of a few weeks. The rash is of the mulberry hue, and appears early. There is often diarrhœa at the critical period. There is hæmorrhage and ulceration, with perforation in some cases. There is a deviation from the typical typhus in the duration of the disease, defervescence not taking place at such regular periods; hiccough sets in early, and is often severe; certain nervous symptoms persist it may be for weeks after convalescence. It is not uncommon to have facial or lingual paralysis even after slight attacks, and with a very slow tendency to disappear. Out of about fifty cases of this 'Japan fever' which have come under my notice, I cannot recall more than two deaths. One was the case mentioned in the first lines of this report; he arrived here in a dying state. A post-mortem examination showed intense congestion of the cerebral membranes, the spleen was soft, there was extensive peritonitis, which proceeded from perforation of the bowel. This was of course the immediate cause of death."

HEALTH OF CAMBRIDGE.

At a meeting of the Cambridge Improvement Commissioners (Urban Sanitary Authority) held on Tuesday, January 9, the Sanitary Committee reported, amongst other things, that the surveyor had laid before them amended plans for disinfecting house, apparatus, and sheds, proposed to be erected at a cost not exceeding £500 in the whole; and the Committee having considered the question, recommended that application be made to the Guardians of the Union for permission to construct the apparatus on a portion of the site of the small-pox hospital beyond the railway-crossing on Mill-road. This appeared to be the best available site; and the report was adopted. Mr. Anningson, Medical Officer of Health, reported that the total number of deaths for the quarter ending December 31 was 135. Exclusive of members of colleges, this gave a death-rate of 16·4 per 1000 per annum. There were 26 deaths of persons under one year, and 37 of persons under five years. In the zymotic group there had been 2 deaths from scarlatina, 1 from enteric fever, and 1 from erysipelas.

CLINICAL SOCIETY OF LONDON.

At a meeting of this Society on January 12, the following gentlemen were elected to hold offices during the ensuing sessional year:—*President:* *George William Callender, F.R.S. *Vice-Presidents:* *Herbert Davies, M.D.; Charles Murchison, M.D., LL.D., F.R.S.; Henry Thompson, M.D.; *Richard Barwell; Thomas Bryant; Christopher Heath. *Treasurer:* E. Headlam Greenhow, M.D., F.R.S. *Council:* Henry Charlton Bastian, M.D., F.R.S.; *George Buchanan, M.D.; Andrew Clark, M.D.; Dyce Duckworth, M.D.; Charles Hilton Fagge, M.D.; *Thomas Henry Green, M.D.; J. Braxton Hicks, M.D., F.R.S.; *A. Julius Pollock, M.D.; Reginald Southey, M.D.; *Charles Theodore Williams, M.D.; William H. Brace, M.D.; *Frederick James Gant; J. Warrington Haward; *William Mac Cormac; F. Howard Marsh; *Arthur Bowen Richards Myers; Michael W. Rice, M.D.; James Rouse; Edgcombe Venning; J. Soelberg Wells. *Honorary Secretaries:* William Cayley, M.D.; Thomas Pickering Pick. Those gentlemen whose names are marked with an asterisk did not hold the same office during the preceding year.

LIVERPOOL MEDICAL INSTITUTION.

At the annual meeting of the Liverpool Medical Institution, held January 9, the following office-bearers were elected:—*President:* Dr. James Turnbull. *Vice-Presidents:* Dr. Glynn, Dr. Lyster, Mr. Higginson, Dr. William Carter. *Treasurer:* Dr. Dickinson. *Honorary Secretary:* Dr. Caton. *Honorary Secretary of Ordinary Meetings:* Mr. Chauncy Puzey. *Honorary Librarian:* Dr. Campbell. *Members of Council:* Dr. Adam, Dr. Armstrong, Dr. John Cameron, Dr. Pollard, Dr. Rawdon, Mr. George H. Snape, Dr. Alexander, Dr. Braidwood, Dr. T. D. Chalmers, Dr. Finegan, Mr. McCheane, Dr. Samuels. *Microscopical Committee:* Dr. Braidwood, Dr. Wm. Carter, Dr. Caton, Dr. Davidson, Dr. Glynn, Dr. Lupton, Mr. Newton, Mr. Rushton Parker. *Auditors:* Dr. Adam and Mr. Frederick W. Lowndes.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

This Corporation now includes a lady in its roll of licentiates in medicine. At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, January 9, 10, and 11, Miss Eliza Louisa Walker-Dunbar, M.D. of Zürich, 1872, was a successful candidate for the licence in medicine as well as for that in midwifery. At the conclusion of the examination she duly signed the roll, and was admitted a member of the College.

Charing-cross Hospital.—The operating day at this Hospital has been changed from Saturday to Thursday.

Mr. B. Thompson Lowne, F.R.C.S., the Lecturer on Anatomy and Physiology, has chosen for the subject of his course, about to be delivered in the theatre of the Royal College of Surgeons, "The Anatomy and Morphology of some of the Malformations in the Museum of the College."

FROM ABROAD.

The Atomiser in Diseases of the Eye.

Dr. Landesberg (*Philadelphia Medical Times*, November 25) states that the high praise bestowed by Dr. Schenkl (*Prag. Viertel*, 1871) on the use of the atomiser in certain diseases of the eye induced him to give it a trial in a large series of cases, extending over a period of five years. The results of his experience are very favourable, for although he does not think the atomiser applicable to all the diseases of the eye for which Schenkl recommended it, yet he regards it as a most valuable means of treatment, offering advantages, indeed, over other procedures. It is absolutely injurious in all inflammatory conditions of the mucous membrane, either in the form of conjunctival or granular catarrh, with or without complication of the cornea; and in trachomatous pannus success is but moderate, and inferior to that attainable by other means. In affections of the cornea it is absolutely contra-indicated during their development; but as soon as the inflammatory appearances have subsided, it is a valuable means for quickly bringing the disease to an end, and for facilitating the rapid absorption of opacities. In all recent opacities of the cornea, especially after burns and sloughing, there is no other means so well calculated to restore the transparency of the cornea. In the treatment of diffused keratitis the atomiser has proved preferable to all other methods.

"The period of the treatment was in my cases reduced to almost one-half the usual time, and the results were such as could not possibly be achieved by any other method. The earlier it is applied in diffuse keratitis, the more favourable will be the result. Even the presence of iritis does not contra-indicate its use. With it we achieve what we could not attain until now by any other treatment. We break the force of inflammation, further reparation, and accomplish an almost complete transparency of the cornea. Whether in old opacities of the cornea the atomiser can be applied with any hope of success, remains as yet an open question. The extremely favourable result in one case in which I tried it certainly encourages further experiments. The substances experimented with are the following:—Cupri sulphas, with and without laudanum; simple laudanum and ext. opii.; cuprum aluminatum; sod. chloratum; sod. carb. and bicarb. The best results were attained with ext. opii. The apparatus used was Siegel's atomiser. The length of time of each application varied from three to six minutes for each eye, according to the degree of irritation. The reaction is considerable at first, but disappears very soon. Bad effects I have never observed."

The Vienna Polyclinic.

Dr. Thaon, of Nice, furnishes an account, in the *Progrès Médical*, No. 51, of the progress which this new institution has made, and of the opposition it has had to contend with. The Polyclinic—or, as we should term it, Dispensary—was founded by several well-known physicians of Vienna in 1872, having for its objects the gratuitous prescribing for the indigent sick, the delivery of clinical lectures, and the provision of a certain number of beds for those patients who were too ill to be attended at their own homes or at the Dispensary. This last object has not yet been carried out; but patients have sought advice in large numbers, and students have flocked to the clinical lectures. The number of the patients has increased from 11,962 in 1872 to 25,130 in 1875, most of them being clerks, servants, or working people. In the last year the number of students inscribed amounted to more than 600, of whom from 200 to 300 were foreigners. At the head of this large establishment are fifteen professors, among whom are Drs. Auspitz, Benedickt, Leidesdorf, Monti, Oser, Rosenthal, Schnitzler, Winternitz, etc. Each professor has also one or two assistants. Courses of lectures are going on all day from eight in the morning to five in the evening. The following clinics are established:—One for internal diseases, one for diseases of the chest and larynx, two for nervous diseases and electro-therapeutics, one for diseases of the abdomen, one for diseases of women, one for hydro-therapeutics, one for diseases of the skin and syphilis, two for diseases of children, two for surgical affections, and one for diseases of the ear. The patients, after examination by the professors and their pupils, and after receiving any treatment that may be urgent on the spot, are sent for their medicines to druggists, who have agreed to supply medicines at low prices. In 1875 an income of 15,000 fl. sufficed for all the expenses, the receipts being derived from donations and subscriptionas, the Municipal Council contributing 300 fl., and the Minister of Public Instruction 2000 fl. The institution also received gifts of instruments, medicines, books, etc., and obtained a great reduction in price at the bathing and hydro-therapeutical establishments.

The Polyclinic thus seemed to have entered upon a most prosperous course, and so sharp a critic as Prof. Billroth in his recent work bestows upon it his meed of praise as an undertaking which had successfully issued from individual initiative. But if it had many friends, it soon found that it had to reckon with plenty of enemies. The practitioners of the metropolis found the humbler class of their patients—those who could pay their florin—gradually diminishing in number, to pass away; and the University, with its world-famous General Hospital, began to inquire into the right of the physicians at the Polyclinic assuming the title of Professors. The directors of the Polyclinic added to the disfavour with which they were regarded by the Hospital by issuing a circular, in which they represented that hospitals were only suitable for a limited number of patients, the bulk of whom would be better treated at the Polyclinic. Moreover, many persons considered that the publicity given to the lectures and consultations at the Polyclinic carried a certain appearance of *réclame* or advertisement with it. A hot debate between the rival parties has occupied the Vienna medical journals for some time past, and the University professors have publicly condemned the clinical teaching at the Polyclinic, while the Municipality has withdrawn its subscription.

In spite of all this opposition, Dr. Thaon believes that the Polyclinic will continue to flourish; but he thinks that it is a matter of great regret that it was not from the first attached to the University, under the direction of the College of Professors, who have ever shown themselves ready to adopt all useful innovations. It would then have served as a valuable aid to medical students before entering on actual practice, as also to those who wished to prepare themselves for the professoriat. Turning to Paris, Dr. Thaon observes that such an institution is far more wanted there than at Vienna, but, with the spirit of routine that there prevails, he is not sanguine enough to hope to see it established. The vast indigent population of Paris is most insufficiently supplied with the means of obtaining gratuitous consultations, while numbers of persons fully competent to deal with this material remain unemployed.

A Lithopædion dating back Fifty Years.

Dr. Hans Chiari lately demonstrated before the Vienna Medical Society (*Wien. Med. Woch.*, No. 42) a very curious specimen. A woman, eighty-two years of age, died in the hospital of pneumonia, and thus gave an opportunity of examining into the nature of an indurated tumour of the abdomen, about the size of a man's head. According to her account, this appeared during her last pregnancy in 1827, which was unattended with the birth of any child. At the autopsy an ovoid tumour was found occupying the left internal iliac fossa, measuring eighteen centimetres in length by fifteen in breadth. It had contracted adhesions with the left side of the uterus, the omentum, and with the peritoneum in Douglas's space. The uterus was well formed, as were the right tube and ovary. The left tube was identified with the anterior surface of the tumour, and admitted a small probe to the extent of twelve centimetres, when it became confounded with the adhesions of the omentum to the tumour. Of the left ovary no traces could be found. The tumour exhibited a somewhat uneven surface, owing to the deposit on its outer layer of numerous concretions (some of which were of considerable size), consisting of carbonate and phosphate of lime. A section of the tumour exhibited a fœtus at about full time, but shrivelled up and compressed into an oviform shape. The various parts of the body were easily recognisable. This was the case also with the funis, which could be traced from the navel to a placenta about the size of the palm. The membranes still surrounded the fœtus. With these membranes the surface of the fœtus had contracted close adhesions in many places, and they, together with connective tissue with which they were closely united, constituted the outer covering of the tumour, in which the calcareous concretions were

deposited. The cartilages and bones possessed their normal consistency; but all the other organs, although easily identified and separable, exhibited the presence of salts of lime, and were thus undergoing a process of calcification. Besides the lime, also fat in the molecular form existed in all the tissues, as well as a brown pigment. There were also observed in all the organs large numbers of miliary white granules, grouped together in peculiar needle-form crystals, the chemical examination of which failed to prove their composition.

Psoriasis of the Tongue.

There having recently been some discussions on this affection, M. Devergie, believing that some of the views put forth are erroneous, communicates (*Union Méd.*, No. 153) the results of his abundant experience. In the first place, he believes that the affection is erroneously named, from a fancied analogy to psoriasis of the skin. This last is characterised by two signs—viz., the thickening or chronic inflammation of the skin, and the production or secretion of an epidermis that is more or less adherent. In those cases in which the skin does not seem affected in consequence of the epidermal production which covers it, if the epidermis be detached by means of a cataplasm, the more or less inflamed state of the skin which it concealed is exhibited. In the so-called psoriasis of the tongue there is no trace whatever of inflammation around the white opaline spot, nor is there, at least in simple cases, any other induration of tissue than that which is caused by the thickened epithelium. Moreover, these epithelial spots of the tongue may in some cases go on to ulceration, which is never the case with the cutaneous affection. M. Devergie therefore prefers designating the disease—which is, in fact, a special affection of the epithelium—as "white epithelial patches of the tongue." Of their nature he is entirely ignorant; but he is much disposed to regard them as one of the consequences of mercurial treatment, so often has he met with them in persons who have used or abused mercury, and especially large doses of the proto-iodide. Another common coincidence is to find the affection in persons who smoke excessively; but here he regards the tobacco as only the determining and accidental cause, mercury being the principal one.

The affection usually manifests itself first as a small, white, milky patch from one-half to one centimetre in diameter; no inflammation being present either at the circumference of the patch or in the substance of the tissues. There is little or no pain or tenderness, and little inconvenience is caused to the patient, except when eating. So slow is the progress of the affection frequently, that patients sometimes pass six or seven years without seeking advice. It is found usually at the sides of the tongue, and in the under part of the organ, in the vicinity of the dental arch of the lower jaw; so that the patient, if he have a bad tooth, is apt to attribute it to the irritation which that produces. If, however, these patches make but very slow progress in the generality of cases, in others they run a more rapid course, so as soon to pass into a state of ulceration. They are then usually situated on the dorsal surface of the tongue, near one of its edges.

M. Devergie finds the affection very amenable to a caustic application, which he prepares in the following way:—Four parts of powdered crystallised proto-nitrate of mercury are dissolved in eight of distilled water, which is then gradually brought to the boiling point. It is then removed from the fire, and two parts of nitric acid are added drop by drop, stirring the while. Every three or four days the patches are to be lightly touched with this, the patient keeping his tongue motionless for two or three minutes, and then repeatedly gargling the mouth with water. Three or four applications usually suffice to disperse the patches. When ulcerations are present, it is surprising to observe how rapidly they are cured; but more time and a greater number of applications are then required. Gargles of chlorate of potash should also then be used daily.

The first weekly number of the German Health Office (*Reichs Gesundheitsamt*) has just appeared. It contains the bills of mortality of 127 German and of thirty foreign cities and towns for the last week of 1876; an outline of the progress of epidemic disease in Europe and various parts of the world; an article on the relative value of the publication of weekly bills of mortality; and a table of meteorological observations taken at eight representative stations in Germany during the last week of 1876. This work deserves the attention of all persons interested in sanitary matters.

REVIEWS.

Clinical Lectures on Diseases of the Heart and Aorta. By George William Balfour, M.D. St. And., F.R.C.P. Edin., Physician to, and Lecturer on Clinical Medicine in, the Royal Infirmary, Edinburgh. London: J. and A. Churchill. 1876.

This work is a collection of seventeen clinical lectures on Heart Disease, and we have no hesitation in pronouncing it an excellent production, and worthy of the careful study of all physicians. In it there are many things new, and many things old, placed before the reader in a novel and pleasing way. The lecturer does not, as is too often the case, lose himself in his speciality, but regards each subject generally on the broadest grounds. An opening sentence is prophetic of the value of the Lectures in this respect: it says, in fact, that some persons have heart disease and few symptoms; others have severe cardiac symptoms, and yet no heart disease at all. The recognition of these truths is daily becoming of more and more importance, for in this age scarcely any organ of the body is permitted a chance of the natural performance of its functions, and the heart has very frequently to bear the brunt of the inability which less important and less vital organs manifest.

The first lecture is devoted to the general consideration of the value of Physical Signs and Symptoms in the diagnosis of heart affections, and is of the greatest practical utility. It is not by any means easy reading, but this arises from the fact that it is searching and scientific. As to the diagnostic value of the pulse, Dr. Balfour lays down certain rules with a dogmatic confidence which we envy but cannot share. It has seemed to us that in the great majority of cases the pulse, as judged by written rules, is diagnostically deceptive, and that he who trusts to it or is prejudiced by it before using the stethoscope is likely to be mistaken. This is really a question of some importance, because the busy practitioner is often compelled to fall back upon the readiest aids to diagnosis, and would certainly prefer the pulse, which he is perpetually examining, to the stethoscope, whose teachings he is apt to forget in the lapse of time. Simple forms of heart disease are rare, and in consequence the pulse is typical only in few cases. We take exception to one sentence in this lecture: Is "depression of the præcordial region an *indication* of adhesion of the visceral and parietal layers of the pericardium"? If so, we have long passed by a physical sign of easy detection, and yet indicative of a condition only occasionally diagnosed. The author makes many ingenious practical suggestions, and nothing is more needed than the propriety of method in cardiac examinations on which he insists. Method saves time, and is more necessary even in hasty examinations than protracted ones, and gives a satisfaction which "jumping" examination cannot yield.

The second lecture is devoted to Aortic Regurgitation, and while we speak of it in terms of general praise, we disagree with the author on some points. We cannot be quite persuaded that it is possible to determine the degree of lesion by the conduction of the murmur due to it. So often does the murmur fall short or exceed the valvular defect, that to diagnose the degree of this all physical signs and all general symptoms must be carefully regarded. But we commend the author's remarks on this subject to the reader; he has advanced in the right direction. The cases which he records in this and other lectures are admirable instances of illustration, notwithstanding that on some it seems possible to put a conclusion differing from the author's. His explanation of the pulse in aortic regurgitation is to the point; and he holds the opinion that a visible "locomotive" pulse delayed beyond the systole of the ventricles is diagnostic of aortic insufficiency. He however never hints, while discussing the evils of this serious disease, at some striking dangers which do occur. Does not bronchial congestion sometimes become alarming as a result of the cardiac hypertrophy? Does not embolism sometimes cause death, the emboli being carried from deposits on the aortic valves? Does not also hæmorrhage within the skull follow hypertrophy of the left ventricle?

In his lecture on Mitral Stenosis Dr. Balfour gives a prominent place to the presystolic murmur. He makes an excellent defence of its value as a physical sign; but he admits the existence of a diastolic murmur in mitral constriction, altogether distinct from, and due to other causes than, the presystolic. There can be no doubt that the latter word is frequently improperly applied; and such lectures as these, in which its true place is accurately defined, and the existence of other murmurs in mitral stenosis insisted

upon, will tend to diminish discussions, many of which have arisen from an improper application of terms. Dr. Balfour attaches to the presystolic murmur much importance, and believes—if we once hear it—we may rest satisfied of the existence of an incurable mitral stenosis, even though the murmur afterwards disappear. We have always thought the same of the aortic regurgitant murmur, and aortic disease; and further, indeed, that this murmur once heard can always be heard. But Dr. Balfour argues against the latter part of this view, and brings Gairdner and Walshe to witness that an aortic regurgitant murmur may disappear. Nevertheless, during an attack of acute rheumatism we should prefer to hear any murmur other than that of aortic insufficiency. In the author's lecture on Mitral Stenosis a most interesting subject is raised—the possibility of diagnosing this lesion when no murmur exists. He relates cases, in some of which his diagnosis was especially happy. He relies, as proof of the presence of the disease, on the thumping nature of the first sound, on the extreme irregularity of the pulse, on reduplication of the second sound as a result of pulmonary congestion, and on the secondary evidences of stenosis in the lungs. It has been long recognised that mitral disease of double kind may exist, and yet no murmur be heard except the systolic apex. In such cases Dr. Balfour thinks there are evidences of stenosis in a thump preceding the first sound, in the loss of the systolic bruit as we pass backwards, and the appearance of an impure first sound in its place. In one case diagnosed by these signs, the mitral orifice barely admitted the tip of the finger.

The remarks on Curable Regurgitant Mitral Murmur are of great practical importance. Dr. Balfour takes the view that the murmur heard at the apex in chlorosis is due to actual regurgitation; that it and the systolic pulmonary artery murmur are due to reflux of blood into the left auricular appendix, the mitral orifice becoming incompetent owing to a dilatation secondary to cardiac relaxation. We do not deny the truth of this explanation (which is that advanced by Naunyn), but, at the same time, it is perfectly certain that in anæmic persons a true systolic pulmonary artery murmur exists, and that it is possible to increase the loudness of that murmur by pressure with the stethoscope. In many chlorotic girls with very yielding chest-walls all the murmur is possibly a result of pressure, the blood condition and the state of the arterial walls readily favouring its influence. Dr. Balfour adopts the view of De Quincke, that the murmur is due to pressure of the artery by the ventricle in systole. Irregular action of papillary muscles, imperfect tension of valves, etc., take a share in the production of the systolic apex murmur. It is the fact, however, that in many cases the so-called pulmonary murmur is not heard in its greatest intensity over the artery, but outside it, *i.e.*, over the left auricular appendix; and in these cases, though Dr. Balfour seems to think otherwise, other evidences of regurgitation are perceived in the increase of the size of the heart—a condition set down to repeated palpitations, but certainly sometimes due to true regurgitation. We would venture to suggest to Dr. Balfour that, in further proof of the views he maintains, where the "appendicular murmur" is heard there is evidence of dilatation (and even hypertrophy) of the left side of the heart. No matter what may be the cause of curable mitral regurgitant murmurs, a full discussion of the curable conditions is a valuable addition to our practical knowledge.

We have not space to pursue a friendly criticism of many of Dr. Balfour's lectures. His lecture on Irregularity and Intermission of the Pulse comes up to the expectations one would form of it before reading it. The same may be said of his lectures on Angina Pectoris and Cardiac Pain generally, on Pericarditis and its consequences, and on the action of Digitalis. In regard to the latter drug, the lecturer very justly credits Dr. Fothergill with being one of the chief agents in its extensive application and indication of the cases in which it is likely to be suitable. He defends the use of the drug in aortic incompetence, and to our mind on good grounds. It is chiefly in cases of over-dilatation of the ventricle that the drug is most useful; and, indeed, when we have by its aid effected a diminution of this dilatation, the drug should be administered cautiously, or, better still, given intermittingly. We can only refer to Dr. Balfour's reasons for the statement that when the urine begins to diminish in quantity, then we should stop digitalis. This is certainly to be remembered in practice, especially as we believe the reader of the Lectures will admit the justice of the reasons leading to the statement. Dr. Balfour, by-the-bye, prefers tincture of digitalis to the infusion, as being a more uniform preparation. In his consideration of the general therapeutics of heart disease he lauds arsenic in certain cases where digitalis is not admissible, but disparages the value of belladonna. We shall not enter upon a discussion as to the value of the latter, but we certainly believe that it is likely to prove a most useful addition in the therapeutical *armamentarium* of heart diseases. The indications for the use of morphia, nitrite of amyl, chloroform, rest, and exercise are all discussed excellently by the lecturer.

We feel compelled to notice—space notwithstanding—briefly Dr. Balfour's lectures on Aneurism. Of this there is, he says, but one pathognomonic sign—an expansile pulsating tumour distinct from the cardiac pulsation, yet synchronous with the latter, and beating at least as forcibly. With this we agree, but we certainly dissent from the statement that in abdominal aneurism, springing from the anterior part of the aorta, there is as a rule no pain. According to our experience, pain of one shape or the other is the first symptom often, and late on frequently the only one the patient complains of. Patients, indeed, present themselves because of "dyspeptic pain," and careful examination perhaps reveals a large aneurism of the abdominal aorta. But it is to the treatment of aneurism of the aorta, as given by Dr. Balfour, we mostly wish to draw the reader's attention. His commendation of iodide of potassium is strong, and, coming from such a source, worthy of all consideration. He relates instances of this disease in which persons pursued their ordinary occupation, and yet, under this drug in full doses, improved immensely. Full doses are to be given; they are attended by less chance of iodism; and besides, good effects will not be attained by sparing exhibition of the drug. For the explanation of its action we refer the reader to the book itself, but we are in a position to corroborate the statements as to its good effects.

In conclusion, we would say that this book is the outcome of thorough labour and of acute and patient observation. We most heartily commend these Lectures. They are full of new facts; they show how rapid and great has been the advance in the practical study of diseases of the heart; and are certain also to take their share in inducing fresh inquiries into their diagnosis and treatment, and in leading to a more rapid progress even than has been made during the last few years.

GENERAL CORRESPONDENCE.

ANIMAL VACCINATION.

LETTER FROM DR. FREDERICK CHURCHILL.

[To the Editor of the Medical Times and Gazette.]

SIR,—*Apropos* of Mr. Wilson's letter advocating animal vaccination, especially during the prevalence of a small-pox epidemic, allow me to draw attention to a circular recently issued by the "National Vaccine Establishment," and forwarded to me in reply to a second application for a supply of recent lymph. Dr. Seaton, whose name is appended to the circular, explains that the supply of lymph being limited, it is not within the objects for which the Establishment was instituted, to forward lymph for revaccination except to a very moderate extent; and he concludes by saying that if the vaccinator, on receiving his packet of preserved lymph, does not use it for starting primary vaccinations, from which afterwards his revaccinations could be performed, but, instead of so doing, expends the preserved lymph on some of his claimants for revaccination, he must not rely on being able to satisfy other claimants with new supplies from the central depôt.

The medical practitioner is placed in this dilemma: of having to revaccinate the families and servants of nearly all his patients, when—if, as in many cases, his midwifery practice is small, or even *nil*—it is quite impossible to keep up a continuous flow of primary vaccination. Dr. Seaton recommends the medical practitioner, as an alternative, to apply to the public vaccinator of the district in which he resides; but there are many reasons to deter him from resorting to such an expedient, however much he may be in need.

The Belgian statistics quoted by Mr. Wilson, although not largely differing from our own, are instructive. It has been publicly stated of late that revaccination succeeds in about 50 per cent., whereas revaccination of adults by animal vaccine in Belgium succeeded in 62 per cent. My own

experience of the potency of lymph supplied by the National Vaccine Establishment is anything but encouraging. During the past few weeks I have, by request, vaccinated a large number of adults with lymph supplied in tubes by this Establishment, but the successful cases have been very few indeed, certainly under 10 per cent. It may be thought that my manipulation was at fault, but on this point I may remark that I very carefully penetrated the cutis, and this being more or less brawny, a sufficient gap was made to allow of the lymph being carefully "tucked in" with the point of the lancet. The cases selected were healthy subjects, and, as a rule, had few, if any, distinct cicatrices. Many adults who had been recently successfully vaccinated were advised against a repetition of the operation, and I have not thought it desirable to urge revaccination unless my opinion was sought on the subject, although, doubtless, practitioners in other localities may find it expedient to put some pressure upon their patients. I am, &c., FREDERICK CHURCHILL.

South Kensington, January 15.

NATURAL MINERAL WATERS.

LETTER FROM MR. J. ALFRED WANKLYN.

[To the Editor of the Medical Times and Gazette.]

SIR,—I observe in your impression of last week an advertisement of a natural mineral water from the Taunus, which bears the imprint of the approval of some of your medical contemporaries. Thus, it is said by the *Lancet* to be "a wholesome and pleasant drink"; and by another journal to be "free from all organic or inorganic impurities."

Now, this raises a question of so much dietetic importance that I may ask your leave to point out that, according to its own published analysis, which is confirmed by my own chemical investigation, this water contains not less than 100 grains of carbonate of lime per gallon. Now, according to my knowledge, such an enormous quantity of carbonate of lime in a drinking-water is not only an "inorganic impurity," but a very dangerous and deleterious impurity. I can only imagine that the actual composition of this water escaped the attention of those who have written these facile notices. At any rate, I imagine that very few medical men will be found to endorse the opinion that a table-water so loaded with carbonate of lime is one that can be safely recommended as "wholesome." Certainly, no chemist would dare to recommend the use of such a water for a population; and I should very much like to know how it can be safely recommended at all. Lately I was asked to give an opinion upon a similar drinking-water, and I unhesitatingly pronounced it to be dangerous for habitual use, and unfit for consumption as a table-water. I should like very much to submit that opinion to you and your readers, in order to ascertain whether there is any real scientific difference of opinion on the subject, as the mineral composition of table-waters is far from being an indifferent matter. I am, &c., J. ALFRED WANKLYN.

117, Charlotte-street, W., January 15.

¶ THE HUNTERIAN ORATION.—This biennial discourse on the genius of Hunter will be delivered on Tuesday, the 13th prox., by the late President of the College (Sir James Paget, Bart.). The members may expect a great intellectual treat from the well-known eloquence of the Orator on this occasion.

FATAL PHLEBITIS OPHTHALMICA.—At the Marburg Medical Society, Prof. Schmidt-Rimpler related the case of a woman, aged twenty-five, hitherto in good health, who, two days after some conjunctival redness at the outer angle of the eye, exhibited œdema of the eyelids and exophthalmus. There were at first scarcely any general symptoms, but on the evening of the fifth day intense fever set in, and the next night she died. At the autopsy a portion of the roof of the orbit was found rough and deprived of its periosteum. In the ophthalmic vein was found a thrombus in a state of partial suppuration, but which did not extend into the intracranial portion of the vessel. Within its thickened walls there was some purulent deposit, and in the muscles of the eye and the frontal muscle were numerous minute purulent deposits, as well as in the eyelid. The brain and its membranes were normal. Prof. Schmidt-Rimpler supposes that in this case a caries of the orbit had led to thrombosis of the vein, death occurring in consequence of pyæmia.—*Berlin. Klin. Woch.*, December 18.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, DECEMBER 20.

Mr. CARTWRIGHT, F.R.C.S., President, in the Chair.

SIR WILLIAM FERGUSSON, Bart., F.R.S., Mr. T. Hilton, F.R.C.S., F.R.S., Mr. Jonathan Hutchinson, F.R.C.S., Mr. W. S. Savory, F.R.S., Dr. Billing, F.R.S., Dr. Barnes, Dr. C. West, Mr. H. Lee, F.R.C.S., and the Editors of the *Lancet*, *British Medical Journal*, and *Medical Times and Gazette*, were elected Honorary Fellows of the Association; and Mr. A. W. W. Baker, M.A., M.Ch., M.B. (Dublin), Dr. Hollendaer (Halle), J. Pennefather, F.R.C.S., and Daniel Corbett, M.R.C.S. (Dublin), were elected Ordinary Fellows of the Association.

ON THE POSITION OF DENTAL SURGERY IN ITS SOCIAL AND ETHICAL ASPECTS.

Mr. HAMILTON S. CARTWRIGHT read a paper as above. He commenced by saying that in that branch of the profession to which the members of the Society had devoted themselves, even those most highly qualified, professionally and socially, had to suffer to a certain extent in public estimation by the action of many who, terming themselves "dentists," could lay no claim to education, or, in too many cases, to even a knowledge of the ordinary rules and obligations of professional life. He thought that in some degree the educated members of the profession were responsible for this, if they permitted themselves without protest to be associated by the public in any way with those guilty of such practices as those to which he was about to allude; and, as a matter of fact, there had never before been any combination to disavow them, and to teach the public that they were repudiated by all right-feeling persons in the profession. Alluding to the fact that it is only a few years since a special qualification was granted by the College of Surgeons to those who, through various circumstances, could not become members or fellows of that institution, he said that he trusted that the existence of the dental licentiateship would never prevent those entering the profession from aspiring to higher diplomas, for the position of dental surgery would stand or fall by the educational acquirements of its practitioners; whilst he thought that any attempt to place the special qualification above all others could only be viewed as a step in retrogression, as it would prevent men from aspiring to the higher and inclusive diplomas, the possession of which was as necessary in the treatment of the teeth as in that of the eye, ear, or other organs. He then considered some of those means of obtaining notoriety, which, adopted for the most part by unqualified persons, so discredited dental surgery; he divided them into public and private, saying that the most control could be exercised over the former, which was represented by mendacious advertisements and puffs of the most disgraceful kind—the hideous progeny of empiricism and quackery. Mentioning the success he had met with in communicating with the editors of some well-known journals in relation to advertisements appearing in their columns, he spoke of the satisfactory results which had attended the efforts of their medical brethren, who some years since combined to discover a means of arresting an infamous class of advertisement which sullied the columns of the best-known journals, and he suggested that the means adopted by them of making an appeal to the editors might soon put a stop to practices which were such opprobria to the profession, disgracing it, and deceiving grossly a too credulous public. The practices of bringing forward names by means of washes, powders, and catch-penny pamphlets, were, he considered, little less objectionable, and those resorting to them could only be looked upon as tradesmen, not as professional men. In alluding to private means of gaining notoriety, he especially stigmatised one which he was grieved to say was not uncommon—viz., the dastardly practice of those who endeavour to appreciate themselves by depreciating the work of others; whilst he spoke with reprobation of the means employed by some of touting mechanical men for practice, by impudently forcing their acquaintance upon them, by obtruding upon them specimens of their skill, or by disseminating amongst them *brochures*, the contents of which serve only to support a showy binding, which is a background to some name unknown to fame. In proposing the

formation of a code of ethics, he said that there was no desire in that Association to impose any laws on any but themselves, although he thought that it would be for the benefit of the profession generally if the subject of ethics was fully considered. There were many questions in relation to fees which were undecided, as also to the conduct of consultations, of which he trusted there would be many amongst the Fellows of the Society, as they tended towards the benefit of science, patient, and practitioner alike. Remarking that the advertising empiric was chiefly recruited from the lower class of mechanical workmen, he ventilated the question of the expediency of a partial separation of mechanical from surgical dentistry, whereby the surgeon would superintend the adjustment of the instrument as he does that of a truss or a spinal support, leaving its actual supply to the mechanist—a measure which would by no means nullify a perfect knowledge of mechanics on his part. In speaking of the frequent exhibition of anæsthetics in dental surgery, he alluded to the recklessness with which they were administered by many unqualified persons, saying that they should be given only under careful medical supervision, as even in the case of nitrous oxide gas, which did not often kill outright, there were many constitutional conditions in which its administration led to serious subsequent mischief, the cause of which was too often unsuspected by patient and practitioner. Finally, he proposed the careful consideration of the topics he had broached, by a committee appointed for the purpose, and concluded by proving the high claims which dental surgery, practised as it should be by qualified practitioners, had to an equal position with other specialities in medicine. He exhorted all in the Society to do their utmost to assert the position of their speciality in its claims to professional consideration and social standing.

The discussion which followed was a very animated one. Messrs. Cartwright, C. Heath, Napier, Edgelow, Winterbottom, Gregson, Salter, and Grigg taking part in it; Mr. Napier, Mr. Heath, and Mr. Gregson laying especial stress upon the necessity that every surgeon, whatever branch he practised, should be a good mechanician, pointing out the fact that all the most useful instruments had been invented by the surgeon, whose idea had been only carried out by the mechanist. The subject of advertising was thoroughly discussed, and many disgraceful instances of fraud perpetrated by those owing their notoriety to such practices were noticed. Finally, it was resolved to reconsider the subject more fully, and to take means to arrest as far as possible the unprofessional practices, and especially that system of public advertisement which so disgraces the name of dental surgery.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 2.

Mr. George Pollock, F.R.C.S., President, in the Chair.

General Xanthelasma.

Dr. Pye-Smith related the post-mortem results of a case of general xanthelasma, which had been under the care of Dr. F. Smith, formerly of Sheffield, and was previously described in the *Journal of Cutaneous Medicine*. The patient, a woman of thirty-two at her death in 1872, had been under observation for five years. After her first confinement, during which she had severe hæmorrhage, she became jaundiced; and this condition remained for the rest of her life. A few months from the first discoloration of the skin, patches of xanthelasma appeared on the eyelids; and after a time the disease spread to the hands and elbows, and the feet including the heel and dorsum of the toes. Death was referable to exhaustion, due to hæmorrhage into the skin as well as from the stomach and bowels. Meanwhile some of the patches of xanthelasma had become decidedly less. Portions of the diseased skin, examined by Dr. F. Smith after two years' duration, presented a very vascular fibro-cellular growth, with hypertrophy of all the layers of the skin, the cells of the rete mucosum containing yellow-coloured granules, soluble in ether. Post-mortem, the liver, which weighed eighty-eight ounces, was reddish, smooth, and tough, and presented microscopically no trace of normal structure, but tracts of fibrous tissue, groups of small cells, bloodvessels, and crystals of uric acid and tyrosin. Altogether, this condition appeared somewhat related to acute yellow atrophy. Dr. Pye-Smith said that there was now sufficient evidence that xanthelasma was associated not with any special disease of the liver, but simply with protracted jaundice from whatever cause. In the present case there was no obstruction to the bile-flow. Both multiple xanthelasma and the nodular form were rare. General xanthelasma had never been observed apart from jaundice except in two recorded cases, one in Virchow's *Archiv*, and one in Roberts's "Handbook of Medicine."

Mr. Spencer Watson confirmed the last statement, remarking that the case was otherwise when the disease was palpebral only—the subjects not being jaundiced necessarily, but frequently dyspeptic, or sufferers from sick-headache. He suggested that xanthelasma might be due to disturbance of nutrition from nervous causes.

Dr. Hilton Fagge said that smooth xanthelasma, limited to the eyelids, was the only form not associated with jaundice. With jaundice the eyelids alone might be affected, yet the xanthelasma was, as a rule, more general, and plane. True nervous migraine was undoubtedly present in many of the subjects, and hepatic disorder was not essential.

Mr. Maclean referred to the case described by Dr. Roberts, under the care of Dr. Tilbury Fox. It was that of a child less than two years of age, with slightly raised, flattened, buff patches over the body, not accompanied by jaundice.

Dr. Fagge added that this case might be the same as that described by Dr. Fox as "xanthelasmoidea."

Dr. Barlow believed the cases were one and the same. Dr. Fox had exhibited it at the Clinical Society two years ago. A very similar case was now under his own care, in a child, and almost congenital. The patient was susceptible to flea-bites.

Dr. Pye-Smith replied that it appeared to be proved that true general xanthelasma and the disease mentioned in Dr. Roberts's case were not identical.

High Arterial Tension in Mitral Disease.

Dr. Gowers showed a heart with mitral disease, and dilatation and hypertrophy of both ventricles, from a case in which, during life, there existed very high arterial tension. The mitral orifice was dilated to five inches and three-quarters. The posterior segment was very small, only a quarter of an inch in depth; the anterior was nearly double the normal size—an inch and three-quarters deep by two inches and a quarter wide. The circumference of this segment (six inches) was greater than that of the orifice. The flap may at times have prevented much regurgitation. An apex murmur heard during life was very variable. The enlargement of the flap was an illustration of compensatory enlargement under the increased mechanical strain to which it was exposed. The patient, aged forty-four, had had several attacks of rheumatic fever. The atrophy of the posterior segment was probably the result of old rheumatic endocarditis. The wall of the dilated left ventricle was softer than normal, notwithstanding the existence of an excess of fibroid tissue within it. The muscular fibres were degenerated, the new tissue in some parts delicate wavy fibres, in others amorphous and granular. The high arterial tension, which was marked during life, existed in many cases of mitral disease during the later stages, as Friedreich had remarked. The pulse was bounding and incompressible. The kidneys were healthy. The mechanism by which this arterial tension was produced was probably threefold. Over-distension of the venous system usually entailed under-filling of the arterial system. This, however, implied that the volume of the blood remained the same as in health; but the total capacity of the vascular system in many of these cases must be increased; and when, in addition to the dilatation of the heart, of the vessels of the lungs, and of the venous system of the body, general and visceral, there was found distension of the arteries, and a full, incompressible pulse, it was difficult to resist the idea that the volume of the blood was increased; especially since, in these cases, the kidneys were found habitually to under-act, and other water-eliminating organs did not, apparently, over-act. Secondly, the dilatation of the right side of the heart, secondary to the mitral disease, might act as an independent source of obstruction, and affect, through the venous, the arterial system. There was in this case, as in others that Dr. Gowers had seen in which the arterial tension was high, no anasarca, and only on the last day a trace of albumen in the urine, although there was extreme distension of the superficial veins and cyanosis. This seemed to indicate an ability on the part of the walls of the vessels to resist the increased pressure to which they were exposed; but such resistance must facilitate the transfer of that increased pressure from the venous to the arterial system.

Lastly, this increased tension was probably sometimes the result of a diminution in the amount of regurgitation, such as might be noticed in some cases of mitral constriction, the narrowing of the orifice diminishing the amount of regurgitation permitted by damaged valves. In other cases enlargement of one segment of the valve, as in the heart shown, might lessen the incompetence. The effect would be that an enlarged ventricle would throw a greater proportion of its blood into the aorta, and, if an obstruction (from dilatation) on the right side of the heart had been previously developed, the effect would be a considerable increase in the arterial fulness and tension.

Dr. Mahomed asked whether the kidneys were diseased. He had himself met with a case of mitral disease where the pulse was tense and cord-like, but without prolongation of the tidal wave in the tracing. There was cardiac dilatation and hypertrophy, probably secondary.

Dr. Gowers replied that albuminuria occurred on the last day of life only; there was no renal disease beyond simple congestion.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, January 3.

Dr. W. O. Priestley, President, in the Chair.

Report of the Delegate to the Philadelphia Medical Congress.

Dr. Robert Barnes, the delegate representing the Society at the Congress, was elected President of the Obstetric Section. Dr. Barnes expressed his high estimation of the papers read before the section, and his great admiration for the zeal and earnestness with which work was done. He gave a brief sketch of the manner in which the business of the section was conducted, and concluded by expressing his high satisfaction with the hospitality and kindness shown him in America.

Dr. Gomer-Davis exhibited a specimen, which was referred to a sub-committee to report on.

The President delivered his annual address, which has already been published.

Trismus Nascentium.

Dr. Napier, of Fraserburgh, reported a case of this disease. It occurred in an infant five days old. Parents were healthy. It was treated with bromide and iodide of soda; it was, however, extremely difficult to administer medicine or food, owing to the closure of the jaws. The child died. Examination after death revealed no cause for the disease. The cord had separated on the fourth day, and no scratch or sign of injury could be discovered on the body.

Pyæmia from Inflammation of the Umbilical Vein.

Dr. Roper reported two fatal cases of pyæmia occurring in infants. In the first, the only abscess found during life was situated in the neighbourhood of the right deltoid muscle. The cord had separated on the fifth day, and the skin around it had continued red. The child died on the nineteenth day. After death, general peritonitis was found, and the umbilical and portal veins were inflamed and full of pus. The second case presented several abscesses in the wrists and feet; the right lower limb was gangrenous as far as the hip. The internal organs were healthy, even the liver; and the only lesion found to account for the disease was purulent inflammation of the first inch of the umbilical vein.

Case of Pyæmia with Extensive Purulent Deposits in a New-born Infant.

Dr. A. W. Edis related the case of a feeble, prematurely-born child who was attacked with pyæmia about the end of the first week of life. Abscesses formed over right shoulder and in right lower limb. Death took place on the eighth day. Post-mortem examination revealed local peritonitis, inflammation of the umbilical vein (which contained pus), and plugging of the right femoral vein.

The University of Paris.—A number of alterations and improvements are just about to be commenced in connexion with the Ecole de Médecine at Paris, which will adapt that institution to the numerous requirements of modern science, and to the increasing number of medical students. The old and well-known *façade* in the Rue de l'Ecole de Médecine, opposite the Hôpital Pratique, will be retained, but a large portion of the old buildings will be replaced by new.

OBITUARY.

ALFRED SMEE, F.R.S., F.R.C.S. Eng.

We regret to have to record the death of Mr. Alfred Smee, at his residence in Finsbury-circus, on the 11th inst. Mr. Smee was a man of remarkable energy and activity, mentally and physically, and his name has been so many years familiar to men in connexion with voltaic cells and batteries, that we are sure most of our readers will be surprised to learn that he was only fifty-eight when he died. The second son of a gentleman who was for some years Accountant-General of the Bank of England, Mr. Alfred Smee was born in 1818, was educated at St. Paul's School, and afterwards at King's College and St. Bartholomew's Hospital. In 1840 he was admitted a Member of the Royal College of Surgeons, and became a Fellow of it in 1855. He was Surgeon to the Bank of England, the Royal General Dispensary, and the Central London Ophthalmic Hospital, and at one time Lecturer on Surgery at the Aldersgate-street School of Medicine; and among his numerous works he wrote a book on "Vision in Health and Disease"; but he was more widely known for his researches in science, and his name will pass on through the years to come as that of the inventor of "Smee's battery." At the very early age of twenty-three he was elected a Fellow of the Royal Society, chiefly, we believe, on account of his researches in electricity, and he published an important work on "Electro-Metallurgy." He was a Vice-President of the London Institution, where he originated, in 1851, the first of the Educational Lectures. In conjunction with Mr. Hensman, the engineer to the Bank of England, and the printer, Mr. Coe, he brought out the present form of the Bank of England notes, and the forms of cheques now adopted by that establishment. Mr. Smee was also Surgeon to, and, we understand, one of the founders of, the Gresham Life Assurance Society, and a director of, and surgeon to, several other companies and institutions. Besides the treatises already mentioned he was the author of the following works:—"Sources of Physics;" "Elements of Electro-Biology;" "Instinct and Reason;" "The Principles of the Human Mind;" "The Potato Plant, its Uses and Properties;" "The Process of Thought, adapted to Words and Language;" "Accidents and Emergencies;" "The Human Mind;" and several others, among which may be mentioned a large illustrated quarto volume, entitled "My Garden," in which are described the geology, topography, and leading features of the neighbourhood of Carshalton and Beddington. Mr. Smee twice contested Rochester, unsuccessfully, in the Conservative interest, and was rewarded for his courage by the presentation of a testimonial of plate from the Conservatives of that city. We are informed that he took a great part, together with Sir James Hannen and Mr. Justice Pollock, in modifying the scheme for the reorganisation of St. Paul's School, as first proposed by the Education Commissioners.

We have said enough to show that Mr. Smee was a man of very uncommon activity and versatility of mind, and of remarkable ingenuity. He leaves a widow and a son and daughter. The latter married Professor Odling, F.R.S., of Oxford; and the son, who is a Member of the Royal College of Surgeons, is already known for some studies in Physiological Chemistry.

Freiburg University.—Dr. A. Röhrig, of Kreuznach, the author of some excellent essays on the action of drugs, has been called to be Professor of Medicine at Freiburg.

Dublin Hospital Sunday Fund.—The Executive Committee have recommended the fund collected on the second Sunday in November, 1876, to be distributed as follows among the participating institutions:—Sir P. Dun's, £249 15s. 4d.; City of Dublin, £577 8s. 3d.; Steevens', £138 6s. 5d.; Meath, £479 9s. 4d.; Mercer's, £287 11s. 3d.; Whitworth (Drumcondra), £54 9s. 3d.; Coombe (Lying-in), £99 7s. 7d.; Rotunda (Lying-in), £131 11s. 3d.; St. Mark's (Ophthalmic), £139 0s. 7d.; National Eye and Ear Infirmary, £58 9s. 10d.; Convalescent Home, £348 9s.; Cork-street (Fever), £122 6s. 1d.; Adelaide, £765 4s. 4d.; Rathdown, £148 11s. 6d.—total, £3600. The statement of accounts showed that the collection in 1876 amounted to £3873 9s. 3d., being £253 16s. 11d. over the collection of the previous year. The working expenses had been £242 0s. 3d.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, January 9, 10, and 11, the following candidates obtained the Licence to practise Medicine:—

Aldridge, Edward Arthur.	Gunn, Christopher.
Dunbar, Eliza Louisa Walker.	Young, Thomas Frederick.

The successful candidates for the Licence to practise Midwifery were—

Aldridge, Edward Arthur.	Poole, Jonas Sealy.
Blunden, William.	Willis, Francis Taylor.
Dunbar, Eliza Louisa Walker.	Woods, Arthur A.
Gunn, Christopher.	Young, Thomas Frederick.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 15th inst., and when eligible will be admitted to the pass examination, viz.:—

Baxter, James C., student of the Liverpool School.
Colbourn, Thomas W., of the Birmingham School.
Dearden, Richard J., of the Manchester School.
Eason, Alexander M., of the Liverpool School.
Gibbs, Alfred N. G., of the Bristol School.
Godson, Edwin, of the Birmingham School.
Gomes, Dominic A., of Bombay.
Hampson, Samuel, of the Manchester School.
Higgins, Samuel McC., of the Liverpool School.
Maw, John H. C., of the Liverpool School.
Moore, Joseph W., of the Birmingham School.
Morley, Richard B., of the Leeds School.
Norman, William A., of the Cambridge School.
Poett, Patrick M., of the Dublin School.
Pointon, James, of the Liverpool School.
Riley, James W., of the Birmingham School.
Saunders, John C., of the Sheffield School.
Shann, Henry C., of the Leeds School.

The following passed on the 16th inst., viz.:—

Anderson, Matthew J. B., student of St. Bartholomew's Hospital.
Brunt, John, of St. Bartholomew's Hospital.
Eccles, Friend R., M.D. Toronto, of St. Thomas's Hospital.
Forrest, William, of the Liverpool School.
Fraser, Duncan, M.B. Toronto, of St. Thomas's Hospital.
Gibbs, Francis C., of St. Thomas's Hospital.
Hartley, John, of the Middlesex Hospital.
Henry, George McW., of University College Hospital.
Lloyd, John, of University College Hospital.
McGeah, Wm., M.D. Queen's Univ. Ire., of the London Hospital.
Murray, Horace H. C., of the Charing-cross Hospital.
Nicod, Louis C. N., of St. Mary's Hospital.
Russell, George H., of Guy's Hospital.
Seager, Herbert W., of St. Mary's Hospital.
Smith, Frank, of the Middlesex Hospital.
Stevens, Lewis W., of the Middlesex Hospital.
Sweeting, Richard D. R., of the London Hospital.
Wheaton, Francis D. W., of St. Mary's Hospital.
Wishart, John, M.B. Toronto, of St. Thomas's Hospital
Wright, Adam H., M.B. Toronto, of St. Thomas's Hospital.

The following passed on the 17th inst., viz.:—

Addison, William H., student of King's College.
Barnes, Henry J., of University College.
Buxton, Thomas, of University College.
Carll, Henry B., of St. Mary's Hospital.
Clabburn, Tom G., of King's College.
Clarke, Thomas F., of King's College.
Davies, John M. L., of the Middlesex Hospital.
Embleton, Denis C., of University College.
Evans, Arthur L., of University College.
Fooks, Charles J., of Guy's Hospital.
Fordham, Alfred, of the London Hospital.
Hawkins, Howard, of Guy's Hospital.
Henchey, John H., of St. Thomas's Hospital.
Jerome, John W., of King's College.
Martin, John M., of King's College.
Mort, Herbert B., of St. Bartholomew's Hospital.
Norman, Alexander S., of University College.
Norman, William H., of King's College.
Pearce, John P., of the Middlesex Hospital.
Pilkington, George, of Guy's Hospital.
Roberts, Oswald, of St. Thomas's Hospital.
Robinson, Stapleton C. B., of St. Thomas's Hospital.
Roper, George A., of St. Thomas's Hospital.
Ross, Ronald, of St. Bartholomew's Hospital.
Saunders, William, of University College.
Stathers, George N., of University College.
Stewart, Rothsay C., of King's College.
Sykes, William A., of St. Bartholomew's Hospital.
Williams, Lemuel E., of University College.
Wills, Charles J., of the Middlesex Hospital.

The following were the questions on Anatomy and Physiology submitted to the 127 candidates at the written portion of their examination on the 12th inst., viz:—1. Describe the coagulation of the blood, and mention the various circumstances which accelerate or retard it. 2. Describe all the characters by which the duodenum is distinguished from the lower portion of the ileum.—3. Describe the various structures which form the hip-joint. Name and classify the muscles which act upon the joint, specifying the nervous supply and action of each. 4. Give the course and relations of the axillary artery, and the dissection necessary to expose it. Name the branches arising from its first part, and describe their anastomoses. 5. The superficial muscles of the calf being removed, describe the parts brought into view between the lower border of the popliteus and the heel. 6. Describe the course and relations of the vena portæ outside the liver. Mention the veins which directly and indirectly form it, and the several communications which exist between it and the general circulation.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

FOX, CORNELIUS, M.D., M.R.C.P., M.R.C.S.—Medical Officer of Health for the Central, Eastern, and Southern Divisions of the County of Essex (reappointment).

GIBBINGS, ASHLEY, M.R.C.S., L.D.S.—Assistant-Surgeon to the Dental Hospital of London.

HUTCHINSON, S. J., M.R.C.S., L.D.S.—Assistant-Surgeon to the Dental Hospital of London.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff Surgeon Edward Higgon Evans has been promoted to the rank of Fleet Surgeon in her Majesty's Fleet, with seniority of December 17, 1876. In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet Surgeon Frederick Foster Morgan has been placed on the Retired List from November 22, 1876. The undermentioned Fleet Surgeons have been retired from November 30, 1876, in accordance with the provisions of her Majesty's Order in Council of February 4, 1875, viz.:—Thomas Beswick Purchas, M.D.; William George Hill, M.D.; and Alexander M'Bride, M.D.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-General Henry Clinton Foss retires upon half-pay; Surgeon-Major William Henry Pollard retires upon temporary half-pay; Surgeon-Major William Tydd Harding retires upon temporary half-pay; Surgeon-Major Augustus Frederick Elliot, M.D., retires upon temporary half-pay; Surgeon Ninian Alexander Williamson, M.D., resigns his commission; Surgeon Benjamin Richard Jagoe, M.D., from half pay to be Surgeon.

ARMY HOSPITAL CORPS.—For "Captain of Orderlies Joseph Collin to be be removed from the Army, her Majesty having no further occasion for his services, dated November 11, 1876," as stated in the *Gazette* of November 24, 1876, read "Captain of Orderlies Joseph Collin retires upon temporary half-pay."

BIRTHS.

GRAVES.—On January 11, at 14, Chichester-road, Westbourne-square, W., the wife of F. G. Graves, M.D., of a daughter.

KEELAN.—On December 16, at Roseau, Dominica, West Indies, the wife of N. W. Keelan, L.R.C.S.I., L.R.C.P., of a son.

ROWORTH.—On January 7, at Grays, Essex, the wife of Alfred T. Roworth, M.R.C.S.E., of a son.

WYNDOWE.—On December 21, 1876, at Hyderabad, Deccan, the wife of S. Jardine Wyndowe, M.D., Residency Surgeon, of a son.

MARRIAGES.

DEAKIN—MARTYR.—On January 16, at St. Peter's, Regent's-park, C. W. Shirley Deakin, F.R.C.S.E., H.M.'s Bengal Army, to Maria, eldest daughter of Joseph Martyr, of Woking, Surrey.

GODSON—TRITTON.—On January 11, at St. George's, Hanover-square, Clement Godson, M.D., M.R.C.P. Lond., of 8, Upper Brook-street, Grosvenor-square, to Alice Maria, daughter of the Rev. R. Biscoe Tritton, vicar of Otford, Kent.

HAYNES—MAUND.—On January 10, at St. Luke's, Southampton, Stanley Lewis Haynes, M.D., of Eastnor House, Malvern, to Caroline Henrietta Maund, of Portswood, Southampton.

M'KIM—SOMERVILLE.—On December 27, at the Wilmslow Independent Chapel, Joseph M'Kim, of Trinity College, Dublin, to Jessie, fourth daughter of T. A. Somerville, L.R.C.P. Edin., of Wilmslow, near Manchester.

SECCOMBE—SEARNETT.—On January 11, at St. John's, Angell Town, Brixton, George Samuel Seccombe, L.R.C.P. Lond., M.R.C.S. Eng., to Martha Elizabeth, only child of the late W. H. Searnett, Esq., of Brixton.

WETHERED—WRIGHT.—On January 11, at St. Mary's Church, Cheltenham, Edward Bestbridge Wethered, eldest son of Joseph Wethered, of Clifton, to Mary Ellen, daughter of Thomas Wright, M.D., F.R.S.E., Cheltenham.

DEATHS.

ALLEN, ROBERT AUSTEN, M.D., Surgeon-Major Army Medical Department, at Rawul Pindee, India, on December 4, in his 47th year.

BUTTER, JOHN, M.D., F.R.S., a magistrate of the county of Devon, at 7, Windsor-villas, Plymouth, on January 13, in his 86th year.

MEARES, JOHN HENRY DEVENISH, L.K.Q.C.P., L.R.C.S.I., Surgeon-Major 82nd Regiment, son of the late John Devenish Meares, of Meares Court, county Westmeath, Esq., J.P., D.L., at 76, Pembroke-road, Dublin, on January 15, aged 41.

SCHLUND, CHARLES EUGENE, M.D., of Mannheim, on January 7, in his 75th year.

SMEE, ALFRED HUTCHINSON, F.R.S., at his residence, 7, Finsbury-circus, on January 11, aged 58.

TYLER, E. A., M.R.C.S., L.S.A., formerly of 3, High-street, and 23 Devonshire-street, Portland-place, Marylebone, at East Ilsley, Berks, on January 15, aged 46.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Extra Acting Physician. Candidates must be graduates in medicine of a British university recognised by the Council of Education and Registration, or Fellows or Members of the Royal College of Physicians of London, Edinburgh, or Dublin. Applications, with diplomas and certificates of registration, to the Medical Committee, Children's Hospital, Steelhouse-lane, on or before February 1.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Aural Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with copies of testimonials, to the Secretary, at the Hospital, on or before January 30.

HOSPITAL FOR DISEASES OF THE THROAT, GOLDEN-SQUARE.—Surgeon; also an Emergency Surgeon. Candidates for either appointment must be Fellows or Members of the College of Surgeons. Further particulars can be obtained from Dr. Morell Mackenzie, Hon. Medical Superintendent, to whom applications, with testimonials, should be addressed, on or before January 29.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Candidates must be graduates in medicine of any university recognised by the General Council of Medical Education and Registration of the United Kingdom, or Licentiates of the Royal College of Physicians of London, and shall also be graduates in surgery of any university above referred to, or a Fellow or Member of the Royal College of Surgeons of England. Candidates must be duly registered in their several degrees and qualifications. Applications, with testimonials, to John J. Potts, Hon. Sec., on or before January 25.

ROYAL SOUTH LONDON DISPENSARY, ST. GEORGE'S-CROSS, LAMBETH-ROAD, S.E.—Two Honorary District Surgeons. Applications to Mr. Hentsch, at the Dispensary, on or before January 31.

THE GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, LONDON, N.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons. Applications, with copies of testimonials, to the Secretary on or before January 26.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Axbridge Union.—Mr. W. H. G. Phelps has resigned the Tenth District; area 7910; population 3857; salary £70 per annum.

Bosmere and Claydon Union.—Mr. Horatio Bloomfield has resigned the Debenham District; area 13,529; population 3951; salary £74 per annum.

Kingsclere Union.—Mr. G. P. Richards has resigned the Kingsclere District; area 20,845; population 3874; salary £80 per annum. Also the Workhouse; salary £20 per annum.

Wantage Union.—The Ilsley District is vacant; area 18,950; population 3534; salary £75 per annum.

Wilton Union.—Mr. Thomas J. Bennett has resigned the Wilton District; area 10,595; population 3969; salary £100 per annum.
Also the Workhouse; salary £40 per annum.

APPOINTMENTS.

Bradford (Yorks) Union.—Samuel C. Hirst, M.R.C.S. Eng., L.S.A., to the First District.

Chailey Union.—Percy Leslie, M.D. Edin., L.R.C.S. Edin., to the Third District.

Chester.—Joseph C. Bell, F.C.S., as Analyst for the County.

Chesterfield Union.—Ambrose M. Palmer, M.R.C.S. Eng., L.R.C.P. Edin., to the Whittington District.

Hailsham Union.—George Percy, M.R.C.S. Eng., L.K.&Q.C.P. Ire., to the Third ADistrict.

Kidderminster Union.—John Ormsby, L.R.C.P. and L.R.C.S. Edin., to the Lower Mitton District.

Thorne Union.—John Cameron, M.D. Glasg., L.R.C.S. Edin., to the Hatfield District.

Whitchurch (Hants) Union.—Isaac Willcocks, M.R.C.S. Eng., to the Overton District.

DR. HIRT, of Berlin, Privat-docent in the University, and well known for his contributions to the study of hygiene, has just been granted a stipend by the new German Health Office to enable him to investigate the hygienic regulations of British manufactories on the spot.

AMMONIACAL TINCTURE OF MUSK.—Prof. Lebert recommends the following formula in cases in which inflammatory affections take on a typhoid or adynamic character:—Musk one, carbonate of ammonia one, distilled water ten, and rectified alcohol thirty parts; essence of mint two drops. Twenty-five or thirty drops in water or wine.

THE Medical Club of Berlin has succeeded in instituting short courses of lectures for general practitioners on anatomy, physiology, histology, chemistry, pathology, midwifery—in fact, on all the most important branches of medicine. The lectures will be given by such men as Virchow, Langenbeck, Leyden, Bardeleben, and others, and will, we understand, deal with recent advances in the various subjects of which they treat.

PRELIMINARY LIGATURE OF VEINS IN EXTIRPATION OF A LARGE TUMOUR OF THE BREAST.—In the *Lyon Médical* for January 7, M. Mollière relates an interesting case of a very voluminous sarcomatous tumour of the breast, over the surface of which was spread a rich network of veins, terminating in two large trunks opposite the clavicle. Fearing either the entrance of air or the occurrence of severe hæmorrhage, before removing the tumour he passed waxed threads under each of these trunks. The blue veins which furrowed the whole upper region of the breast disappeared, the integument assuming a white colour. The operation which followed was attended with the loss of very little blood, and no ill-consequence followed the ligature of these large trunks.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. J. P. Prince.—Received with thanks.

Patentee.—Foreign States grant letters patent for inventions, called in France *brevets d'invention*. An English patentee usually obtains patents abroad when the invention is of great utility.

Medicus.—1. No. 2. During the Commonwealth there were no physicians or surgeons in the army; but the older citizens, who had almost all served in it, administered medicines, and the soldiers dressed each other's wounds with some well-known remedies.

Architect.—During his residence at Oxford, Sir Christopher Wren in anatomical science stood amongst the first professors of his day; and as early as the age of fifteen he was employed by Sir Charles Scarborough, an eminent physician and mathematician, as a demonstrating assistant. His abilities as a demonstrator, and his attainments in anatomy generally are acknowledged by Dr. Willis in his treatise on the Brain, for which he made all the drawings; and he is allowed to have been the originator of the physiological experiment of injecting various liquors into the veins of living animals, which Bishop Spratt calls "a noble experiment," exhibited at meetings at Oxford.

F. M., Guy's.—Messrs. Durham and Pick, the recently elected examiners, took their seats at a meeting of the Board on the 12th inst., and have been engaged at the College of Surgeons daily since. Their labours were brought to a close yesterday (Thursday).

Dr. Morris.—To the celebrated Abernethy is due the sole honour of establishing the anatomical school of St. Bartholomew's.

Ophthalmologist.—The late Martin Ware, F.R.C.S., was one of the first who made the ophthalmic branch of the art a special study.

Lex, Lincoln's-inn.—The notorious Dr. E. W. Pritchard was executed for murder in July, 1865. You will find the account in this journal of that date.

Dr. R.—Lord Lumley founded the lectures bearing his name, which were first delivered at the College of Physicians about the year 1584.

An Old Member.—It has already been suggested that the members should be consulted on the "momentous question." We believe there was a meeting of the Conference Committee at the College on Tuesday last.

ŒSOPHAGOTOMY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—On page 27 of your last number (January 6), under the head of "Notes, Queries, and Replies," you have—"The late Dr. Scott was the first person in this country who successfully performed the operation of œsophagotomy." The latest monographs on this subject (Cheever, "Two Cases of Œsophagotomy, with a History of the Operation," Boston, 1868; and Terrier, "De l'Œsophagotomie externe," Paris, 1870) make no mention of Dr. Scott or his case. May I ask you for particulars of Dr. Scott's case

Berleburg, Westphalia, January, 1877. L. VOSS, M.D.

COSTERMONGERS AND THE ARTISANS' DWELLINGS ACT.

The intended demolition of seven acres and a half of dwellings by the Metropolitan Board of Works in the district of Golden-lane, Whitecross-street, and Bunhill-row, has led the costermongers to hold a meeting on the matter, and they have adopted a resolution "to endeavour to obtain an amendment of the Artisans' Dwellings Act." It appears they are desirous that the whole of the dwellings in the district in question should not be removed at once, but by degrees, and that tenements suitable to the class now occupying the existing houses should be erected. They object to the model lodging-houses because of the impossibility of taking their donkeys and barrows to the top of such buildings; and moreover, in too many instances, the rent is fixed beyond their means.

INTOXICATING LIQUORS LAW—MELBOURNE.

A correspondent to a contemporary writes from Melbourne, under date of November 30, that a Bill now passing through Parliament, to amend the law regulating the sale of intoxicating liquors, is the result of a compact between the publicans and the teetotalers. It forbids the opening of any new public-house for a period of three years from the passing of the Act, unless a majority of the ratepayers, voting by ballot, ask for it. It leaves untouched the law as to Sunday trading, which is absolutely prohibitive, without any exception in favour of travellers, and is almost without exception disregarded, to the knowledge of the police, who are instructed to enforce its restrictions. The grocer's licence, under which most families which do not deal with a wine merchant are supplied with beer, wine, and spirits, is to be abolished, and there has been great controversy over the abolition.

COMMUNICATIONS have been received from—

Dr. Voss, Berlehurg; Dr. Thomas Dean, Burnley; Secretary of the Obstetrical Society of London; Mr. Wickham Barnes, London; Dr. G. E. Herman, London; Mr. J. Latchmore, Leeds; Mr. Frank Thicke, Westminster; Mr. Brinsley Nicholson, Brighton; Mr. P. L. Hart, Notting-hill; Dr. F. Churchill, London; Mr. George Baown, London; Dr. Wm. Cater, Liverpool; Dr. Sparks, Mentone; Mr. George Franklin, Leicester; Mr. T. M. Stone, London; Mr. J. A. Wanklyn, London; Dr. C. Fox, Chelmsford; Dr. Fletcher Beach, Clapton; Dr. Drysdale, London; Mr. Edwards-Crisp, London; Dr. R. B. Searle, Penzance; Mr. Frank Bolton, London; Mr. B. R. Wheatley, London; Mr. Henry Morris, London; Mr. W. E. Poole, London; Dr. James Barr, Liverpool; Dr. T. C. Fox, London; Dr. J. Pearson Irvine, London; Dr. Balmanno Squire, London; Dr. Bauce, London; Mr. John Chatto, London; Dr. Edis, London.

BOOKS AND PAMPHLETS RECEIVED—

Samuel Benton, L.R.C.P. Lond., M.R.C.S.E., Nurses and Nursing—Royal London Ophthalmic Hospital Reports, vol. ix., part 1.—Dr. H. Von Ziemssen, Cyclopædia of the Practice of Medicine, vol. vii.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—East London Observer—Worcestershire Chronicle—Canada Lancet—Journal of Nervous and Mental Disease for 1876—The Criterion—Dairyman—Glasgow News—Edinburgh Courant.

APPOINTMENTS FOR THE WEEK.

January 20. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Mr. Ernst Pauer, "On the Nature of Music: the Italian, French, and German Schools." (With Pianoforte Illustrations.)

22. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Second Lettsomian Lecture—Dr. Alfred Wiltshire, "On Vascular Rhythm as exemplified in Periodical Hæmorrhages, General and Local, and on the Treatment of Hæmorrhages from the Female Generative Organs."

23. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropolooical Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. John Harley, "On a Case of Sclerema Adultorum." Mr. H. T. Butlin, "On the Minute Anatomy of Two Cases of Carcinoma of the Breast, preceded by Eczema of the Nipple and Areola."

24. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery (Council Meeting, 7½ p.m.), 8½ p.m. Mr. Edgelow, "A Remarkable Case of Maxillary Disease." Mr. N. Stevenson, "Abnormal Hypertrophy of Intermaxillary Bone, and Operation to Remedy the Defect." Dr. Orphoot (Edinburgh), "A New Means of Preventing the Access of Saliva in Dental Operations." Mr. Hamilton S. Cartwright, "Severe Case of Alveolar Hæmorrhage connected with Jaundice."

25. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Royal Institution, 3 p.m. Dr. Wright, "On Metals, and the Chief Industrial Uses of these Bodies and their Compounds."

26. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Address by the President. Mr. Brodhurst, "Cases of Subcutaneous Section of the Neck of the Thigh-Bone." Dr. Greenfield, "A Case of Hydatid of the Lung." Mr. Pugin Thornton, "A Case of Tracheotomy, in which the operation was performed three times in a few years."

Quekett Microscopical Club, 8 p.m. Ordinary Meeting.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Sir John Lubbock, Bart., "On Ants."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 13, 1877.

BIRTHS.

Births of Boys, 1319; Girls, 1197; Total, 2516.
Average of 10 corresponding years 1867-76, 2375·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	677	681	1358
Average of the ten years 1867-76	814·9	825·4	1640·3
Average corrected to increased population ...	...	...	1755
Deaths of people aged 80 and upwards ...	...	...	49

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	6	1	1	1	3	1	3	...	5
North... ...	751729	51	4	6	1	10	1	2	2	3
Central ...	334369	...	2	...	...	2	...	2	...	2
East	639111	13	5	2	...	3	...	...	...	2
South... ...	967692	30	12	14	2	7	1	10	...	4
Total	3254260	100	24	23	4	25	3	17	2	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·567 in.
Mean temperature	41·5°
Highest point of thermometer	52·5°
Lowest point of thermometer	28·5°
Mean dew-point temperature	38·7°
General direction of wind	S.W. & N.E.
Whole amount of rain in the week...	1·96 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 13, 1877, in the following large Towns:—

Boroughs, etc. (Municipal bounaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Jan. 13.	Deaths Registered during the week ending Jan. 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2516	1358	52·5	28·5	41·5	5·28	1·96	4·98
Brighton	102264	43·4	59	25	53·0	31·4	43·7	6·50	2·20	5·59
Portsmouth ...	127144	28·3	93	47	52·5	32·2	44·3	6·84	...	...
Norwich	84023	11·2	67	37	52·0	32·0	43·3	6·28	0·75	1·90
Plymouth	72911	52·3	45	30	53·5	30·5	45·3	7·39	1·49	3·78
Bristol	202950	45·6	171	97	51·4	30·3	42·0	5·56	0·60	1·52
Wolverhampton ...	73389	21·6	60	35	...	...	...	...	...	...
Birmingham ...	377436	44·9	328	162	50·7	29·0	40·5	4·72	0·50	1·27
Leicester	117461	26·7	114	28	50·0	30·5	41·4	5·22	0·16	0·41
Nottingham ...	95025	47·6	57	42	50·3	27·6	40·9	4·94	0·29	0·74
Liverpool	527083	101·2	447	273	51·5	31·4	40·1	4·50	0·17	0·43
Manchester ...	359213	83·7	296	188	49·3	30·0	41·4	5·22	0·30	0·76
Salford	141184	27·3	138	78	50·7	28·5	40·5	4·72	0·30	0·76
Oldham	89796	19·2	76	50	...	...	...	...	...	...
Bradford	179315	24·8	143	82	49·6	31·4	40·9	4·94	0·37	0·94
Leeds	298189	13·8	283	146	51·0	31·0	41·3	5·17	0·22	0·56
Sheffield	282130	14·4	223	118	49·5	23·0	40·8	4·89	0·14	0·36
Hull	140002	38·5	110	63	48·0	29·0	40·2	4·55	0·22	0·56
Sunderland ...	110382	33·4	101	56	50·0	31·0	39·5	4·17	0·36	0·91
Newcastle-on-Tyne	142231	26·5	121	68	...	...	...	...	...	...
Edinburgh	218729	52·2	142	90	49·0	31·0	39·6	4·23	1·06	2·69
Glasgow	555933	92·1	394	251	...	...	...	...	...	...
Dublin	314666	31·3	190	169	56·2	24·8	41·5	5·28	0·17	0·43
Total of 23 Towns in United Kingdm	8144940	38·3	6174	3493	56·2	24·8	41·5	5·28	0·63	1·60

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·57 in. The lowest reading was 28·90 in. at the beginning of the week, and the highest 29·89 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XIV.

WOUNDS.

(*Continued from page* 58).

Incised wounds are those made by *weapons* with cutting edges, more or less sharp, and which are used *not* as a wedge, as in penetrating wounds, but drawn across the surface in the manner of a saw. These injuries are known from the circumstance of their superficial extent being usually greater than their depth. Such wounds bleed more largely than all others in the vast majority of instances. When the edge of the weapon by which they are caused is keen, their margins are sharp, straight, and well defined, though there are some exceptions to this the general rule. Thus it has been observed that however sharp a cutting instrument may have been, if considerable force has been employed, it will be found not only to have cut, but also to have bruised and lacerated the parts divided. Such wounds also *gape* more than others differently produced, though the amount of retraction of their edges will vary according to circumstances. Hence it is that, except perhaps in the bones, the extent of wounds of this class bears a less close relation to the size of the instruments which have inflicted them than in those last considered. In those the state of *contraction* or *relaxation* of *the muscles* at the moment has a considerable influence on the size of the wound, their *traction* facilitating the infliction and augmenting the extent of the wound, while their *relaxation* has the opposite effect; so that the *same* instrument, employed with the *same* degree of force, may produce wounds on the *same* part of the body very different from each other, both in severity and extent. Thus, as remarked by Boyer, a stroke with a sabre above the knee in the flexed state of the limb will produce a very large and deep wound, whereas the extent and gaping of the wound will be comparatively trifling when the stroke has been applied to the thigh in an extended state, and in a relaxed state of its muscles.

An incised flesh-wound *in the direction of the fibres of the muscles* will give rise to *little or no gaping* of the wound, while in the case of the incision being made in a direction immediately across the muscular fibres the wound will appear deeper and will be found to gape more.

In reference to the kind of instrument producing it, it is of importance to attend particularly to *the condition of the edges* of an incised wound, which can only be satisfactorily done while the wound is quite *recent*. Where the instrument is sharp, and where, as is usually the case, it has been drawn across the part, the edges of the wound will be found to be quite straight. On the other hand, when the instrument is blunt, or where, as sometimes happens, it has been pressed, as in penetrating wounds, against the part on the principle of the wedge, without being drawn along it, the edges of the wound will be found to be more or less serrated or irregular.

After the lapse of twenty-four or forty-eight hours, when the wound has not healed by the first intention, it is usually difficult, if not impossible, to say very positively whether it has been the effect of a sharp or a blunt instrument. By this time, however straight originally, the absorbents will have acted on the edges of the incision, and have given it a more or less serrated margin.

Again, it should be known that a blunt body, such as a stick, may in certain circumstances inflict a wound which it *is not* always *possible to distinguish from an ordinary cut with a moderately sharp instrument*. A blow with a stick or other blunt body—especially if round and smooth—when given with a very considerable degree of force and velocity, to a part such as the scalp or the shin, where no mass of soft parts intervenes betwixt the skin and the bone underneath, will produce a wound so straight-edged as to be with difficulty distinguished from a wound with a cutting instrument; while, if the cutting instrument was not a very sharp one, or had not been drawn across the wounded part, but used as a wedge, no means will be left us of determining the point in question. This has been well illustrated by Dr. Taylor.

Thus, on the occasion of a trial at Chelmsford, in 1842, a person was convicted of the crime of inflicting a wound on the face with a knife, and a respectable female, who had been charged as an accessory, was sentenced to a severe punishment for aiding her in the supposed act of stabbing. The proof in this case rested on the evidence of a surgeon, who swore that the wound on the prosecutrix had been produced by a knife, and not by a blow with the fist as was alleged by the defence, though the latter opinion, as appears by the circumstances adduced in the general evidence, was by far the more probable one; the grounds for concluding that any knife had been used resting chiefly on the loose statement of the prosecutrix herself.

In another case, for which we are indebted to the same author, the person was acquitted of a charge of stabbing on the head with a knife, from the difficulty of deciding, from *the appearance of the wound*, by what means it had been caused. In this instance it was proved that the prisoner had a knife in his hand when he struck the blow.—("Manual," page 205.)

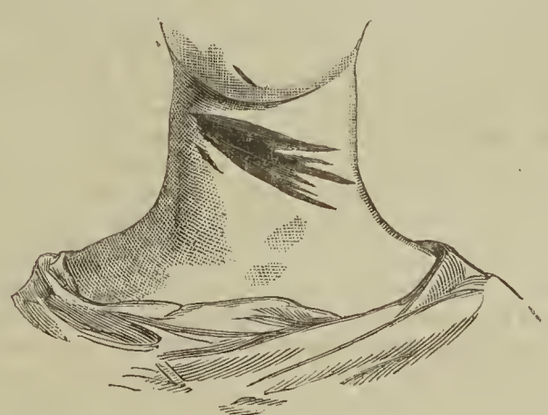
But, what seems more unlikely, a round body may, in striking the head, produce a wound with straight edges. In a private patient in the summer of 1871 a cricket-ball caused a wound across the forehead of a young lady, immediately above, and of the length of, one of the eyebrows, which I could not have distinguished from a wound by a cutting instrument.

In incised wounds three distinct portions may frequently be distinguished pretty accurately:—(1) *The commencement* of the incision; (2) *its termination;* and (3) *its centre*. Thus, the commencement and the termination of the incision differ, the former having only *one point*, the latter *ending in a bifurcation*, or *in several points*. Again, it is not unfrequently to be seen—in cases of cut throat, for instance—that one or two superficial and slight incisions have been made before the person had been able to inflict the principal wound; and these are almost always, though not invariably, found near its commencement. Again, where the parts divided are nearly of uniform consistency, *the deepest part of the wound* is commonly nearer to *the commencement* than to *the termination* of the wound—*i.e.*, nearer to the single-pointed extremity than to its forked one.

Once more, in wounds of this sort, where angular flaps exist in the edges of the incision, *the free angles or points* will be observed to point towards their commencement.

Most of these distinctive characters usually come out best in wounds of the throat, though even in these they are not invariable in their occurrence. They are most apt to fail in suicidal cut throats inflicted with blunt instruments. They come out pretty clearly in the accompanying woodcut taken from a cast of the neck of a woman (Harvey) murdered at Cults, near Aberdeen, in 1854. The wound, judging from the

Fig. 1.



above criteria, had commenced on the right side. The characteristics of such wounds, however, come out even better in Fig. 2, copied from a cast taken from a male suicide, adjudged on the same grounds to have commenced on the left side of the neck.

In judging from the direction of a wound betwixt homicidal and suicidal cut throat, I need scarcely warn you that the decision must be *reversed* in the instances of murder and suicide by *left-handed persons*. Such a suicidal wound was inflicted on herself by an old woman of dissipated habits at Bridge-street, Aberdeen, in 1855.

I have already noticed the indeterminate character that i

occasionally shown by wounds of the throat with blunt instruments by determined suicides (of which we have several casts in the museum). The same want of characteristic appearance

Fig. 2.

may be sometimes met with under opposite circumstances. Thus, Fig. 3 represents the neck of a man who committed suicide with a razor in the police-cells a few years ago.

Fig. 3.

I need scarcely insist on the importance of your attention in cases of this sort being carefully directed to such particulars as the above at the post-mortem when these characteristics are sufficiently well marked and readily distinguishable. In this way the medical jurist may, for instance, be able occasionally to discriminate a case of homicide from one of suicide; or again, to determine the position of the murderer in reference to his victim while inflicting the fatal injury. A little attention will serve to bring out one other point bearing on the diagnosis of incised wounds. Thus, while an incision in *a dead body*, made by drawing a sharp cutting instrument across the part, will usually take a straight course from its commencement to its termination without any deviation or complication, this can scarcely be expected to be the case with homicidal or suicidal wounds in the living. In these cases the principal incision is rarely *the only one;* while the line of the incision will have *diverged* more or less *from* the straight course. Here, the instinctive shrinking of *the suicide*, and still more, the partly voluntary and determined, partly also instinctive, shrinking back from pain of *the murderer's victim*, hinders the first touch of the weapon from doing its intended work, and requires its reapplication. The writhing of the murderer's victim, and the rotation of the assassin's wrist, usually still more than in the infliction of a punctured wound, insures a change of direction to some extent in the line of incision. From these circumstances an incision of any length will be found to have diverged more or less from the straight course, or, what is more frequently the case, it will show some of those spurs or branches previously adverted to, and shown in some of the woodcuts. (*Vide* Figs. 1 and 2.) Further, from the operation of the same causes it will sometimes happen that in an incised, as in a penetrating wound, though there may be but *one incision in the skin, two or more wounds* will be seen to have been made underneath by *the same propulsion of the weapon*. This, as previously explained in the case of a punctured wound, is effected by the weapon having been only partially withdrawn, or been made to change its direction after the outward wound was made, and then plunged into the deeper parts in a new direction, and with new and added force. Again, as pointed out by Caspar, incised wounds—of the throat especially,—though made by one application of the cutting instrument to the part, may leave several distinct superficial incisions. This author adduces an interesting case in illustration, in which the inspectors had made *four* incised wounds out of the one which really existed; the interruptions which had occurred in this single incision being explicable on the supposition that the head had been bent forward at the moment of its infliction.—("Forensic Medicine," vol. i. page 127.)

In *penetrating* wounds we had occasion to remark that the incision through articles of clothing made by the instrument in penetrating these is usually smaller than the weapon. *The reverse* of this is commonly observable after *incised wounds;* as will be readily understood from the direction taken by the weapon.

(*To be continued.*)

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

Lectures III. and IV.

(*Continued from page 697 of last volume.*)

ANOMALIES OF REFRACTION: ASTIGMATISM—DISEASES OF ACCOMMODATION: MUSCULAR ASTHENOPIA, STRABISMUS.

I endeavoured to explain in my first lecture that we understand by refraction the condition of the eyeball—when its accommodation is relaxed—with reference to the formation of images of objects the rays of light proceeding from which are parallel.

I also stated that the emmetropic eye is of such a length that rays of light parallel in the air are after refraction by the dioptric system, brought to a focus on the surface of the layer of rods and cones; that the ametropic eyeball is one the antero-posterior axis of which is either too short or too long, and, as a consequence, parallel rays of light are brought to a focus either behind or in front of the layer of rods and cones. I also pointed out that an eyeball with too short axis is said to be hypermetropic, and that, on the other hand, one with too long axis is called myopic. These two conditions constitute what are known as anomalies of refraction. The first anomaly is called hypermetropia (or far-sight), the second myopia (or short-sight).

I shall also speak in this and the following lecture of "astigmatism," a condition of asymmetry of the cornea which we often find described amongst affections of that structure. It hardly belongs to refraction as I have defined it; but as it exerts considerable influence upon it, and its treatment goes along with that of anomalies of refraction, I have deemed it advisable to introduce it here.

Examination of Refraction.—We can ascertain the state of refraction of an eye either by trial with lenses, or by ophthalmoscopic examination.

The former method is preferable, as it is easier to learn, and gives the more correct results; however, before commencing the trial I would recommend you to take a look with the ophthalmoscope, and so avoid the unnecessary trouble involved in attempting to ascertain the state of refraction in an eye the media of which are opaque, or in which there is retinal or choroidal disease, etc.

Trial with Lenses.—In order to examine the condition of refraction by trial with lenses, we must be provided with a set of trial glasses, spherical and cylindrical, of positive and negative foci; also with the book of Snellen's test-types alluded to in Lecture II. The trial lenses can be obtained from Westley, 27, Old Bond-street; they are sold in suitable boxes. The box of spherical lenses usually contains about forty-eight pairs (twenty-five convex, and twenty-three concave), of positive and

negative focal lengths, varying between two and eighty Paris inches.(a) The focal lengths of the lenses, from Nos. 2 to 5, increase by half-inches only; those from Nos. 5 to 12, by inches; larger gaps being left as the scale ascends.(b)

In the box with the spherical lenses are contained a set of prisms, the surfaces of which are inclined to each other at angles varying from 3° to 18°; the numbers are not consecutive, but gaps are left, there being only twelve prisms in the set. There are also a set of slips of tinted glass; a plain glass, half of which is opaque; a frame for holding the lenses; and three metal discs, one of which is perforated by a small circular opening, another by a slit, the third being quite plain.

The cylindrical lenses are sold in a separate box, containing forty pairs (twenty convex and twenty concave), together with a frame for holding the lenses, and a metal disc perforated by a slit, the size of which can be regulated by a sliding portion. The focal lengths of the cylindrical lenses increase only by an inch, from Nos. 5 to 18, but gaps of increasing breadth occur as the numbers become higher.

We conduct the trial of refraction by lenses thus:—We place our patient (if we have room) at twenty feet from the card, on which are pasted the letters from XX. to CC. We now hold some opaque object in front of one eye, and ascertain what the patient can read with the other; if XX. can be read at twenty feet, and vision is rendered less distinct by the addition of a *convex* lens, and if $1\frac{1}{2}$ can also be easily read at eighteen inches, we may assume that the eye is emmetropic. If the room at our disposal is not twenty feet long, we can use letters of VIII., X., or XV., according to the distance we can command, and obtain results exactly the same as if letters of XX. situated at twenty feet are used.

Now suppose that the eye under examination reads letters of XX. at twenty feet, and is still able to read them when a convex lens is held in front of it; or it may only read XXX. or XL., and by the addition of a convex lens vision may be improved. Again, that only letters of CC., or C., or none, can be read at twenty feet, vision for near and even very small objects being perfect, while it is found that distant vision is improved by a concave lens.

In any of these cases the presence of ametropia is certainly indicated. In the first two the existing anomaly of refraction is probably hypermetropia; in the last, myopia is to be suspected. We must always take care to examine each eye separately, as a considerable difference is frequently found to exist. Occasionally the difference is so great that one eye is found to be hypermetropic and the other myopic.

In order to examine the state of refraction by means of the ophthalmoscope we must employ the direct method of examination. As I stated when speaking of the examination of the erect image, no details of the fundus become plainly visible in emmetropia until the observed eye has been approached to within a distance of two inches or less; if, on the contrary, however, a bloodvessel, portion of the optic disc, or other object situated at the level of the retina, is *plainly* seen, whilst the observer is still separated from the observed eye by some considerable interval, ametropia certainly exists. The question now arises—What is the form of anomaly of refraction present?

This question is answered by ascertaining whether the object seen is viewed in an erect or inverted position: if the former, hypermetropia exists; if the latter, myopia is present.

The position of the image may be ascertained by either of the following methods:—First, having plainly distinguished some object, a bloodvessel for instance, we steadily approach the observed eye, taking care the while to direct the light properly, and to keep the object in view. If, as the observed eye is approached, we find that the object retains its distinctness, or becomes even more plainly visible, the image is an erect one; the retina is situated within the focus of the dioptric system, and the eye is hypermetropic. If, on the contrary, as the observed eye is approached, the object becomes gradually indistinct, and at length fades entirely from view, the image is an inverted one; the retina lies without the focus of the dioptric system, and the eye is myopic.

The second test is: Having obtained a *distinct* image of some object occupying the fundus, we move our head from side to side, the observed eye being meanwhile fixed. Should the object seen move in the same direction as our head, the image is an erect one, and the eye is hypermetropic; if in the contrary direction, the image is inverted, and the eye myopic.

A general idea of the state of refraction may also be obtained by the indirect method of examination. If, when the biconvex lens is held at a distance about equal to its own focal length from the observed eye, the bloodvessels and disc appear large, and if it be also noticed that on withdrawal of the lens the size of the object decreases, the eye is hypermetropic; if the reverse of this obtains, the eye is myopic; if no alteration occur, the eye is emmetropic.

Symptoms, Measurement, and Treatment of Anomalies of Refraction.

I have already pointed out the conditions on which anomalies of refraction depend, together with the methods of ascertaining their presence; it now remains to discuss the symptoms arising from each, the mode of measuring the degree of anomaly present, and its treatment.

Hypermetropia (H).

In hypermetropia, the disturbance of vision is due, as before stated, to a faulty shape of the eyeball, the antero-posterior axis of which is too short, so that the retina lies within the focus of the refractive media. Consequently, adjusting power has constantly to be used in order to form distinct images upon the retina, even of distant objects, the rays of light coming from which are parallel. It is when looking at near objects that the patient experiences the inconvenience due to hypermetropia. He usually sees well enough at a distance. In many cases of hypermetropia, letters of XX. can be read at twenty feet; but in order to do this, the hypermetropic eye must use accommodation in the same manner as does the emmetropic eye only when looking at an object at a short distance; consequently, when a near object is looked at, the rays of light from which are considerably divergent, the tension of accommodation has still to be increased, and soon becomes insufficient to form distinct images on the layer of rods and cones.

The patient usually complains that he cannot read or do near work for any length of time; that after looking for a short period the lines and letters run together, and then disappear. He usually states that if he rubs his eyes, and keeps them shut for a minute, he can continue to read or work for a short time longer, but soon objects become as indistinct as before. He generally states that vision is good for distant objects. When a patient presents himself complaining of the above defects of vision, hypermetropia should always be suspected.

We can measure its degree in the same manner that we can ascertain its existence—both by trial with lenses, and by ophthalmoscopic examination.

We conduct the trial with lenses as follows:—Having placed our patient at a distance of twenty feet from the board containing letters from XX. to CC., or at a distance corresponding to lower numbers if we have not twenty feet at our disposal, we cover one eye and proceed to test the other. If we find that the eye under examination reads XX. at twenty feet, and that the same acuteness of vision is still maintained on the addition of a weak convex lens, we try a stronger and still stronger lens, continuing the trial until we have found the *strongest* lens with which the same letters can still be made out. We can express the degree of hypermetropia, as a fraction, by placing 1 for the numerator and the focal length of this lens for the denominator—*e.g.*, if the eye reads XX. at twenty feet, and can still make out the letters when a convex lens of twenty-four inches focal length is held in front of it, the degree of hypermetropia may be expressed as $\frac{1}{24}$ ($H = \frac{1}{24}$).

But the eye under examination may not read letters of XX. at twenty feet either with or without a convex lens, but only those of XXX. or XL. Should this be the case, there may be some impairment of sensibility of the retina, opacity of the media, or the hypermetropia may be complicated by astigmatism. Nevertheless, the degree of hypermetropia may still be expressed as a fraction by the focal length of the strongest convex lens with which the greatest acuteness of vision is maintained being placed for the denominator, and 1 for the numerator.

In the treatment of hypermetropia our object is to render pencils of rays of light convergent before they reach the cornea, and that so they may be brought to a focus on the retina by the refractive power without accommodation.

Hypermetropia of high degree—for instance, $\frac{1}{12}$ or $\frac{1}{20}$,—may

(a) A Paris inch = $1\frac{1}{8}$ English inch.

(b) It must be remembered that the refractive power of a lens increases in *an inverse ratio* to its focal length. In the trial boxes, 2 is the strongest and 80 the weakest lens.

give rise to disturbance of vision as soon as the child begins to learn to read. Slighter degrees, as $\frac{1}{24}$ or $\frac{1}{30}$, often are not noticed until the eyes are much strained in doing near work. Young adults often first discover the defect when reading hard, or trying the eyes in any way, or if, from any cause, they have got out of health.

If the patient is in bad health, he must be treated on general medical principles. He should be directed to *wear glasses for all near work*, and these should be the *strongest* with which letters of XX. can be read at twenty feet; or if no glasses enable the patient to read XX. at twenty feet, the *strongest* with which distant vision is most acute should be ordered. He should also be recommended to rest the eyes for a time, and especially avoid working with insufficient light. If after having used the glasses for a week or a fortnight the patient experiences the same difficulty in doing near work, stronger ones must be ordered.

In ascertaining the degree of hypermetropia by means of convex glasses, only part of the existing defect becomes apparent, the remainder being masked by accommodation, which the patient is unable entirely to relax. The amount of hypermetropia, which we ascertain by trial with lenses in the manner indicated, we distinguish as *manifest* hypermetropia (H m). The hypermetropia still remaining, but masked by tension of accommodation, is known as *latent* hypermetropia (H l), and becomes *manifest* on artificial paralysis of the accommodative apparatus by means of atropine.

In most cases of hypermetropia it will be found sufficient to neutralise the manifest portion; but should the symptoms return persistently, in spite of the strength of the glasses being increased, the accommodation must be thoroughly paralysed by a strong solution of atropine (four grains to one ounce), and glasses ordered which correct the whole of the hypermetropia, both manifest and latent. Hypermetropic patients often suffer from chronic conjunctivitis, which will get well without further treatment if proper glasses be ordered.

If we wish to measure the degree of hypermetropia by means of the ophthalmoscope, we should use Oldham's instrument; and, having ascertained the existence of hypermetropia, direct the patient to look at some distant object, and thus relax his accommodation as much as possible. We then approach the observed eye till our own cornea is separated from it by an interval of only two inches; then, taking care to relax our own accommodation, revolve the disc (containing convex lens, placed at the back of the ophthalmoscope) until we have ascertained the *strongest* lens through which a *distinct* view of the fundus is still obtained.

The focal length of this lens expresses the degree of hypermetropia; for instance, if it be found that a clear view of the fundus is obtained when + 24 is placed behind the sight-hole of the ophthalmoscope, and that a *stronger* lens renders the image indistinct, H $\frac{1}{24}$ is present.

If the observer be not emmetropic, he must place that lens which corrects his ametropia in the clip purposely fixed to the instrument before commencing the examination.

Rays of light emerging from the hypermetropic eye are divergent, and the strongest lens with which an emmetropic eye with accommodation relaxed can make out clearly the details of its fundus is that which gives them a parallel direction, and renders the hypermetropic eye artificially emmetropic.

Innsbrück University.—Dr. Prokop von Rokitansky, one of the sons of the famous Vienna pathological professor, has been appointed Professor of Medicine at Innsbrück.

Treatment of Ephelides.—Prof. Hardy observes that the pigment which constitutes these disappears under the influence of a slight inflammation of the skin, and, in order to produce this, he recommends the following lotion:—Corrosive sublimate half a part, alcohol q. s. to dissolve this, distilled water 125 parts, sulphate of zinc and acetate of lead, of each 2 parts. This lotion may be used of this strength, or diluted with water, according to the effect it produces. Generally after its employment a slight desquamation is observed, with a more or less complete disappearance of the ephelides. Prof. Hardy also treats them by local douches of sulphurous waters, such as those of Barèges and Bagnères-de-Luchon. Alkaline lotions and douches of borate or subcarbonate of soda may also be employed. Frequently, however, the cure is but apparent, the spots reappearing with great tenacity when the local measures are no longer applied.—*Progrès Méd.*, Jan. 6.

ORIGINAL COMMUNICATIONS.

CASES ILLUSTRATING

SOME OF THE LESS FREQUENT FORMS OF KERATITIS AND CYCLITIS;

WITH SHORT REMARKS.

By EDWARD NETTLESHIP, F.R.C.S.,
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(*Concluded from page* 63.)

Group IV. contains cases of "episcleritis," a disease which in some instances is decidedly mixed in character, and appears to have some alliances with the cases already given. The term is applied to a case in which a patch—usually rather large—of the white part of the eyeball becomes much congested, the tissues beneath the conjunctiva of the affected part becoming more or less thickened. It is generally placed in the ciliary region, but may be seen much further from the cornea. In typical cases the swelling is greatest at a little distance from the edge of the cornea, but sometimes it is complicated with pustules on the corneal border. The swelling generally forms a broad uniform mound, the centre being the most prominent part and sometimes pointing slightly, as if there were pus beneath. Although a rusty yellowish tint is sometimes perceptible at the focus of the disease, I do not know that circumscribed suppuration ever takes place, or that the tissues ever give way and ulcerate. The patch of disease is usually single, and in most cases occurs on a part of the eye which is wholly or partly uncovered by the lids. In the cases which I have seen there has been comparatively little tendency to recur; but this liability is said, as a rule, to be strongly marked. In two (Cases 17 and 22) a previous attack had occurred, and in two (Cases 14 and 15) the disease relapsed while under observation. The attacks generally last several weeks, and sometimes several months—*c.g.*, Case 15, in an old man; and Case 22, which was complicated with phlyctenulæ and ulceration of cornea. When the deposit has been absorbed, a patch or patches of dusky, apparently thinned, sclerotic are often seen in its place, but I believe some cases recover without leaving any trace; and it is seldom that any protrusion of the thinned patches takes place as in the former group of cases. The pain is usually severe.

Among the following nine cases, the disease was complicated with iritis in Case 14, while in Case 21 iritis was the first, and perhaps throughout the main element, the episcleritis being secondary and slight. In Case 15 the iris acted badly, but the patient's advanced age probably accounted for this.

With regard to diathesis and state of health there seems to have been no special peculiarity in any of the cases, excepting Case 14, who was rheumatic and strumous, and Case 22, who was probably strumous and had had syphilis several years before, his father being very gouty. The patients varied in age from nineteen to seventy-two. Seven were men and two were women, but in one of the latter (Case 21) the disease was chiefly iritis. The patch of disease was situated partly or wholly in the palpebral fissure in seven cases, being entirely concealed by the lids in only two (Cases 15 and 22).

Some of the foregoing facts seem to point to the local influence of cold as the most probable exciting cause of episcleritis; especially its disregard of age, its much greater frequency in men than in women, and the situation of the disease—usually on a more or less unprotected part of the eye. A majority of the patients follow out-door occupations (Cases 16, 17, 18, 20, 22); and it is interesting that the only woman who presented the disease in a typical form was a street-hawker, and therefore much exposed to changes of weather. The treatment adopted varied much, and the only means followed by anything like uniformity of result was repeated blistering (Cases 18, 20, and 22), but in some others blisters did not relieve.

Case 14.—*Relapsing Localised Episcleritis with Iritis in One Eye of a Strumous Lad whose Father suffers from True Gout—Patient not Rheumatic or Gouty.*

Wm. C., aged nineteen, a thick-lipped, strumous-looking lad admitted September 4, 1875, with a single deeply-seated spot of unusually yellow deposit beneath the conjunctiva at the outer edge of right cornea; it looked like a pustule. The eye had been bad for a week. The yellow oxide ointment was

ordered. Four days later there was more pain, and the deposit was, if anything, larger, causing a gradual mound-like elevation, and implicating the border of the cornea itself; there was also slight haze of the centre of the cornea, and atropine disclosed two iritic tags adherent by white dots of lymph to the lens-capsule; they were situated at the outer part of the pupil, corresponding to the episcleral deposit. Atropine and iodide of potassium now ordered, and the yellow ointment omitted. He quickly improved, and ceased attending for a month after October 2. Three weeks later a relapse occurred, and when the eye had again been inflamed a week he came back to the hospital; there was much congestion, and the same uniform mound of thickening, but this had extended. Much pain. No ulceration. He came once more, but the state is not noted.

There was no evidence of syphilis, acquired or inherited, and he denied quite frankly ever having had intercourse. His father, a publican, aged forty-eight, had for some time been subject to characteristic attacks of gout in his right foot and knee, and none elsewhere. The patient himself had had no arthritic symptoms at all, nor did he know of any in his other relatives.

In September, 1876, he wrote that he had remained well.

Case 15.—*Localised Episcleritis in One Eye of an Old Man; Relapsing while under care—Imperfect Action of Pupil to Atropine (?) from Slight Iritis—Much Pain, Patches of Thinned Sclerotic remaining—No Cause found.*

John H., a rather feeble old man, aged seventy-two, a printer, was under care from the end of October, 1874, to February, 1875 (four months), with well-marked episcleritis of the right eye, limited to the upper part. The swelling of sub-conjunctival tissue was moderate, the congestion of the overlying conjunctiva extreme, the pain intense (especially at night), and the eye tender to the touch. There was never any positive iritis, but the pupil dilated imperfectly with atropine, and was somewhat oval. On several occasions it was thought that tension was slightly increased. The condition had been gradually coming on for several weeks, and had been at a climax for a fortnight before admission.

The progress of the case was slow, and in January there was a relapse of general conjunctival congestion after he had omitted atropine for three weeks. This passed off, and on February 17 the eye was free from any active symptoms, the seat of the former inflammation being marked by several patches of thinned sclerotic—some of them separate and round, others confluent, but all of them quite flat. Vision not impaired at all.

The treatment at first was by blisters and atropine (six blisters in the first two weeks). The pain and congestion were partly relieved. Atropine continued. A month after admission, mercury (grey powder), with a little Dover's powder and bitter mixture, were added. Under this he rapidly improved without being salivated, and on December 12 mercury was discontinued. The relapse in January was treated by occasional blisters, with iodide of potassium and bichloride of mercury without atropine. Thus it would seem that the most definite improvement took place on both occasions while he was taking mercury. His own impression was that blisters did not relieve the pain.

He had never had rheumatism, and denied ever having been exposed to the risk of syphilis, and I did not succeed in assigning any cause for the attack. He was not subject to headache, but on one occasion, near the end of his attendance, he had for a few days severe pain on the left side of his head (the side opposite to the affected eye)—a dull heavy pain, coming on, like the pain from the inflamed eye, at night, and keeping him awake. It occurred, however, during the relapse, and was probably connected with it.

Case 16.—*Localised Episcleritis in One Eye of a Middle-aged Woman—Much Pain—Slight Inflammation of other Eye.*

Anne W., forty, a hawker, attended in September, 1874, with episcleritis of the right eye, the upper and inner part of the ciliary region being much congested and somewhat swollen, and looking almost as if "pointing" from suppuration. There was great pain. The eye had been bad for five weeks, and the other had at first been slightly inflamed. She denied being rheumatic. She came only twice, and there are no notes of progress.

Case 17.—*Localised Episcleritis without Iritis in One Eye of a Young Man—Much Pain—Previous Attack in same Situation.*

Henry C., thirty, labourer, admitted September 19, 1874, with a patch of episcleritis at outer part of right eye; slight characteristic subconjunctival swelling, with intense conjunctival congestion over it. It was very painful, especially at night. It had been inflamed three weeks. There was no iritis, and he could read No. 1 Jäger with the eye. He was not rheumatic. He only came once, blisters and atropine being ordered. I have failed to trace him since. He said that four years previously he had had a similar attack on the same part of the same eye.

Case 18.—*Slight Localised Episcleritis of One Eye—No Iritis—Considerable Pain—Patient a Middle-aged Man.*

William W., forty-six, omnibus-driver, came on May 12, 1875, with a patch of congestion at the outer part of the left eye. Pupil active; scarcely any thickening beneath the inflamed patch. Patient complained of a gnawing pain. T.n. The eye had been inflamed three weeks. There was a little discharge. He attended for a fortnight, using the yellow ointment and three blisters during that time, with the result that the pain ceased, but that the congestion had rather increased at his last visit. I have not been able to see him since.

Case 19.—*Patches of Thinned Sclerotic, probably left by a Former Attack of Episcleritis, in One Eye, but no History of Attack.*

John S., fifty-nine, a pie-shopman, was admitted with slight conjunctivitis of his right eye on September 29, 1875. On examining the eye I found several small patches of thinned sclerotic at the upper inner segment of the ciliary region. They were well-defined, dusky, and quite flat, exactly such as are left after episcleritis, but he denied all knowledge of any previous inflammatory attack.

Case 20.—*Local Episcleritis (slight), with History of General Inflammation at first, in One Eye of a Man—No Iritis, but Accommodation Painful.*

Thos. F., thirty-three, carpenter, under care for a patch of congestion, with slight thickening of conjunctiva and subconjunctival tissues at inner part of right eye (episcleritis), in February, 1876. It had, he said, been present for six weeks, and the whole eye had been bloodshot at first. Pupil active; some photophobia. V. 6 J. badly, the act of accommodation appearing to be painful and difficult. The eye had never before been inflamed or even irritable. In four days, after the use of the yellow ointment and four blisters, it was very nearly well, but he continued to use the ointment for three weeks. The other eye was shrunken and puckered from a wound thirteen years before; it had never been in the least irritable, and there seemed no reason for supposing the episcleritis of the right eye to be in any way connected with the state of this eye.

Case 21.—*Iritis in One Eye, with Corneal Haze, and afterwards Slight Localised Episcleritis—Patient a Young Woman.*

Mary W., thirty-two, unmarried, was under care from June, 1874, to January, 1875, for iritis, with complications in the right eye only. At first it was iritis only, but in September there was some central haze of cornea, which had nearly, but not quite, disappeared by the middle of November. At the latter date there were no active symptoms, but the eye remained liable to attacks of pain and redness at times. A fortnight later (December 2) there was slight episcleritis of the upper and outer segment. On January, 13, 1875, all congestion had disappeared, and the cornea was quite clear. The notes are defective as regards history and cause, and the interest of the case in its imperfect state consists in its being an instance of unsymmetrical iritis with a marked tendency to implication of the ciliary region of the sclerotic. She took mercury (grey powder) during a considerable part of the time, and iodide for the remainder. The final episcleral attack got well under grey powder and blisters, without atropine. In September, 1876, she wrote that she had had no relapse.

Case 22.—*Relapsing Phlyctenular Keratitis, with Episcleritis—No Iritis—Patient Strumous and Rheumatic, and has had Syphilis.*

John R., aged twenty-four, a labourer, admitted January 28, 1875. His eyes had been bad on and off for two years; the present attack had lasted from two to three months. The character of the disease approached very nearly to ordinary phlyctenular keratitis. In the left eye there was some slight ulceration at outer part, with vascularity of the adjacent cornea; in the right, a patch of episcleritis below the lower border of the cornea. There was no iritis. The case was troublesome, and remained under care three months, being sometimes better, and sometimes worse. Blistering repeatedly

seemed the only measure followed by distinct benefit; atropine did no good; mercury was not tried internally.

The case differed from simple phlyctenular ulceration of cornea in its more stationary character, and in the presence of some localised episcleral inflammation.

Patient was strumous, and had had abscesses in the neck, and one formed while under care. He was also very subject, every winter, to rheumatism in the shoulder, and neuralgia in the head. Five years previously he had had syphilis fully.

ON REDUPLICATION OF THE CARDIAC SOUNDS.(a)

By JAMES BARR, M.B., L.R.C.S. Edin.

(*Concluded from page* 61.)

RETURNING to Dr. Johnson's paper, I think that "a simultaneous equal, or nearly equal, impediment in the pulmonary and systemic vessels" must be an event of rare occurrence. When a disturbance in the normal balance of the circulation takes place, it is very unlikely that the impediments would be general and *equal*, and just as improbable that the obstructions should be met by equivalent compensations of hypertrophy and dilatation of the heart's cavities.

"Reduplication of the first sound over the base of the heart in some cases of simple dilatation of the heart's cavities, without valvular disease or evidence of arterial obstruction, either pulmonary or systemic," is not, as Dr. Johnson says, "inconsistent with the theory of asynchronous ventricular contraction," but it is somewhat inconsistent with his potent cause of reduplication (viz., high tension), and his statement made two paragraphs before that—"There is one feature which is common to all these cases [Bright's disease and emphysema], and that is an impeded circulation, either pulmonary or systemic." In short, not only are these cases not incompatible with the asynchronous theory, but they are those in which there would presumably be, in the words of Dr. Hayden, "derangement of synchroniety in the influx of nerve-force, or of muscular irritability in the walls of the heart."

There is another argument advanced by Dr. Johnson, which he thinks strongly supports his theory—viz., "The part of the double sound which is lost as we pass from base to apex is always the first or presystolic part." He acknowledges that this comports equally well with the asynchronous theory in cases of Bright's disease, but he says, "When, in consequence of emphysema with pulmonary obstruction, the first sound is double near the base of the heart, and single at the left apex, it is still the *first* division of the double sound which disappears at the apex; yet, if the want of synchronism of the ventricular systole were the cause of the phenomena, the absent [I suppose he means *present*, because, as the word stands, from his point of view, it supports the theory which he is trying to dispute] sound would be that of the earlier contracting left ventricle, over whose apex the stethoscope is applied."

Of course I can have no idea of the real nature of the cases on which Dr. Johnson bases his statements, but I may be allowed to suggest that what he calls the "left apex" is in reality the right apex; certainly where you have got a hypertrophied and dilated right ventricle due to emphysema of the lungs, without any corresponding affection of the left ventricle, the apex-beat is almost invariably caused by the former. The apex-beat is nothing more nor less than that part of the cardiac globe which during contraction comes into closest proximity with the chest-walls. When you have got dilated hypertrophy of the right ventricle, and a normal left, then the latter is pushed away from the parietes, and takes no part in the causation of the apex-beat.

My experience of reduplication of the first sound has been chiefly limited to that occurring in Bright's disease; hence I am not able to speak with authority in the class of cases to which Dr. Johnson refers, but I think the first element is not the one so invariably lost on approaching the apex as he would have us believe. In Case 32, page 577 of Dr. Hayden's book, the first element "was dull and soft, whilst the latter, which immediately succeeded, was sharp and 'valvular' in character. The former, by its rhythm, might be mistaken for a presystolic murmur;" but, unfortunately for Dr. Johnson's theory, it "coincided with the cardiac impulse."

A remarkable example of reduplication of the first sound is recorded by Dr. Sibson in the *Lancet* of April 11, 1874. At one time, "on applying one end of the double stethoscope on the lower end of the sternum, and the other on the apex, the first sound was double, though it was single when applied separately over each of these points. The first of the two sounds was loudest over the right ventricle, the second of them was loudest over the apex." Three weeks later the reverse of this occurred, so that the second element was then loudest over the right ventricle, and the first loudest over the left ventricle.

Having dealt with Dr. Johnson's arguments in detail, we will now turn to Dr. Sibson,(b) with whom I agree that the reduplication is due to asynchronism, but whose explanation, that in the cases of Bright's disease the asynchronism arises from a more tardy and prolonged contraction of the left than the right ventricle, I cannot adopt. If that were the case, we might then truly expect, with Dr. Johnson, to find the second sound invariably reduplicated in these cases; or if the absence of that phenomenon could be accounted for by the much greater strain on the aorta than the pulmonary artery, enabling the former to overtake the latter in producing tension of its valves, then we would expect that, normally, the high tension of the aorta would produce premature closure of its valves, with consequent reduplication of the second sound.

Hitherto high arterial tension has been more or less looked upon as the direct and sole cause of reduplication of the first sound; whereas, I believe that it is not the immediate, but only a remote agent. It is not the high tension *per se* which causes the reduplication, but it is the effect which it produces in the capacities of the ventricles, and its interference with the uniform distribution of the blood. That ventricle which is best supplied with blood, and which best retains its muscular irritability, initiates contraction, first raises its intra-ventricular pressure to its height, and tensely closes its auriculo-ventricular valve, which gives rise to the first element of the sound. It does not necessarily follow that the ventricle which begins will first end contraction, for the length of the period of systole varies. The shorter the systole, the greater the hypertrophy, relatively to the mass to be moved and to the obstruction in front.

In cases of Bright's disease the normal right ventricle retains its muscular irritability better than the abnormal left; and its normal-sized cavity is relatively better supplied with blood than the somewhat dilated left. Consequently, in the case of the right, the inhibitory action of the vagus in preventing contraction is sooner overcome; but when the left ventricle begins contraction, its systole is not tardy and prolonged, but quick and powerful. This, taken in conjunction with the extra strain in the aorta, permits recoil of that artery to take place as soon as that of the pulmonary; hence there is no reduplication of the second sound. Such is the interpretation of Dr. Sibson's case (before alluded to) during the stage when the first element was referable to the right, and the second to the left ventricle.

Some may properly say that, granting the above interpretation, how then will you explain the condition three weeks later? At that time "the radial was less tense than before; the second sound over the aorta was the same as before, and was of the same intensity over the conus arteriosus as over the aorta. The doubling of the first sound had again spread over the left ventricle and the great vessels. The second first sound over the right ventricle and the pulmonary artery was louder; the first first sound was louder over the left ventricle and the aorta. So that the second first sound was the voice of the right ventricle and the pulmonary artery; the first first sound was produced by the left ventricle and the aorta."

My answer to this is, that at this later date the effective force of the left ventricle began to fail, the pulmonic circuit became engorged, as shown by the second sound being "of the *same intensity ever the conus arteriosus as over the aorta*." Consequently, during diastole the left ventricle was quickly filled, owing to the great pulmonary pressure, while at the same time the right side was not freely supplied, owing to the capillary obstruction in the systemic system. Thus the balance of blood-pressure was in favour of the left, and it was stimulated to commence contraction before the right. The reason why the left did not complete its systole now in a shorter time than the right, as it is assumed to have previously done, was that the compensatory nutrition had begun to fail. So that, in proportion to the amount of work, it was relatively

(a) Read before the Liverpool Medical Society.

(b) The lamented death of Dr. Sibson has occurred since the above was written.

not so powerful as the right, consequently its contraction was more prolonged, and what it had lost in power it gained in time.

The verity of the above explanation is supported by an experiment which was tried a week later. "The patient was put under the influence of nitrite of amyl, and the doubling of the first sound was less marked, the second less metallic, and the sphygmographic tracing lost the characteristic broad form of tension, and became pointed at the top." This is just what we would expect to occur when a more equal distribution of the blood-pressure in the pulmonic and systemic systems was established. The dilatation of the arterioles would increase the quantity of blood in the systemic circuit, would give a freedom to the flow, and an additional supply to the right ventricle, which would cause it to commence its contraction earlier. Again, the greater quantity of blood in the systemic system would lessen that in the pulmonic, and thus, the pressure in the latter being diminished, the left ventricle would not be so quickly filled with blood, and hence the commencement of its contraction would be retarded.

This is analogous to the effect which inspiration has in restoring the disturbed balance of the circulation which exists at the end of expiration, and in so abolishing the double first sound, which can then be detected.

As I have ascribed reduplication of the first sound to asynchronism in the initial stage of ventricular contraction, so I believe reduplication of the second sound to be due to asynchronism at the end of contraction, and in the consecutive reaction of the aorta and pulmonary artery, with the tension of their respective valves. One of the most marked examples of double second sound with which I have met, occurred during the early stage of convalescence after a severe attack of typhlitis. In this case the second element was unmistakably aortic; the pulse was infrequent, easily compressed, and the individual beats were long. Here the asynchronism arose from the prolonged contraction of an exhausted left ventricle, and as it recovered its power the doubling of the sound was abolished.

In considering reduplication of the cardiac sounds, the fact should not be lost sight of, that one or other, or both ventricles, are sometimes converted into a species of blood-reservoirs, through dilatation and failure in the muscular force, so that only part of their blood is expelled during systole. This may be a temporary, and is not an infrequent condition, as shown by Claude Bernard, who believes it to be due to distension, arising from the action of the *depressor nerve* of the heart; or it may be a permanent state, in which case the prognosis must be very grave. A very good example of the latter, I believe, will be found in Case 88, page 884 of Dr. Hayden's work. In this instance there were aortic incompetency, with great dilatation and hypertrophy of the left ventricle, a "pre-diastolic" aortic murmur, and a normal right ventricle. I think there can be no doubt but that this was a case of pseudo-reduplication, the primary or aortic element being replaced by a "pre-diastolic" murmur. Had the ventricle emptied itself, the murmur must have been markedly "post-diastolic," but its systole was only partial; hence, regurgitation took place into the distended ventricle before the recoil of the pulmonary artery.(c)

I have previously shown that the primal elements of normal reduplications are connected with the right heart; but in morbid states, owing to the many varied conditions, the primal elements are in some cases associated with the right and in others with the left. I have not here time to lay down rules for determining in every case with which sides of the heart the respective elements are connected, or for explaining these associations. Usually it is a matter of no great clinical difficulty to settle, with the aid of the double stethoscope, the site of maximum intensity of each of the elements of double sounds; and having concluded to which side of the heart they respectively belong, you should inquire into the causes of the asynchronism, by attending to all the circumstances of each individual case, and by considering those conditions which hasten or retard the commencement of systole on the one hand, and those which shorten or protract ventricular contraction on the other. By this wholesome study an intimate knowledge of the state of the heart will be obtained, which cannot fail to be of benefit both to the professional man and to his patient.

(c) See, also, Case 1, recorded by the author in the *Edinburgh Medical Journal*, December, 1876, pages 526-7.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GREAT NORTHERN HOSPITAL.

CASES OF RHEUMATIC FEVER TREATED BY SALICIN AND SALICYLIC ACID.

[For the notes of these cases we are indebted to Mr. Carter, Senior House-Surgeon.]

(Under the care of Dr. CHOLMELEY.)

Case 1.—Susannah L., aged nineteen. Had had two previous attacks of rheumatic fever—one when ten, the other when seventeen years of age,—had a distinct systolic cardiac bruit, heard loudest at the apex.

Present Attack.—Took to her bed on November 9. Had shiverings and pains in various joints, especially in the knees and wrists. When admitted (November 13, 1876), temperature was found to be 102·2°, going up to 103·6° at night. There was much sweating, and the knees and wrists were swollen and painful. Salicylic acid ten grains, sodæ bicarb. ten grains, ordered every three hours. The morning temperature on the 14th was 102·7°; evening 103°. On the morning of the 15th temperature fell to 100·4°, rising that evening to 102·4°. By the 17th the temperature was normal, and she was free from pain. She was ordered quinine on the 20th, and rapidly gained strength.

(Under the care of Dr. CHOLMELEY.)

Case 2.—Robert B., admitted October 31. A tall, powerfully-built man, a ticket-collector on the Metropolitan Railway, involving much exposure to draughts. On admission, feet, ankles, left arm and hand, much swollen and very painful; face flushed; skin perspiring; complaining of great thirst. Had been complaining of headache, loss of appetite, and thirst for about a fortnight, and had been in bed for ten days before admission, vomiting and shivering fits supervening at that time. About eight years ago was laid up for three months with rheumatic fever; and a brother of his died from rheumatic fever. Temperature on admission 102·2°. For seven days the temperature varied from 101° to 102·6°. On November 7 it fell to 99°, and became normal on November 10 (ten days after admission). He was first treated with salicin, ten grains every two hours. This was changed to salicylic acid, ten grains every two hours, on November 3; and salicin, ten grains every three hours, tried again on November 6. Expressed himself as feeling easier immediately after commencement of treatment. On November 4 (the fourth day after admission) he described his pains as slight. Had a relapse next day, but was free from pain by November 7. Left his bed on November 18, and made an uninterrupted recovery.

(Under the care of Dr. LEARED.)

Case 3.—Emma S., aged thirty, admitted November 14. Severe pains came on in left thigh on November 10. By next day both knees, ankles, and legs were affected, being swollen, red, and tender. Says she had rheumatic fever when she was eight years old; laid up for six months then. Has occasionally suffered from rheumatic pains since. Temperature 100·6° on admission. Ordered salicylic acid ten grains, sodæ bicarb. ten grains, every four hours. In this case the effect was very marked. After taking three or four doses of the medicine the pains entirely ceased, and the temperature was normal by the following day. She had a relapse on November 24, which necessitated a return to the salicylic acid, with similar benefit.

THE LONDON HOSPITAL.

CASES OF RHEUMATIC FEVER TREATED BY SALICYLIC ACID AND SALICYLATE OF SODA.

(Under the care of Dr. LANGDON DOWN and Dr. WOODMAN.)

The following summaries of cases and conclusions therefrom are by Mr. H. E. Price, B.Sc., House-Physician of the London Hospital. These patients were treated almost on a uniform plan—viz., fifteen grains of either salicylic acid or salicylate of soda (mostly the latter) were given every hour for six hours consecutively. Afterwards the dose was repeated every four hours until the pain and temperature became normal.

Mr. Price found in some cases, when the salicylate of soda

had been discontinued and iron given, that a relapse occurred. He therefore subsequently continued the administration of salicylate of soda until the patients left the hospital, and he then found that no relapse occurred. In from twelve to forty-eight hours generally the pains were markedly diminished, and the temperature reduced.

With respect to heart affection, in one case (Case 7) a permanent cardiac murmur developed whilst under treatment. Another patient (Case 2) was admitted with a systolic, and went out with a presystolic murmur in addition. The other cases did not manifest any increase in heart mischief. Mr. Price's cases, though very valuable, would have been more so if they had been first attacks.

With respect to the urine in cases where salicylic acid was given, Mr. Price found the specific gravity generally raised—in one case to 1034. On boiling with Fehling's solution, there was a very slight but tardy deposit of red oxide.

As to the toxic effects, especially of salicylic acid, dull headache, deafness, and singing in the ears were commonly noticed. Three female patients did not complain of headache, said in fact they were free from pain and were comfortable; but each had a flushed, anxious face, quickened respiration, and jerky speech, with a mental hebetude not unlike that of typhus. In one woman of neurotic temperament there was active delirium; in one male patient, also, there was delirium. Nausea was frequent with salicylic acid, and occasional with salicylate of soda. Four cases treated by salicylic acid were unsatisfactory.

1. A case of acute rheumatism with pericarditis, endocarditis, and pneumonia, in which the temperature, in spite of salicylic acid, quinine, and cold spongings, remained elevated for many days.

2. A case of subacute rheumatism where the salicylic acid was very nauseating, caused vomiting after each dose, and had to be discontinued.

3. A case of rheumatoid arthritis associated with phthisical changes in the lungs. The pains ceased; the temperature was reduced at first, but not subsequently.

In another case of rheumatoid arthritis, where the pains were subacute and erratic, the drug seemed of no benefit.

It is much to be desired that further trials of salicylate of soda should be made in such subacute and chronic rheumatism. Dr. Pollock, at the Clinical Society debate, referred to one case in which most marked benefit ensued.

Reports.

Case 1.—H. D., male, aged thirty-four, had hypertrophied left ventricle and mitral insufficiency from previous rheumatism. This is the seventh attack. Pains subacute on the day of admission (the fifth day of the attack). Temperature 101·5°. On the seventh day of attack, after twelve doses of fifteen grains each of salicylic acid, he was entirely free from pains, and temperature was normal. The pains did not return, the temperature did not exceed 99°, and on the ninth day after admission (the thirteenth of the disease) he was able to leave his bed.

Case 2.—J. G., female, aged seventeen. Chorea two years ago. She states that the present is the first attack of rheumatism. She has a systolic murmur. Pains on the day of admission (the seventh day of the disease) severe. Temperature 101·5°. On the ninth day of the disease "in no pain to speak of." On the tenth, and subsequently, the temperature normal; and on the twelfth no pains at all. On the thirteenth (five days after admission) was able to get up, and had no relapse. The medicine (salicylate of soda) caused slight nausea. In addition to the systolic murmur she left the hospital with a presystolic one.

Case 3.—W. T., male, aged sixteen. Second attack. Pains on the day of admission (the sixth day of the disease) very severe. Temperature 104°. On the eighth day of the disease, after eleven doses of the salicylate of soda, pains much less severe, and temperature 99·4°. On the tenth (four days after admission) no pains at all; slight tinnitus aurium. Temperature 98°. The pains did not return, the temperature remained between 98° and 99°, and on the fifteenth day (nine days after admission) patient was able to get up. The salicylate of soda was then discontinued, and iron administered; and six days subsequently there was a slight relapse, but after three doses of the salicylate the pains again disappeared.

Case 4.—W. C., male, aged fourteen. Second attack. Mitral regurgitant murmur present on admission and discharge. Pains on the day of admission (the seventh of the disease) tolerably severe; temperature 100°. On the tenth day of the disease, temperature normal and pains less severe. On the twelfth day, pains entirely absent; and on the sixteenth day (nine days after admission) was able to get up. He continued taking the salicylate of soda the whole of the time he was in the hospital, and had no relapse.

Case 5.—M. B., female, aged fifteen. Second attack. Pains on the day of admission (the seventh day of the disease) tolerably severe; temperature 101·8°. On the tenth day of the disease, temperature normal and pains absent. At first she had salicylic acid, but this caused vomiting, and she was then ordered salicylate of soda, which she tolerated. Although she had no return of the pains, she was not allowed to get up for a long time, on account of a rough sound at the base of the heart, which persisted until she left the hospital. It was at first suspected to be due to recent pericarditis; but in the absence of symptoms, and the temperature being normal, it was considered to be the remains of some old inflammation.

Case 6.—M. G., female, aged eighteen. First attack. Pains on admission (the fifteenth day of the disease) severe; temperature 101°; after three doses, temperature normal and pains much less severe. Pains absent on the nineteenth day. Slight deafness and singing in the ears present at first. On the twenty-third day (seven days after admission) was able to get up. She continued taking salicylate of soda during the whole time she remained in the hospital, and had no relapse.

Case 7.—G. M., male, aged twenty-one. Second attack. Pains on admission (the third day of the disease) severe. Temperature 104·2°. Salicylate of soda commenced on the fifth day. On the sixth day pains absent. On the seventh day, temperature normal; ascended to 100° on the eighth day, afterwards never above 99·4°; permanently normal on the sixteenth day. A systolic apex murmur was noticed on the eleventh day, and this continued.

Case 8.—F. H., male, aged twenty. Third attack. Pains on admission (the second day of the disease) very acute. Temperature 101·6°. On the fourth day pains were no better—new joints were affected. Temperature still elevated (102·6°). Salicylic acid ordered. After four doses, each of fifteen grains, temperature came down to 98·4°. On the fifth day, pains absent. A rough superficial sound heard at base of heart. Temperature—morning, 101·2°; evening, 100·2°. On the seventh day temperature became normal, and rough sound disappeared. On the twelfth day (ten days after admission) was able to get up, having had no return of pains. Iron was then administered, and some days after patient had a relapse, which, under salicylic acid again, in three days was subdued.

Case 9.—W. S., aged fifteen. First attack. Mitral systolic murmur on admission and discharge. Temperature on admission (the fifth day of the disease), 101·6°. Pains severe. After six doses of fifteen grains each of salicylic acid, pains ceased. On the seventh day of the disease (three days after admission), temperature became normal.

STANLEY HOSPITAL, LIVERPOOL.

CEREBRAL HÆMORRHAGE AND COMPRESSION WITHOUT FRACTURE—TREPHINING—DEATH.

(Under the care of MR. RUSHTON PARKER.)

A COTTON-PORTER, aged thirty-six, fell from a height while stowing cotton in a warehouse, and was carried insensible to the hospital shortly after the accident—on November 18, 1876. He lay perfectly flaccid, breathing heavily, and at first without stertor, but so profoundly comatose as to be incapable of all muscular movement in response to tickling the feet and pulling the hair. The pupils were equal, insensible, and moderately dilated; the pulse was steady, full, and fairly strong; and the face neither pale nor livid. He vomited twice after being put to bed, and within about an hour his breathing stopped on three occasions for two or three minutes at a time, during which his face became intensely cyanotic, but the pulse never flagged. After a few stertorous and sighing respirations he each time recovered regular breathing. No fracture or bruise nor any external indication of injury could be detected; all that appeared evident under the circumstances was the tolerable certainty of intracranial hæmorrhage, the fatality of which could only be averted by trephining. The head was shaved, and, as there was no clue to the seat of hæmorrhage, the right side of the skull, being uppermost, was trephined about two inches above the ear. No clot was reached, but a portion of brain protruded after division of the dura mater. The cerebral pulsation was very powerful, reminding one of a large aneurism. The left side was then trephined above and in front of the ear, and on removing the piece of bone, what appeared to be black

clot could be seen through the dura mater, which was then opened, and an ounce or an ounce and a half of clot escaped. The trephine was about three-quarters of an inch wide, and although the surface of the brain on the left side bled freely, this ceased in about half an hour under the light pressure of a piece of sponge. The operation was performed within two hours of the accident, and he lived three hours more, during which, though he never regained consciousness, his breathing was not interrupted until he quietly died.

The next day the head was opened, and it was found that the hæmorrhage extended over an area corresponding to the whole of the temporal fossa; it was limited to the left side, on the surface of the hemisphere, and under the cerebral arachnoid. The brain was much lacerated at the site of the clot, but not otherwise injured by the accident, and under the occipital scalp a diffuse ecchymosis was found.

Remarks.—This case is an example, it is thought, of a class of head injuries from which recovery is hopeless in the absence of prompt surgical aid, and to which the operation of experimental trephining is peculiarly adapted. They are, perhaps, more easily selected when actually confronted than when described on paper, and for that reason all attempt at their discussion is omitted here; but a retrospect of this case, and of others clinically allied, points pretty clearly to the importance of doing early what has to be done at all. Though the trephining here did no available good, it certainly did no harm; and if this step could have been taken an hour or two earlier, it is still possible that its value could have been more clearly demonstrated, if even life could not have been saved.

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Medical Times and Gazette.

SATURDAY, JANUARY 27, 1877.

PROFESSOR TYNDALL ON GERMS.

It is a year ago since we published a brief account of some experiments by Professor Tyndall in this most important field of scientific research, and we then endeavoured to point out some of the possible bearings of his work, and expressed the belief that further experiment would tend not only to confirm what he had done, but to extend its interest and value. We have now to record fresh experiments and fresh deductions from them, and they are, if possible, more interesting and more important than the former series, because they not only confirm the Professor's own previous work, but show how the experiments of others, which seemed quite irreconcilable with his, are susceptible of explanations which seem still further to strengthen the position of those who hold to the germ theory of putrefaction.

It is not our intention on the present occasion to attempt a detailed account of the experiments, which Professor Tyndall has just communicated to the scientific world in a communication read before the Royal Society, and to the public in a lecture delivered at the Royal Institution on Friday last. Our purpose is to draw the attention of the profession to the subject, referring them for fuller information as to details to the experiments when they are published, as they doubtless soon will be, under the direction of the Professor himself. The former series will be found pretty fully detailed in this journal, January 29, 1876, and those of Dr. Roberts, of Manchester, in the *Philosophical Transactions* for 1874.

Professor Tyndall commenced a new series of experiments in September by repeating those of Dr. Roberts, of Manchester, and of Professor Cohn, of Breslau. For a time all his results tended to corroborate his own experiments of last year, and were in opposition to many of the results obtained by Roberts and Cohn. Then he began to have failure after failure, and, however carefully he performed the experiments, the results were such as to favour the doctrine of spontaneous generation. Was he, then, after all, wrong in his conclusions last year, and must he confess himself in error? No! He must carefully consider the possible causes of failure, and try and guard against them. He found that, when using alkalised hay infusions, the older the hay the more likely were the infusions to develope organic life, after all care had been taken in the experiments, and even when the time of boiling had been prolonged from minutes to hours. After again and again repeating the experiments, he found that, by using new hay or old, he could produce success or failure at will. And he also found that fresh peas soon yielded all their juices, became tasteless, and were even reduced to a pulp by boiling, while old dried peas retained their taste, and hardly coloured or altered the water in which they were boiled for hours. He therefore concluded that, as the old and dried hay or peas were slow to yield their juices, so the germs attached to them, and also old and dried, were able longer to resist the boiling, and still to retain their power of germination. Here, then, was an explanation for some of the failures; but others still remained which could not be accounted for in this way—certain infusions, of which we may name cucumber, possessing a great resistance to sterilisation by boiling. These experiments were performed in Roberts' plugged bulbs, but he found that if the same infusions were boiled in flasks, of which the necks were carefully hermetically sealed during ebullition, they remained pure, and clear, and free from organisms. This he believes to be due not to the germs actually in the infusion resisting sterilisation, but to those diffused in the air above the infusion in the plugged bulbs.

These experiments were carried on in the Laboratory of the Royal Institution, and much hay was introduced from time to time. After they had been going on for some time he reverted to the methods employed in his experiments last year, and found that, with even greater care than he then employed, failure after failure came to disappoint and perplex him. Was he, then, after all mistaken? It would have been easy to give up in despair, and acknowledge defeat; but, fortunately, the President of the Royal Society offered him the use of the new Jodrell Laboratory at Kew, and, repeating the experiments there, he was able to confirm his last year's results—and yet tubes exposed in the atmosphere of the Kew Laboratory rapidly became rotten. It was not, then, spontaneous generation which caused his want of success, but the fact that the atmosphere of the Royal Institution had become so infectious

with the germs introduced with the hay that the ordinary precautions, which formerly sufficed to give success, were no longer sufficient. The truth of this explanation was farther supported by the fact that the tubes, etc., which were failures in London, all developed a peculiar thick fatty scum, with a deeply pitted surface, thus showing a common source of infection. It must not be forgotten that, among all these failures, some experiments (in which extraordinary care was taken) corroborated those of last year, and Professor Tyndall was able to sterilise all the animal infusions which he tried when they were boiled in flasks of which the necks were hermetically sealed during ebullition.

Other experiments have been made with hay artificially dried at temperatures varying between 140° to 150° Fahr., which Professor Tyndall has not yet published. The theory of the occasional presence of germ-clouds, which Professor Tyndall introduced in his lecture at the Royal Institution last year, receives indirect, though strong, corroboration from the experiments we are now considering. Professor Lister some time ago found that if the infusions with which he was then experimenting were rapidly transferred from one prepared vessel to another in the atmosphere of his study, no infection was the result in the majority of the experiments, and in others a single kind of fungus or organism was developed in the fluid as the result of those few seconds of exposure. The importance of such facts as these cannot be too strongly insisted on in support of the germ theory, and it seems to us that the multiplication of such failures as those recorded by Professor Tyndall, if only their cause is as diligently and successfully traced, will throw more light upon this difficult subject than many series of perfectly successful experiments.

It is very interesting to compare Professor Tyndall's experiments with the practice of antiseptic surgery, more especially in its early days, when the means for guarding against infection were less perfect than at present. How often were the occasional failures seized upon triumphantly by the opponents of the system as proofs of the unsoundness of its theory, while the numerous successes were said to be only such as were met with under other methods of treatment. May not the growing success of the antiseptic system in the hands of Professor Lister and others be studied with advantage side by side with Professor Tyndall's successes and failures?

Scientific medicine and surgery owes a deep debt of gratitude to those laymen who, like Professor Tyndall, furnish by their labours valuable material for their students to work with. And it is a debt which we should not be slow to acknowledge, for such experiments take much thought and time, and skill, and but few of those in the profession who are capable of performing them can spare either the necessary thought or time from the actual practical pursuits of their lives. The remarks with which we closed our notice last year of Professor Tyndall's first series of experiments receive the strongest support from his second series; and again we urge the necessity of constant repetition of experiments which seem to contradict the general direction of the results previously obtained.

CONJOINT BOARD FOR ENGLAND.

The fate of the altered amended Scheme for a Conjoint Examining Board for England is still doubtful, two of the co-operating medical authorities—the Universities of Cambridge and Durham—yet withholding their full assent to it. It is only fair that the University of Durham should, by taking its turn as an objector, have an opportunity of vindicating its great importance as a medical authority. But if it is true that, as we have heard, the representatives of Durham in the Conference hold that the Universities ought to have a share in the appointment as well as in the nomination of the examiners, fearing that otherwise university men will not have a fair chance for examinerships, we cannot think that the selection of a point to be objected to in the Scheme is at all a happy one. The University of Durham may surely be content to trust the interests of university men to the care of the Royal College of Physicians; and the Durham objection cannot be for a moment considered tenable. But the difficulty raised by the University of Cambridge is very much more formidable. That authority proposes that the Scheme shall positively terminate at the end of five years from the date of its sanction by the General Medical Council. The Scheme, as it at present stands, provides, it will be remembered, that at the end of five years each of the co-operating bodies shall have the right of withdrawing, should it think fit so to do; but, according to the new proposal, the whole Scheme is to determine at that time, unless renewed. That is, that the Scheme shall cease to be operative when it has been only one year in full operation; for as the professional education of medical students lasts four years, and the Scheme cannot be made retrospectively compulsory, four years must elapse from its establishment before it affects all the candidates for a qualification. This change would inevitably, it appears to us, cause so much trouble, confusion, and delay, that it is most undesirable the corporations should accept it. Hitherto, alterations and improvements in the by-laws and regulations of some at least of the licensing bodies have been delayed "till the Conjoint Board is established"; then they would be held over to see if the Conjoint Scheme would last. The doubt whether it would be renewed would be constantly interfering to stay even the discussion of suggested reforms, while the necessary alterations of by-laws and regulations respecting examinations—such alterations to be, perhaps, only temporary—would cause great trouble and annoyance; and, in connexion with this point, it is to be remembered that these required changes cannot in the case of every one of the licensing bodies be effected by the licensing body acting on its own authority alone, but must be submitted to, and approved by, high external authorities. Look at it as we will, the alteration suggested by the representatives of the University of Cambridge appears so highly objectionable, that if it is insisted on it must put a stop to the Scheme altogether. We trust that, whatever course is to be taken, it will be taken quickly. Everyone must by this time be heartily sick of the whole subject of Conjoint Schemes; and we cannot but suspect that the delays and hesitations, and all the various amendments and alterations, connected with the English Scheme are really the outcome of a very grave doubt of the wisdom of establishing a Conjoint Examining Board in one division of the kingdom only. The original idea of one such Board for each of the three divisions had completeness, and something of greatness, to recommend it; but any of the medical authorities may well feel reluctant to share the responsibility of fathering such a stunted, incomplete production as a Board for one division only.

HOSPITAL ELECTIONS.

We are exceedingly glad to hear that it is proposed at the forthcoming annual meeting of the trustees of the Liverpool Royal Infirmary and Lock Hospital, to be held on the 29th inst., to alter the law which gives the power of electing honorary medical officers to the general body of trustees, and to vest that power in future in a committee consisting of twenty-nine gentlemen. It will be within the recollection of many of our readers that there was recently a very hotly contested election at the Liverpool Royal Infirmary, in which Dr. Davidson was the successful candidate. We know well that no better man could be found for the post, but it was also the general opinion that his opponent was a most worthy competitor. Now, it is precisely under such circumstances, when two good men come forward, by either of whom the interests

of the Hospital are likely to be well served, that the fiercest competition arises. Then it is, as in the recent election at Liverpool, that the largest number of votes is likely to be recorded, when, in point of fact, the merits of the candidates become matter for all kinds of judgments, political, religious, in fact, in too many instances, every kind save what ought to be the real one—professional merit. This question of professional desert to a non-professional elector is too often an intangible thing—something which cannot well be weighed and measured, save by professional standards; and when such is the case it is better not to leave the election in the hands of the body of governors at large, nor in the hands of the medical staff solely, but in a conjoint and fairly representative body, where medical opinion will have due weight, and where public opinion will be so represented as to prevent anything like cliquism. By the neglect of such fundamental rules, we have recently had here in London an exhibition which, in more than one respect, approached to something like a scandal. We had the whole medical staff and a portion of the governing body of an important hospital opposed to a candidate supported by another portion of the governing body. Under such circumstances a wise man would soon have chosen his part: he would have declined the unequal contest. For surely nothing could be more likely to create bad feeling, and to give rise to general unpleasantness, than for a man to insist on thrusting himself as a colleague on another set of men who had indicated, as plainly as a thing could be indicated, that they wanted none of him. Nevertheless, there were advertisements after advertisements in the daily papers, consultations of lawyers, canvassing to any amount, and we know not what else. Every one of these mischances could have been avoided had the candidates agreed to refer their respective claims to a comparatively small committee, selected as might be agreed upon, so as to insure fairness in all things.

We hear that the Liverpool Committee is proposed to consist of twenty-nine members. We have not yet heard how the body is to be constituted, but a slight sketch of the proper kind of committee is something as follows:—The body should in the first place be fairly representative; it should represent the medical staff, the council, or whatever lay body really carries on the work of the hospital, and the body of governors at large. The whole of the medical staff should not sit on this committee, or it might be able to outweigh the other representatives. Usually it will be sufficient that the two or three senior physicians and the two or three senior surgeons should sit on it and vote on it. The members appointed by the other bodies should be in proportion. Those chosen from the body of governors should be specially elected for the purpose of voting at such elections, and should, if possible, be chosen, not for their social position, but for their aptitude for the work they may have to do, and, above all, they should hold no other office of trust under the governors. Such, we think, is a sketch of the best kind of electoral body for the selection of physicians or surgeons to an important hospital. Of course the particulars must be filled in to suit the wants of any particular institution. But we do hold that some such body should be created at each hospital, that personal canvassing should be abolished on pain of incapacitating any candidate having recourse to it, and that the mere counting of names should cease.

THE WEEK.

TOPICS OF THE DAY.

The Registrar-General, in his weekly return, asks to what extent vaccination, as it is usually performed, has protected the population of London against death by small-pox. The returns of the year 1876, he says, answer this question to a certain extent. Seven hundred and thirty-five persons of all ages died of the disease in question; 325 were returned in the medical certificates as unvaccinated, 219 as vaccinated, while of 191 the fact is not spoken to. Thus, in 544 deaths the proportions in every 100 were found to be 60 of persons unvaccinated, and 40 of persons vaccinated. The proportions of the unvaccinated were greater in the hospitals, where every case was classified; so that out of 735, including the due proportion of the uncertified, 439 or more were unvaccinated, and 296 were vaccinated at some time and in some way or other. If the numbers unvaccinated and vaccinated among the living were known, it would be easy to determine the mortality of the two classes; but in the absence of an actual enumeration of the vaccinated, all that can be asserted is that out of a comparatively small number of persons unvaccinated 439 died, while out of the great mass of the vaccinated population 296 died. For the earlier age of one to five the proportions of vaccinated children living can be calculated from the numbers returned as successfully vaccinated in recent years by the Medical Officer of the Local Government Board. In a recent weekly return these numbers were shown to be 317,081 vaccinated, and 31,360 unvaccinated children, out of 348,441 of that age living in the year 1876. In the fifty-two weeks of that year, 6 vaccinated children aged one to five years died out of 317,081 living, and 81 unvaccinated died out of 31,360 unvaccinated. But the numbers of deaths have to be raised, for in 38 cases it was not stated whether the children had or had not been vaccinated. After distributing these 38 cases proportionately, the deaths after vaccination are 9 in 317,081 living, while the deaths are 116 in 31,360 poor children unprotected by Jenner's discovery.

An injunction was recently granted by Vice-Chancellor Sir James Bacon, on the motion of the owner of Windlebank, near Wimbledon, for restraining the Croydon Union Rural Sanitary Authority from polluting the River Wandle by the discharge of sewage matter into it. In granting the injunction the Vice-Chancellor allowed three months to the defendants to take steps to get rid of their sewage. To a strenuous appeal for further time he replied that at the end of that period, when the defendants had shown what steps they had in the meanwhile taken, it would be open to them to apply for further time.

The Admiralty Committee on the causes of the outbreak of scurvy in the late Arctic Expedition has been taking evidence during the past week. Sir George Nares has been examined, and also the leaders of the different sledge parties, Lieutenants Beaumont, Egerton, and Rawson. It is stated that the evidence of Admirals McClintock and Ommaney, and probably of other Arctic officers, including Admiral Collinson, a member of the Committee, will subsequently be taken; and that the Presidents of the London Colleges of Physicians and Surgeons, having been asked to furnish the names of gentlemen competent to assist the Committee, have nominated Mr. Busk, F.R.S.; Dr. Pavy, F.R.S.; and Dr. Guy, F.R.S. Dr. McDonald, F.R.S., of Netley, who has been conducting experiments on the result of subjecting lime-juice to very low temperature, is also to be heard, and Professor De Chaumont, of the Netley School. Amongst other names rumoured as likely to be called are those of Dr. Buzzard and Dr. Harry Leach, the Medical Inspector of the Port of London.

A correspondent of the *Times* in Servia, who has been visiting some of the Turkish hospitals in the vicinity, states that they are greatly inferior to those established by foreigners in Belgrade and other places. The bedsteads are of wood, and often without mattresses, and a great scarcity of medicines and qualified surgeons prevailed in all the places visited. The English Hospital at Belgrade now contains about fifty patients, but more are expected shortly. Drs. Attwood, Hume, and Watts are in attendance; they have been serving since

December 1 without pay, and the contributions sent from England, and promised, have been more than exhausted, so that the expenses are now borne by Dr. Attwood entirely.

At a meeting of the Council of the Metropolitan Hospital Sunday Fund, held at the Mansion House last week, the Lord Mayor presiding, the following noblemen and gentlemen were unanimously elected as the managing body for the current year:—Committee of Distribution: The Lord Mayor, President; Sir Sydney H. Waterlow, Bart., M.P., Vice-President; Lord Ashley; Messrs. Alderman McArthur, M.P., Thomson Hankey, M.P., S. Morley, M.P., G. W. Callender, W. Sedgwick Saunders, J. Smith, and T. Turner. General Purposes Committee: The President and Vice-President *ex officio;* Bishop Claughton; Cardinal Manning; the Revs. Canon Miller, J. Thain Davidson, J. Kennedy, Professor Marks, G. Bowden, J. F. Kitto, and R. H. Marten; Earl Cadogan, the Hon. R. Capel, Sir R. Alcock, Mr. Alderman Finnis; Messrs. J. Boodle, H. Brooks, C. B. Carter, S. Hoare, J. Hogg, J. G. Pitcairn, and E. H. Scott; Dr. Sedgwick Saunders; Sir E. H. Currie and Mr. R. B. Martin, honorary secretaries; Mr. H. N. Custance, secretary. Dr. Glover expressed his opinion that the sums hitherto collected annually in aid of the Fund were altogether unequal to the amount that could be desired from all metropolitan churches and chapels, and he proposed the following resolution, which was passed unanimously:—"That it be an instruction from this Council to the General Purposes Committee to consider whether any, and, if so, what, means can be taken to excite the interest and co-operation in this Fund of congregations which have never yet contributed to it, and to increase the interest already kindly displayed in it by the great majority of London churches."

The further hearing of the summons against Mr. Cooke for keeping a school of anatomy in New Bridge-street, Blackfriars, in such a manner as to be a nuisance to the neighbourhood, came on at the Guildhall Police-court on Saturday last. At the commencement of the proceedings Mr. Cooke announced, through his counsel, his intention of removing the School, if the Court should decide against him, without appealing against the magistrate's decision. After hearing evidence, Sir Thomas Gabriel decided that the School was a nuisance, and must be removed, and he should issue a prohibitory notice against its recurrence. At the same time Sir Thomas complimented Mr. Cooke upon the manner in which he had met the complaint: he had a perfect right to go to these premises, because he had a licence to do so; but, as the School was proved to be a nuisance, Mr. Cooke stated that he would at once leave them, and nothing could be more honourable.

The Richmond Select Vestry have just placed themselves in the unenviable position of trying to satisfy everybody, whereby, as usual, they have pleased nobody. It certainly would have been well to make, if possible, an arrangement with the Southwark Company to prevent the cutting off the water-supply of the town until such time as the Vestry were fully prepared to substitute the new arrangement. But as it is there is nothing for the parishioners to do but submit with a good grace to the inevitable, and be thankful for the much purer water they will get; and, as the Vestry have most fully recognised the necessity for promptness of action, no doubt a few days will see the present unpleasant state of things remedied, and an ample water-supply once more at the disposal of the whole town.

Considerable excitement was occasioned at Portsmouth on Sunday last by the Indian troopship *Serapis* steaming into harbour with a yellow flag flying, as a sign of the prevalence of pestilence on board. It appears that two men belonging to troops from Delhi were attacked with small-pox after the vessel left Bombay. These cases were landed at Malta, and the usual precautions for preventing the spread of the infection were at once had recourse to. Nevertheless, after leaving Malta the hospital orderly who had attended upon the patients, and the soldier who slept in the adjoining bed, were attacked with the disease. On reaching Spithead the sufferers were placed on board a tug and conveyed to the infectious ward attached to the Portsea Military Hospital. Pratique was granted by the sanitary officers about a couple of hours after the ship had been moored alongside the jetty. The prompt measures adopted by the captain on ascertaining the existence of the infection were doubtless the means of preventing the spread of the disease amongst the large number of women and children on board the *Serapis*.

THE SPREAD OF SMALL-POX.

Dr. Orme Dudfield, the Medical Officer of Health for Kensington, has recently issued a special Report on Small-pox, illustrating the various ways in which the disease has been and may be spread; with observations on the necessity for additional hospital accommodation, and suggestions of a precautionary character. This little Report is exceedingly interesting; and Kensington is to be congratulated on having a Medical Officer of Health who not only knows his duty, but does it exceedingly well. "The number of cases reported in the four weeks ending November 11 was thirteen, and of these several were 'back cases,' of which we had only recently heard. The cases which have come to our knowledge in the last four weeks were thirty-six (in thirty-three houses)—viz., twenty-two cases in the north, and fourteen in the south sanitary district. Of these, I am thankful to say, twenty-eight cases have been removed to the hospital." Thus, though the numbers are comparatively small, there is a decided tendency to increase; and Dr. Dudfield has done well to remove to special hospitals all cases occurring in houses or families where complete isolation of the sick could not be effected. A cause of infection not sufficiently considered is well illustrated. We transcribe it from the Report:—"One case of small-pox in a man, A, was traced to contact with the clothes of another man, B. B himself was quite well; but he lived in the same room with his children, who had small-pox (two of them have died of the disease), and he went about his ordinary business as usual during their illness. I regret to have now to state that there is good reason for believing that B (or his son similarly circumstanced) has infected two other men, C and D, who have been removed to the hospital. C has died, and his sister having sickened with the disease, has also been removed to the hospital. The history of D's case is curious. B's son, wishing to go to his sister's funeral, represented to his friend D that the girl had died of bronchitis, the secondary disease entered on the medical certificate of the cause of death, and not having a decent coat to wear, he borrowed one of D. In about thirteen days—the usual period of incubation of small-pox—the lender was stricken with the disease, and sent to the hospital." In many cases, no doubt, the spread of infection in this manner is due to thoughtlessness, but after public attention is thus drawn to it, there should be no more of it. The necessity for removing all cases to a hospital as soon as possible becomes all the more imperative, and means ought at once to be taken to disinfect both house and people whenever and wherever small-pox has occurred. The disease is spread, too, Dr. Dudfield thinks, by exposing bed-clothes and mattresses in back-yards in order to purify them. The poor people quite forget that in thus ridding themselves of infection they are simply helping to waft it elsewhere. The Sanitary Act of 1866 specially provides for such cases, and could, we think, be put into action if offending persons were summoned before a magistrate. Going about in infected clothes is a more difficult subject. Many of the poorer classes have no "change," and therefore what are they to do? How about visitors to the small-pox hospitals? Do people visit their sick friends; and if so, are

they disinfected before they leave? Public institutions would do well to bear this in mind. Hospitals especially ought to abolish "visiting days" for the time being. This would certainly lessen the chances of infection. It would be a very serious matter if any of our larger metropolitan general hospitals should have to be closed on account of small-pox appearing in its wards. Dr. Dudfield points out that "isolation is all-important." In small houses it is absolutely necessary; in large ones, even, it is desirable. Persons living in a house where there is small-pox ought to consider themselves infected to all intents and purposes, and abstain from communication with the outer world for the time being. Young people ought to be kept from school, and "City gentlemen" ought no longer to mix with their fellow-clerks—this especially refers to some of the large London establishments, where a great number of gentlemen work together. "School officers have an important duty to discharge." No doubt schools are the source of much infective mischief during an epidemic such as this. In addition to other precautions, Dr. Dudfield advocates a free use of disinfectant fluids, vaccination for the young, and for infants, even before the usual period of three months. Revaccination for others—in fact, for all—is strongly insisted on. We have referred to this Report at some length, as it deals in a most thorough manner with a loathsome disease which is at present epidemic amongst us, and which, in spite of all that has yet been done, seems to gain ground. Every individual member of society ought to take precautions in advance, rather than wait until the disease knocks at his door, for prevention is better than cure.

EXTIRPATION OF LYMPHADENOMA.

M. Pauffard brought a case of lymphadenoma before the Société Anatomique of Paris. It is reported in the *Progrès Medical* of January 13. A young man, aged twenty-three, with a good family history, was admitted into the Lariboisière on March 23, 1876, with an enormous lymphadenomatous tumour on the left side of the neck. It had commenced four months before his admission, and, according to his own idea, it had originated as a result of a strain. At this time he felt an acute pain in the neck, and in a few days he perceived, just over the acromion, a little lump, which slipped about beneath the finger. This lump rapidly enlarged; he, however, continued his occupation, and paid little or no heed to it. In three months it had increased enormously in size. He then applied at the hospital for advice. On examination no other glands could be found affected; liver, spleen, and kidneys normal. There was an excess of white blood-cells; a *bruit de souffle* at the base of the heart and in the vessels was heard. Patient was exceedingly pale. He was at first treated by injections of Fowler's solution into the enlarged glands, ten drops every morning. At the end of twelve days there was no improvement, local or general. Then, in addition to the subcutaneous injections, five minims of the solution were ordered internally, twice daily. This treatment was continued for two months, and, there being no improvement, it was decided to extirpate the enlarged glands with the knife. A T incision was made, the vertical branch of which ran parallel with the anterior border of the sterno-mastoid, and the horizontal one directly backwards. "Masses of glands, hard and white as cartilage, adherent to each other, and extending to the transverse cervical processes, were removed; the large vessels of the neck were laid bare, as also the thyroid body; slight hæmorrhage, in spite of the number of small vessels which had to be divided; catgut ligatures; Lister's dressing." Cicatrisation commenced well, and the superior portion of the incision healed by the first intention. He was afterwards sent into the country; his general condition much improved. At the end of August he was readmitted to the hospital: at this time he was unable to move his left arm, (?) owing to paralysis of deltoid. There were large glands in the axilla and above the right clavicle. During the next month a mass of glands reformed in the scar of the old wound, which invaded the larynx. The patient died suddenly at the end of November. The autopsy showed, in addition to the glands in the neck, that the spleen was very much enlarged, and studded throughout with small nodules of varying sizes: these nodules were white and hard, and were embedded in strands of connective tissue, proceeding from the capsule, which was thickened. Mesenteric glands large; kidneys normal; lungs and mediastinum quite free. It will be seen that this case of lymphadenoma was complicated with leucocythæmia, and therefore the prognosis from the first was less hopeful. In Mr. Haward's case, reported to the Clinical Society last session,(a) there was no leucocythæmia; and it would seem, though this latter case also terminated fatally, that lymphadenoma, when uncomplicated, offers greater chance of being successfully eradicated than when complicated by a disease like leucocythæmia, which, *per se*, is often fatal. At all events, though these cases have both terminated fatally, it would be unwise to condemn an operation for the removal of growths which resist all other efforts of treatment, and which when left alone invariably terminate fatally.

THE SEWAGE QUESTION.

Some time since, the President of the Local Government Board appointed a Commission, consisting of Mr. Robert Rawlinson, C.E., Mr. Clare S. Read, M.P., and Mr. S. Smith as an assistant, to inquire as to the great difficulties of devising means for the disposal of sewage, and also as to the practical efficiency of the chief systems then (1875) in operation, by sewage farms, land filtration, and by precipitation or chemical processes. The report of the Commissioners, the chief recommendations of which have been known for some time, was made public last week. The Commissioners visited Edinburgh, Wrexham, Chorley, Blackburn, Doncaster, Harrogate, Wolverhampton, Leamington, Warwick, Rugby, Banbury, Bedford, Croydon, Norwood, Reigate, Worthing, Aldershot, Romford, Tunbridge Wells, Cheltenham, Merthyr Tydfil, Barking, Norwich, and Enfield; Kendal, where the downward intermittent principle is carried out; Leeds, Bolton, Coventry, Tottenham, Edmenton, and Hertford, where sewage is treated by a chemical process; Bradford, Birmingham, and Luton, where sewage-sludge is precipitated by the addition of lime; and Halifax, Rochdale, Salford, and Manchester, where the pail system is partially used for dealing with excreta. They also visited Leyden and Amsterdam, where the pneumatic system is partially in operation; Paris, where only a portion of the sewage is utilised in irrigation; and Brussels and Berlin, where the sewage is about to be disposed of in irrigation. The Commissioners are of opinion that the retention for any lengthened period of refuse and excreta in cesspits or cesspools, or at stables, cow-sheds, slaughter-houses, or other places in the midst of towns, must be utterly condemned; and that none of the (so-called) dry earth or pail systems can be approved. That the sewering of towns and the draining of houses must be considered a prime necessity under all conditions and circumstances, so that the subsoil water may be lowered in wet districts, and may be preserved from pollution. That most rivers and streams are polluted by a discharge into them of crude sewage, which practice is highly objectionable. That, as far as they have been able to ascertain, none of the existing modes of treating town sewage by deposition and by chemicals in tanks appear to effect much change beyond the separation of the solids and the clarification of the liquid. That, so far as their examinations extend, none of the manufactured manures made

(a) *Clinical Society's Transactions*, vol. ix., page 40.

by manipulating town's refuse, with or without chemicals, pay the contingent costs of such modes of treatment; neither has any mode of dealing separately with excreta so as to defray the cost of collection and preparation by a sale of the manure been brought under notice. That town sewage can best and most cheaply be disposed of and purified by the process of land irrigation for agricultural purposes. That land irrigation is not practicable in all cases. That towns situate on the sea-coast or on tidal estuaries may be allowed to turn sewage into the sea or estuary below the line of low water, provided no nuisance is thereby caused.

THE FRENCH FOREIGN MEDICAL PRACTITIONERS BILL.

In our number for January 6 we gave some account of the Bill brought before the French Chamber of Deputies by M. Marvaise, to change, very seriously, the conditions under which foreign medical men have hitherto been allowed to practise in France. We are glad to learn that Lord Lyons, acting upon instructions from our Government, has strongly represented to the Duc Decazes the illiberal character of M. Marvaise's Bill, and the alarm produced by the announcement of it among English physicians and English invalids; and the French Government have determined to vigorously oppose the Bill in all its future stages. The French Government appeared from the first well disposed to pay attention to the arguments and representations of Lord Lyons, but desired to be furnished with full and accurate information as to the law and custom with respect to allowing foreign medical men to practise in England. This information was supplied in a memorandum by the President of the General Medical Council; and in this paper a suggestion was made, that the progress of M. Marvaise's Bill should be arrested until a joint committee of foreign and English representatives might be convened to consider the matter, as "it might be possible to bring about reciprocal action, which would be equally just and beneficial to all parties interested." The memorandum was communicated to the French Government; and we learn, from papers communicated to the President of the Medical Council, that Lord Lyons, in a dispatch dated January 12, informs Lord Derby "that he had called the attention of the French Government to the suggestion that the Bill should be arrested until an international committee could consider the position of foreign medical men in England and France respectively." Lord Lyons also states that "his Excellency had for long been earnest in pressing upon the consideration of the Minister for Foreign Affairs and for Public Instruction objections to the illiberal restrictions contemplated by the Bill. The Duc Decazes has informed Lord Lyons that the Minister of Public Instruction had thought it inexpedient to take in this instance the somewhat unusual course of resisting the simple consideration of a Bill, in opposition to the report of the Initiative Committee; but that the Government had determined to offer a strenuous opposition to M. Marvaise's Bill in its future stages. Lord Lyons further communicated to his Excellency, both on his own account and by order of her Majesty's Government, that there was no possible doubt as to the very serious objections entertained in Great Britain to this Bill."

SMALL-POX IN LONDON.

The deaths from small-pox, which had been 116 and 100 in the two preceding weeks, further declined to 79 in the week ending January 20, of which 32 were certified as unvaccinated, 18 as vaccinated, and in the remaining 29 cases the medical certificates did not furnish any information as to vaccination. Distributing the 29 cases not stated in the proportion shown in the 50 cases stated as to vaccination, and assuming that 90 per cent. of the London population have been vaccinated, it may be estimated that but 1 death from small-pox was registered last week among every 114,000 vaccinated persons, whereas the proportion among the unvaccinated was 1 death in every 7000 persons. Small-pox was, therefore, more than 16 times as fatal among unvaccinated as among vaccinated persons. The 79 deaths from small-pox included 30 in the Metropolitan Asylum Hospitals at Homerton, Stockwell, and Hampstead, 4 in the Highgate Small-pox Hospital, 1 in the St. George's Workhouse, 1 in the Whitechapel Workhouse, and 1 in the North-street Infirmary, Poplar; the remaining 42, or 53 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 8 of the deceased small-pox patients had resided in Hackney, 9 in Lambeth, 6 in Bow, 6 in Camberwell, and 5 in Wandsworth and Clapham. Excluding one hospital case admitted from Hounslow, 6 belonged to the West, 17 to the North, 24 to the East, 31 to the South, and not one to the Central groups of districts. Of the 900 beds available for small-pox patients in the Metropolitan Asylum Hospitals, 846 were occupied on Saturday last, against numbers increasing steadily from 185 to 873 during the twelve preceding weeks.

"CONDENSED MILK."

Under the above heading we here reproduce a letter addressed by Dr. Griffith to the Editor of the *Daily Telegraph*, and published in that paper on Wednesday last:—

"Sir,—As infant mortality is again engaging public attention, I would ask a short space to point to an article of food most deleterious in its results to infants, and unfortunately too prevalently used, simply, I believe, because its baneful effects are not generally known or recognised. It is now some years since condensed milk began to be employed for the sustenance of suckling babes either by itself or in combination with the natural nutriment. In either case I believe it to be prejudicial; in the former it is very frequently fatal. Several years ago I had my attention drawn to this by the wasting of a beautiful infant, which was, however, ultimately saved by my having detected in time the cause—viz., condensed milk, on which it was being fed. A return to the natural aliment was followed by recovery; and my patient is now a pretty little child, healthy, though not strong. I have utilised this fact and discovery to the saving of many children who must inevitably have wasted and perished had the food not been changed. The condensed milk I have found to produce a form of diabetes; and, I apprehend, the larger quantity of saccharine matter contained in it occasions irritation of the kidneys, and not unfrequently of other organs also. I shall not occupy any more of your space, but conclude by expressing the hope that you will grant me room to warn against this great danger."

"Faithfully yours, G. de G. Griffith,
"Senior Physician to the Hospital for Women and Children; Physician to St. Saviour's Maternity."

To address such a letter on such a subject to a daily paper seems to us decidedly wrong. It is calculated to excite great alarm in the minds of parents and guardians—an alarm which cannot readily be appeased, even by those who are fully acquainted with the whole matter. Had Dr. Griffith contented himself with bringing such a statement before a society capable of judging and dealing with it, we could not have objected. Had he addressed himself to a medical journal—the ordinary medium of communication on such subjects between medical men—he would have given others, who are capable of dealing with such matters, an opportunity of judging of the merits of his discovery before he addressed himself to the general public. As it is, we should be glad to hear what explanation Dr. Griffith gives as to the reasons which induced him to act as he has done.

DR. TRAUBE'S MEDICAL LIBRARY.

It may interest some of our readers to know that this library has become the property of the Berlin publisher, Herr Hirschwald, and is being disposed of by him in separate volumes. Catalogues will be sent gratis to anyone who chooses to write to 68, Unter den Linden, Berlin.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE first of the annual course of scientific lectures for 1877 was delivered in the College Hall, last Monday afternoon, by Dr. James Emerson Reynolds, Professor of Chemistry in the University of Dublin. The subject of the discourse was "The Influence of Chemical Constitution on Physiological and Therapeutical Action." The lecturer alluded, in his introductory remarks, to a paper read before the Royal Society of Edinburgh on January 6, 1868, by Drs. Crum-Brown and Thomas R. Fraser, "On the Changes produced by Direct Chemical Addition on the Physiological Action of Poisons." He observed that in researches published since that paper the influence of chemical constitution had been considered chiefly from the physiologist's point of view, but he wished to deal with th e question in this and the following lecture from a chemical stand-point. Having explained the modern usage of the terms "molecule," "atom," "atomicity," "latent atomicity," "saturated" and "unsaturated chemical compounds," Dr. Reynolds proceeded to show that the unsaturated chemical compounds were, as a rule, the most energetic chemically; and also that it was within this group that we chiefly met with physiologically active compounds. He further showed that the members of the group of saturated compounds, which exerted decidedly physiological activity, contained one or more atoms easily replaced by more energetic elements or groups of elements, or were readily broken up into unsaturated compounds. The study of the chemical constitution of a body on physiological and therapeutical action was, therefore, of the highest importance if we desired to explain the action of bodies possessing physiological activity. The remainder of this, the first of two discourses, was devoted to the bringing forward of evidence in support of the following propositions:—First, that bodies containing the same elements in the same proportions—as acetic acid, lactic acid, and grape sugar, or the double cyanides—can differ materially in physiological activity when compared under equally favourable conditions; and that the observed dissimilarity in action is due to difference in chemical constitution. Secondly, that bodies which contain the same elements in different proportions, but which are similar in chemical structure—as the phosphates of sodium recently investigated by Professor Gamgee,—can differ materially in physiological activity; and that the observed dissimilarity in action can be explained on chemical grounds. The discourse, which was one of deep interest, was listened to by a large audience of the Fellows and Licentiates of the College, other members of the profession, and senior students of medicine.

EDINBURGH ROYAL INFIRMARY.

AT an adjourned general meeting of the contributors to the Edinburgh Royal Infirmary, held on the 10th inst., the report of the Committee of Contributors was presented, from which we learn that there was a deficiency in the income of last year to meet the current expenditure of no less than £4388. In 1875 the deficiency was £4268, and in 1874 £2198. The Committee state that the annual deficiency has now become a subject of grave consideration, and renders it absolutely necessary that the income of the institution should be largely increased by the contributors. Further efforts must also be made to raise the sum required—about £50,000—to complete the new Infirmary buildings, which are making satisfactory progress, and it is hoped will be completed in two years. Already £170,000 has been spent on the building, which when completed is expected to be the finest hospital in the kingdom. Although there had been during the last few years a deficiency in the annual subscriptions, it was a matter for congratulation that the legacies had largely increased. The average amount now received in legacies each year was £16,000, as against £5000 in former years.

GIANT-CELLS IN SYPHILIS.

AN interesting communication on this subject is made in the *Centralblatt für die Medicinischen Wissenschaften*, No. 45, 1876. As the matter is now being discussed at the Pathological Society, we shall briefly give the substance of the communication. Dr. Paul Baumgarten, the prosector at the Pathological Institute in Königsberg, describes the presence of "giant-cells" in syphilomata. These cells have hitherto been looked upon as the specific histological criterion of tubercle. They occur, however, in a number of other growths, but, as Dr. Baumgarten says, their presence or absence has often been invoked to decide on the syphilitic or turbercular nature of products, the macroscopic characters of which were rather undecided. In one case, Dr. Baumgarten relates how a diagnosis of syphilis was almost withdrawn because of the presence of these giant-cells in a cerebral neoplasm, though the clinical history, as well as the remaining post-mortem appearances, pointed very definitely to syphilis. On another occasion, while examining a syphilitic testis in the fresh state, he found large numbers of these remarkable cells, counting as many as twelve or sixteen of them in the field of a No. 4 Hartnack's objective. In this latter case the history pointed definitely to syphilis. Urged on by these observations, Dr. Baumgarten examined other syphilitic growths, and found them almost constantly. Of course these results are of great importance, and we hope that there will be observations bearing on a point which is interesting and important to the elucidation not only of syphilis, but also of tubercle.

THE HEALTH OF ST. MARYLEBONE PARISH.

DR. WHITMORE, Medical Officer of Health for the parish of St. Marylebone, in his monthly report for December last, gives the death-rate of the parish for that period as equal to an annual death-rate of 19·18 per 1000 of the population of St. Marylebone. Dr. Whitmore accounts for this remarkably low rate of mortality (which was 2·7 per 1000 less than that of all London during the same period, and 11·38 per 1000 less than the death-rate of the parish in December, 1875) by the mildness of the temperature, and the consequent decrease in the number of deaths from bronchitis and other diseases of the respiratory organs, usually so fatal at this season of the year. Dr. Whitmore remarks that a continued succession of wet days, with a temperature ranging between 50° and 60°, will, no doubt, impress most persons in comfortable circumstances with the idea that the weather is very wretched and very unseasonable; but to the aged and infirm, and to the poor and destitute, it must have proved a blessing, the magnitude of which may be estimated by the fact that in the last four weeks of December, 1875, when the weather was exceedingly severe, 157 more persons died in the parish of Marylebone than during the four weeks of the past month.

THE FORCE OF EXAMPLE.

A CURIOUS instance of the power of the imitative faculty was reported to the Société de Biologie at Paris on November 22, 1876, by Dr. Magnan. At a girls' school near Paris, numbering 115 scholars, a girl, ten years old, was attacked with convulsions in one forearm on July 15, 1876. These convulsions gradually extended in the next few months to all the extremities, and were followed by strong tonic contractions of the muscles, but the child ultimately recovered. Up to November 19, *nineteen* other girls of different ages became subject to exactly similar attacks. They all finally recovered, and the average duration of the disease was shorter than in the original case.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A QUARTERLY COURT of the Directors of this Society was held on Wednesday, January 10, in the rooms of the Royal Medical and Chirurgical Society. In the unavoidable absence of the

President, the chair was taken at eight o'clock by Dr. Pitman, Vice-President. The Treasurer reported that there were fifty-eight widows and eleven children applicants for relief from the general fund, and four children from the Copeland Fund. A sum of £1257 10s. was voted to be distributed among them. The expenses of the quarter were £65 15s. 9d. The deaths of two widows were reported by the Secretary—one had been receiving grants since December, 1828, and the other since September, 1847. One fresh application from a widow was considered and admitted. At Christmas last a sum of £323 had been distributed as a present out of the surplus income amongst the widows and orphans, and fifteen guineas were presented to the Secretary as a compliment for his exertions in collecting the subscriptions of members. Five new members were elected.

ANOMALOUS CONDUCTION OF MITRAL MURMURS.

At the meeting of the Medical Society of London last week, Dr. Sansom related two cases recently under his care in the London Hospital, illustrating anomalous conduction of mitral murmurs. The patient in the first case was a man, twenty-four years of age, who had had three attacks of acute rheumatism, and had on a former occasion been a patient in the London Hospital, when a presystolic mitral murmur was noted. There was now a loud musical first-sound murmur, and a systolic thrill could be detected, whose maximum was a little to the left of the base of the ensiform cartilage. It was so strongly marked in the tricuspid area that most competent observers thought it must be due to tricuspid regurgitation. There was now no presystolic murmur. Dilatation of the right side and the usual signs of failing heart preceded death. At the autopsy the mitral orifice was found to be narrowed so as to admit only one finger, and to be surrounded by a calcareous ring. The calcareous matter was attached in largest mass to the interventricular septum. Dr. Sansom considered that this dense calcareous material had acted as a conductor of sound to the interventricular septum, and so by the right apex to the ear; hence the abnormality of position of the murmur. In the second case the patient was a man aged fifty, whose only previous illnesses were chorea at eight years of age, and scarlatina at fourteen. Lately he had had rheumatoid pains, but no fever. On auscultation, a musical presystolic murmur could be heard over an area not greater than a circle of one inch and a half in diameter, just to the left of the base of the ensiform cartilage. A little to the left of this spot there was a loud rough first-sound murmur. Twelve months after first coming under observation the presystolic murmur ceased to be audible. Before death, dilatation of the right side was manifest, with venous pulse and throbbing liver. To relieve ascites, paracentesis abdominis was performed, and it was noted that the urine, which just previously had been highly albuminous, now contained very little albumen, but was highly saccharine. The diagnosis in this case was arrived at by experience of the former. It was that there was mitral stenosis, the characteristic presystolic murmur of which had been conducted by dense material to the interventricular septum, and thence to the apex; that, considering the musical character of the murmur, the valve aperture was probably a calcareous ring; that the murmur had ceased to be audible because the left auricle had become dilated and its muscle enfeebled; that there was, in addition, incompetence both of mitral and tricuspid valves. This diagnosis was exactly confirmed by the autopsy. Dr. Sansom thought the cases worthy of record, as the observations might be useful in diagnosis.

THE METROPOLITAN WATER-SUPPLY FOR DECEMBER LAST.

"The state of the water in the Thames and Lea was very bad during the month of December." This is the commencement of the Report of the Water Examiner presented to the Local Government Board for the last month; but it ceases to be surprising when he states that, from an examination of the river books kept at the intakes from the Thames, it appears that the floods during that period have been the worst that have occurred in the river for many years. The water companies unprovided with sufficient storage reservoirs are accordingly compelled to take in dirty water, and distribute such as they can get through their filter-beds, imperfectly filtered. There is a considerable amount of solid matter in the water; and it is too fine to settle, the discoloration being caused by the chalk, clay, and other impurities carried down by the floods. This is very difficult of removal by filtration, being only practically got rid of by subsidence previous to filtration. Dr. Frankland confirms Major Bolton's report, and adds that the Thames water during the whole of December was loaded with organic impurities of the most disgusting origin. To those who draw their supplies from the West Middlesex Company it will be gratifying to learn that the water issued by them was efficiently filtered but so much cannot be said of the other London companies. Dr. Frankland further remarks that it may be interesting for those who can afford the cost of domestic filters to know that even the polluted water thus issued can be chemically purified by filtration through spongy iron; and he inserts in his analytical table, for the purpose of comparison, the results yielded by the Grand Junction Company's water after passage through a spongy iron filter which had been in constant use for more than a year. This filter removed nearly nine-tenths of the organic matter and more than one-half of the hardness from the water passed through it.

VACCINATION AND ERYSIPELAS.

Since our last writing, an admirable report by Mr. John Netten Radcliffe to the Local Government Board, on the subject of an outbreak of erysipelas apparently following vaccination, in certain parts of Lincolnshire, has been brought under our notice. After what we said on the subject of vaccination last week, we are unwilling to deal with such an important document as the report now before us without due consideration of every point in it. This is the more necessary as the report, unfortunately, seems to lend itself to the view that, by want of due care on the part of the vaccinator, even death itself may follow what ought to be a trivial and wholesome operation. We hope to deal with the whole subject next week.

University of Dublin School of Physic.—The Board of Trinity College have appointed, for one year, the following extra examiners, whose names were selected from lists recommended by the Professors of the School of Physic in Ireland:—Practice of Medicine—Thomas Hayden, Fellow and Vice-President of the King and Queen's College of Physicians; Institutes of Medicine—Arthur Wynne Foot, M.D.; Anatomy and Physiology—Reuben J. Harvey, M.D.; Materia Medica—Rawdon Macnamara, M.D.; Chemistry and Physics—Joseph A. Galbraith, M.D., Fellow of Trinity College.

Capillary Hæmorrhage after Esmarch's Method.—Dr. Riedinger, of Würzburg, with respect to the capillary hæmorrhage which sometimes ensues after the removal of the elastic tube of Esmarch's apparatus, and which is due to paralysis of the walls of the vessels, recommends its treatment, or rather its prevention, by means of electricity. After all visible vessels have been tied, and shortly before the loosening of the tube, both poles of an induction apparatus, armed with large sponges so as to increase the sphere of contact, should be brought directly on the wounded surface. At first the stream may be allowed to flow for half a minute, but afterwards only for shorter periods. Energetic contraction of the muscular substance takes place, and it is soon covered with a thin layer of coagulated blood; and the hæmorrhage is so slight that the wound can soon be closed. Dr. Riedinger has tried the plan with success in several amputations.—*Allg. Wien. Med. Zeit.*, No. 42.

CORRIE *v.* MAYO.

ACTION FOR BREACH OF COVENANT TO SUPPLY WATER TO A HOUSE.

THIS case occupied the Court of Common Pleas, before Mr. Justice Lindley, all last week, and presents so many points of interest that we subjoin an abridged report of the trial, with some additional notes from a correspondent:—

This action was now being tried for the second time. On the former occasion the jury found a verdict for the defendant, but a new trial was granted on the ground that the verdict was against the weight of evidence. The action was brought by the plaintiff as lessee of a house at West Clandon against the defendant, the lessor, for breach of a covenant in that lease to do all permanent works necessary to secure a sufficient supply of water on the premises in question. The plaintiff in November, 1873, moved into the house, and on discovering the insufficiency of water, means were at once taken on the part of the defendant to obviate that inconvenience. There were at that time two wells on the premises—one a deep well from which the water-supply was drawn, and the other a shallow well, which, at the time of the plaintiff's entry, was not connected for the purpose of supplying the house. In order to increase the supply from the deep well, on December 28 boring was commenced. While these operations were being carried on, the shallow well was connected with the house supply, and the plaintiff borrowed from his neighbours in order to make up any deficiency in the amount necessary for household purposes. This boring was completed on February 28, 1874. Before and during this time, and subsequently, some of the plaintiff's family and establishment, which amounted to some twenty persons in all, were alleged to suffer from sore throats of a very similar type and of a very persistent character. His wife, three of his daughters, and two female servants were affected in this way, while another daughter and two other servants seem to have been in ill-health in other ways. Mr. Corrie, and the sons and servants, did not appear to have been affected with those symptoms, but in April, 1874, the plaintiff's medical man, Dr. Stedman, being unable to account for the persistency of the sore throats in those whom they attacked, suggested the possibility of their being caused by bad water, and took certain samples of the drinking-water then in use by the plaintiff's family, which he forwarded to Mr. Ogston, the analyst. Mr. Ogston reported that the water was of a doubtful character, but might improve. This account of the water was communicated to the defendant. Nothing further appears to have passed on that subject until April, 1875, when a complaint as to the character of the water was made, and samples again taken, some of which were forwarded to Mr. Ogston, and others to the defendant, which he immediately despatched to Dr. Corfield to be analysed. Both analysts again reported unfavourably of the water, although Mr. Ogston found it somewhat better than the sample sent him in the preceding year. It should be remarked as to these analyses, that whereas the evidence was that the butler had drawn some samples in the month of April, and Mr. Ogston's report bears that date, it appeared that Dr. Corfield did not receive and analyse these until June 23; and it was contended by the defendant that such an interval of time between the time of taking the samples and subjecting them to analysis would render untrustworthy the results of that analysis. On learning the state of the water, the defendant, however, suggested, as a mode of rendering certain the supply of pure water direct from the chalk, that the well should be relined, to render any filtration of surface sewage, etc., impossible, if such a possibility then existed. The plaintiff at this time had put the matter into the hands of his solicitors, and about a week elapsed before the defendant obtained permission to commence the work. However, in the beginning of August the process of relining and casing the well was commenced and carried out. The plaintiff's family, however, had at this time left the house, and the plaintiff finding, as he thought, no improvement in the circumstances, commenced the action against the defendant for breach of covenant on September 30, 1875. The claim was now for damages for the breach of covenant. The points really in issue were whether the water was bad in quality, and whether it was of a character to have caused the illness which occurred among the members of the plaintiff's family and household, and which, according to his account, necessitated his giving up the house. The case, therefore, turned, first on the way the well was bored in the first instance, and the strata through which it passed. The well-sinker who bored the well, which was seventy feet deep to begin with, was called concerning this by the defendant, and said that the boring passed first through about fifty feet of various clay strata, ultimately reaching the chalk at a depth of sixty feet from the bottom of the well, and was continued into the chalk for a depth of fifteen feet—140 feet in all. The question arising out of this was, how the organic matter discovered by Mr. Ogston's and Dr. Corfield's analyses should have found its way into the water. The suggestion on the part of the plaintiff was that surface sewage found its way into the well from above by filtration, and so forcing its way produced the impurities in the water which had the injurious effect on the health of the family as described. As to this Mr. Mylne, a civil engineer and a geologist of considerable attainments, gave it as his opinion that filtration was impossible through strata of clay to the depth described, and adduced reasons in support of his opinion. However, to avert this, if it were possible, the casing of the well was completed on the part of the defendant, and it appeared that if that casing were good and sound it must finally preclude any possibility of surface filtration into the deep well. A second point in issue, therefore, was, whether this work had been executed in such a manner as to insure immunity from that danger. On this point there was a considerable conflict of evidence, the plaintiff's witnesses saying that the cement of the lining was of an inferior character, and had never been allowed to get hard, and that the work was, in short, so executed that it would not exclude water from the well. On the other hand, for the defendant, the bricklayer who cased the well said that it was made thoroughly sound and water-tight, and every precaution taken; and several witnesses who had seen the well pumped dry since the casing pronounced it to show no signs of leakage. One of these witnesses had, in the course of this week, while the action was proceeding, made holes in the side of the well, and pronounced the casing to be sound and water-tight, and of a considerable thickness. At one time no doubt some water had found its way into the bottom of the well while the pipe was closed, as the plaintiff alleged, through defects in the concrete at the bottom; but for the defendant it was said this was occasioned by the loosening of the standpipe in consequence of violence used by the plaintiff's servants in putting in and taking out the plugs. Another point at issue between the parties was whether the symptoms developed by those of the plaintiff's household who suffered from ill-health while at Clandon were such as would be occasioned by drinking impure water. On this point Dr. Stedman, of Guildford, who attended the plaintiff's family, expressed his opinion that the type of illness, from its similarity in the several cases and from its general character, was a probable result of the drinking of impure water, and in this he was supported by Mr. Thornton, surgeon to the London Hospital for Diseases of the Throat, and to some extent by Dr. Corfield. On the other hand, Professor Wanklyn, Dr. Stevenson, lecturer at Guy's Hospital, Dr. Sills, of Guildford, Mr. Haynes Walton, surgeon to St. Mary's Hospital, and Dr. Morell-Mackenzie expressed their opinion that impure water would never produce the symptoms detailed by Mrs. Corrie and her daughters and by Dr. Stedman. It was incidentally suggested by these witnesses that the wall-paper of the dining-room being loaded with arsenic might produce such symptoms, but they were disinclined to attribute them to either one or the other cause. Another point which presented considerable difficulty was the reconciling of the various analyses made of the water at different times. The analyses made before the casing of the well presented unfavourable features in every case; but for the defendant it was contended that it was not clear that all these came direct from the deep well, or without admixture with water from the shallow well in the pipes through which it came. The analyses, however, presented also a great divergence of opinion, even after the casing of the well; Dr. Corfield and Mr. Ogston still reporting unfavourably of the water, while Professor Wanklyn, the late Dr. Letheby (whose evidence was read), and Dr. Stevenson pronounced it very good. It became, therefore, a question for the jury what conclusion they would arrive at from these analyses taken in connexion with the rest of the evidence. After very forcible speeches by Mr. Day, Q.C., and the Solicitor-General on behalf of their respective clients,

The learned Judge summed up the case with great care,

telling the jury that the questions they had to answer for the determination of this action would be the following:—Had a reasonable time elapsed for the defendant to do the work under the covenant to secure a sufficient supply of water to the house before the action was brought? And if the answer of the jury to this should be in the affirmative, the following question would arise:—Did the defendant within a reasonable time do the necessary work to secure a sufficient supply of water—first in quantity, second in quality?

The jury found a verdict for the plaintiff for £100.

On the above case (our correspondent observes) we would remark that singular ill-luck seems to have pursued the defendant from first to last. In the first place, no prudent man would have allowed such a special clause to be inserted in a lease; but when the deficiency of water was pointed out, he acted with the utmost promptitude and good faith in causing the well to be bored down to the chalk. There, we suspect, most people would have thought the matter ended, as he did, and that with the well passing down 125 feet through clay, any doubts as to the quality or quantity of the water from the chalk below would have been at an end. It seems, however, that the ladies of the family had sore throats, which defied the skill of Dr. Stedman, who thereupon suggested impure water as a possible cause. What are the special symptoms which led Dr. Stedman to this conclusion does not appear, for there seems to have been no diarrhœa, no boils, nor other symptoms distinctive of impure water; whilst the symptoms of sore throat detailed at the two trials were inconsistent with each other. He said the throats were as red as a piece of raw beef; but it would be interesting to learn from him what special throat symptoms arise from unwholesome water. It must not be forgotten, too, that the dining-room was hung with a paper which was thickly loaded with arsenical pigment, and that the persons who suffered were the women and stayers at home. Here was a condition in the house well worthy Dr. Stedman's attention, but which he seems to have passed by unnoticed. Nothing could have been looser than the way in which the water was taken for analysis. There was no evidence of the identity of the water which was forwarded to the defendant; and we would suggest that for the future, in any similar case, the samples ought to be taken in the most careful manner by some skilled indifferent person, so as to make sure that samples sent to the plaintiff's and defendant's analysts respectively are from the same source. There was no clear history or identification of the sample which the defendant sent to Dr. Corfield; and we may observe, in passing, that it is odd to see Dr. Corfield acting as the defendant's adviser and analyst in June, and as the plaintiff's adviser and analyst in the following December. The defendant was certainly unlucky in the people he had to deal with; for with the imprudent frankness of an honest man, immediately on receiving Dr. Corfield's analysis of the water, he sent a copy of it to the plaintiff, who thereupon seems to have made it the ground of action.

As to the water itself, we pass over the conflict of analysts, but would notice that it is established in the most irrefragable manner by Mr. Mylne, the well-known geologist and author of the "Geological Map of London," and the workmen who examined the sides of the well, that not a drop of water could filter down, or did filter down, from the surface through 125 feet of clay, so as to contaminate the pure chalk-water at the bottom. Here are two wells, side by side, within a few feet of each other—one, thirty-five feet deep, full to within a yard of the top, unmistakably fed from the surface; the other, twice the depth, with no water less than forty feet from the surface. If the two wells communicated with each other, or with some porous stratum common to both, it is inevitable the shallow well would empty itself into the deeper one—which is not the case. The professional evidence of Mr. Haynes Walton, Dr. Morell-Mackenzie, Dr. Stevenson, and Mr. Sells, of Guildford, showed conclusively that sore throats might come from any ordinary cause, to say nothing of the arsenical paper; whilst the positive testimony of Mr. Wanklyn, the late Dr. Letheby, and Dr. Stevenson showed that there was nothing in the water to account for it. But—to show the glorious uncertainty of the law—at the first trial the jury gave a strongly worded verdict in favour of the defendant, whilst on this occasion they found a verdict against him. Five minutes afterwards, in Westminster Hall, the report was current that the jury said they thought the defendant was a doctor, and found against him because they thought that his medical and scientific witnesses had backed him up from mere *esprit de corps*.

FROM ABROAD.

Adjudication of Prizes at the Académie de Médecine.

After an unusually long delay, the prizes for 1876 were distributed at the annual meeting of the Académie on the 16th inst. Besides these, however, the Council conceived what the *Union Médicale* terms the "happy and pious idea" of decreeing a medal to those of the members who have formed part of the Academy for fifty years, and the following nine Academicians are in that position—viz., MM. Bussy, Chevallier, Boutron, Hervez de Chegoin, De Kergaradec, Piorry, Jules Cloquet, and Bouillaud; the last-named being still one of the most active and eloquent of the learned body, having just announced that he will commence the new year by starting one of those discussions for which the Academy has become perhaps too famous. Another venerable Academician, M. Jolly, now in his eighty-seventh year, unable to attend himself, forwarded, to be read at the meeting, an elaborate essay on "Memory," which is pronounced by the critics a *chef d'œuvre*.

1. For the Academy Prize of 1000 fr. for the best memoir on the "Treatment of Aneurism by Compression" there were two essays sent in, for neither of which was the prize itself awarded, but a "recompense" of 800 fr. was awarded to M. Pize for one of them. 2. The Portal Prize of 2000 fr. was adjudged to Prof. Hayem for his "Researches on the Pathological Anatomy of Muscular Atrophies." 3. For the Civrieux Prize of 900 fr. on "Sleeplessness" there were six competitors, and the sum was divided among three of the best of these. 4. The Capvron Prize of 3000 fr. was adjudged to Dr. Michel Peter, for his memoir on Pregnancy and Diseases of the Heart. 5. The Barbier Prize for the discovery of the cure of an incurable disease, as usual, was decreed to no one, but an "encouragement" was given to M. Moncoq for his apparatus for the instantaneous transfusion of blood. 6. The Godard Prize of 1000 fr. was given to M. Mauriac, for his work entitled "Psoriasis of the Tongue and the Buccal Membrane"; and a *mention très-honorable* was awarded to M. Paul Olivier, for his printed work "On Osseous Tumours of the Nasal Fossæ and of the Sinuses of the Face." 7. The Lefevre Prize of 3000 fr., "On Melancholia in its relations with General Paralysis," was awarded to the joint authors of the best of four essays, Drs. Voisin, of the Saltpétrière, and Burlureaux, of the Versailles Military Hospital. 8. The Argenteuil Sexennial Prize of 8000 fr., for the best improvements in treating stricture, or other affections of the urinary organs, which have been introduced during the years 1869-75, was not awarded, or rather it was split up into the following "encouragements":—M. Duplay receives 5000 fr. for his work on "Perineo-Scrotal Hypospadias, and its Surgical Treatment"; Dr. Squire, of New York, receives 1500 fr. for his work on a "Vertebrated Prostatic Catheter"; and M. Bénas, of Paris, 1500 fr. for the modifications which he has made in the filiform bougies termed *crins de Florence*. 9. The Academy also decreed a prize of 1200 fr. to Dr. Bertillon, and one of 300 fr., with a gold medal, to Dr. Vacher, for their essays on the statistics of the mortality of infants during their first year.

A vast number of gold and silver medals were also decreed to the Physicians for Epidemics, Medical Inspectors of Mineral Waters, and Physician-Vaccinators.

Action of Metals in Anæsthesia.

At the meeting of the Biological Society, January 13, Prof. Charcot gave an account of some experiments now carrying on at the Salpétrière, with the aid of M. Burq. It is well known, he observed, that in hysterical patients one side of the body is often struck with anæsthesia, which is not transitory, but permanent. Now, if in a certain number of such cases a twenty-franc gold coin or two be placed on some part of the anæsthetised side, it will induce in fifteen or twenty minutes a return of sensibility throughout a zone extending from five to ten centimetres above and below the points on which such coins have been placed; and this sensibility will persist throughout a whole day. In other hysterical subjects gold produces no such effect, and copper requires to be employed, while in others it is zinc; but it is gold which most frequently so operates. One day, M. Charcot, wishing to show those who accompanied him how evident the hemi-anæsthesia was

in a hysterical patient, traversed the length of her arm with a long needle. The patient uttered a terrible cry, and it was then ascertained that M. Burq had applied the metal to her arm the same morning. Not only does the sensibility return, but there is an elevation of temperature, and the dynamometer indicates an increase of force. The return of sensibility does not take place suddenly, the patient feeling first by cross-purposes, *e.g.*, ice will feel like a hot body. It is well known that hysterical anæsthesia disappears under the influence of faradisation, and it may be asked whether these metallic applications give rise to a simple electrical phenomenon. This is a question which will be decided by an investigation by physical and physiological experts which is now being made. However this may be, the fact itself has been proved in the plainest manner. Without adopting M. Burq's views on what he calls metallo-therapeutics, Prof. Charcot acknowledges that his point of departure is perfectly exact. He added, that the metals act not only on the anæsthesia of the hysterical, but furnish absolutely the same results when this is due to organic causes, *i.e.*, dependent on cerebral lesion.

The Berlin University in 1876-77.

Dr. Waldenburg furnishes (*Berlin. Klin. Woch.*, January 1) the following particulars concerning the number of students now frequenting the Berlin University:—As regards the general number of students, he observes, it is decidedly looking up again, the matriculated students having increased from 1977 in the last summer session to their present number, 2490—viz., 139 at the Theological Faculty; 1003 in the Juridical; 81 in the Medical; and 1064 in the Philosophical, including natural history. Besides these, 160 students of the Military Medical School, and 150 non-matriculated students, have the right of attending the lectures, increasing the auditors to 2800. Then there are a large number of pupils of the architectural and other public academies, which bring the total up to 4597. Of the 2490 matriculated students, 2039 are Prussians, 221 were born in other parts of the German Empire, 15 non-German Austrians, 24 Hungarians, 61 Russians, 22 Swiss, 14 Roumanians, 11 British, 9 Greeks, 8 Italians, 6 Dutch, 3 Servians, 2 Turks, and 1 Spaniard. From America there have come 45 students, from Africa and Asia 4, and from Australia 1.

The above figures show the preponderating number of students who attend the Faculties of Jurisprudence and Philosophy, including the natural sciences, their numbers having increased in an astonishing manner of late; and in complete contrast with these is the Theological Faculty, which has been just as constantly falling away. As to the Medical Faculty, it has during the last five sessions shown hardly any difference in its small numbers. In 1874 was the first time it counted less than 300 students; and its descent was progressive to the present session, when it has somewhat rallied. On comparing the number of foreigners in the various faculties, it is found that the Medical Faculty has relatively by far the largest number, as has been the case, indeed, in almost all the semesters. The entire number of students from non-German European States is 161, of which 53 belong to the Medical, 75 to the Philosophical, 27 to the Juridical, and 6 to the Theological Faculties. From more distant parts of the world have come 54 students, of whom 15 belong to the Medical, 31 to the Philosophical, and 8 to the Juridical Faculties. If the 68 foreign medical students be deducted, the number of German medical students is less than 200, forming a marked contrast to the preponderating number of juridical students. Can the inference be drawn, then, that the study of medicine has become less attractive than other studies? That the science and art of medicine has not retrograded no one will doubt; but it is certain that the remunerative gains of practitioners, and perhaps their social position in consequence, have diminished in Germany. This diminution of medical students is not confined to Berlin, but is observed in all the other German and in the Austrian universities. That the Berlin University still possesses very great attractions is seen by the great number of foreigners who resort to it for the purpose of studying medicine; and this attraction is undoubtedly due to the great eminence of its professors and teachers. It is remarkable, however, that not a single medical student comes from German-Austria or Bavaria; and that Berlin, in spite of the great eminence of its teachers, and the abundance of its teaching material, does not hold a corresponding position among the other German universities is shown by the start several of these have gained upon it. The explanation of this by the dearness of living at Berlin in recent times, which has been so frequently advanced, cannot be admitted in face of the large numbers of students in the Philosophical and Juridical Faculties. Prof. Waldenburg has too good an opinion of the students to believe that the severity of the examinations explains the diminution of medical students in Berlin; but he believes, as more justifiable, the complaints which are made that these examinations are prolonged over many months, while in other places they are got through more expeditiously. One among numerous obstacles to the sufficient utilising of the teaching material for students is the deficiency in special clinics, the exclusiveness of the arrangements of the Charité Hospital, which was originally founded for military purposes, having prevented their progressing with the increasing wants of the time. Prof. Leyden, in his recent oration in memory of Prof. Traube, delivered in the presence of the Minister of Public Instruction and his Council, drew a striking parallel between the Berlin Charité and the Vienna General Hospital, showing the bad state of things when Traube was appointed; and this remains pretty much the same at the present time.

REVIEWS.

The Germ Theory applied to the Explanation of the Phenomena of Disease: The Specific Fevers. By T. Maclagan, M.D. Macmillan and Co. 1876. Pp. 258.

Let it be granted that the acute specific fevers are directly caused by enormous numbers of minute organisms which grow and propagate themselves in the fluids and tissues of the body: is it possible to explain the symptoms of the said fevers by supposing them to be the immediate results of the said growth and propagation? Such is the question Dr. Maclagan has set himself to answer, and it will thus be obvious that his work can claim to be no other than a series of hypotheses founded on another hypothesis hitherto unproved. It will be equally clear that to review such a book satisfactorily it would be necessary to produce a volume of almost equal size, as each chapter stands more or less upon its own merits. All that can be done is to indicate to the reader a few of the explanations offered by the author, and leave him to form an opinion as to their adequacy. After discussing the nature and action of contagium, and contrasting the action of contagia with that of other poisons, the general characters of the specific and eruptive fevers are stated in two remarkably short chapters. The period of incubation is then dealt with. It is suggested that during the whole period the organisms are multiplying, although they have not reached a sufficient number to cause any serious symptoms; but at last the development becomes more rapid: "Suppose that each produces four others, and that these, in their turn, give rise to as many more; it is evident that the number of germs will soon be so great that it cannot be quadrupled without causing almost an explosion of disease germs in the system. The advent of this inevitable result terminates the period of incubation, and ushers in the stage of invasion."

Having reached this position, the next hundred pages and more are devoted to explaining the various symptoms of fever one after the other—the febrile state, the wasting of the nitrogenous tissues, the increased elimination of urea, and so on—each of which is made to depend upon the growth of germs in the system. Thus, the wasting of the nitrogenous tissues results from the consumption of nitrogen by the contagium particles; the increased elimination of urea from the acceleration of the blood-flow, which "is due to no increased demand on the part of the tissues, but to the propagation of the contagium in their minute structure"; thirst depends upon the demand for water on behalf of the organisms; and all the other well-known characteristics of fever receive a similar elucidation. It will be observed that Dr. Maclagan has up to this point been dealing not with anything which is special to the specific fevers, but to symptoms which are constantly met with in cases of fever when no germs can be supposed to be present. In his preface, he specially deprecates criticism on this head, but it is impossible to accede to his request. We must strongly protest against the publication of a discussion avowedly dealing with only one-half of a question which does not, in our opinion, admit of subdivision. It would surely have been better to have waited

until a few more "odd hours snatched from the busy routine of practice" had allowed him time to give us some reasons why symptoms which are characteristic of all cases of fever, and which in most cannot possibly be thus brought about, should, in certain special instances, depend upon a cause so complicated and so hypothetical. What is it, for example, which in the case of an acute pneumonia or an accumulating abscess plays so exactly the part which in the specific fevers is ascribed to the developing germ?

But now, in the words of our author, let us "drop the organism and take up the parasite." Looking at contagia in the light of parasites, an elaborate comparison is drawn between the hypothetical organisms—which, it should be remembered, have such doubtful relationships as to stand on the debatable ground between animal and vegetable life—and parasites as a class by themselves, including, we suppose, animals, if not plants, of all degrees of differentiation. The class, however, cannot be intended to be very inclusive, for we find given as characteristics of them "that each parasite has its own special nidus, out of which it is not propagated," and "they grow and reproduce their ova with such rapidity, and in so great numbers, that were every ovum to come to maturity the results would be most disastrous." In short, it is evident that it is only a very few members of the class with which a comparison is intended to be instituted. The reader will experience a shock as he reads a passage such as this—"Contagia, then, we regard as minute parasitic organisms, all of which, organism-like, exercise a definite action on their environment, and each of which, parasite-like, requires a special nidus for its development." Can it be, after all that we have been reading, that the organism is developed only in the seat of the local lesion? and if so, how is it to produce the widespread and disastrous effects which startled us in the earlier parts of the book? But no!—there is a subtle distinction to be drawn between the organism as it exists in the body at large, and in the seat of the local lesion. "In any other part of the body the parasite would find the materials required for its growth as an organism; but only in its nidus does it find that other substance which is essential to its propagation and continued growth as a parasite." This is indeed a mysterious and somewhat incomprehensible arrangement, and one to which we fail to trace any analogy in the history of what are commonly known as parasites. At the seat of the local lesion the process of fecundation of the organism, in its capacity of a parasite, is going forward, accompanied by such an increased development of heat as gives rise to the characteristic appearances, whatever they may be; while in the system at large the parasite, in its capacity of an organism, is still running riot, and producing all the ordinary symptoms of fever. The question here must naturally arise—Does the organism collect itself at the seat of local lesion when the eruption appears, and henceforth begin to propagate itself as a parasite and drop the character of an organism; or does the propagation of the parasite continue to supply countless numbers of the organism, which find their way into the system? The answer to this is found a few pages later, when Dr. Maclagan is describing the life-history of a germ—we will give it in his own words. "A disease germ is received into a susceptible system, *i.e.*, one containing the second factor essential to its propagation"—viz., at the seat of the local lesion—"and circulates with the blood through the body; presently it comes in contact with its second factor, and at once is subjected to that influence" (called elsewhere the fecundating powers of the nidus) "which leads to the formation from it of similar germs, which in their turn act in the same way as the parent from which they sprung; and so the process goes on, each germ giving rise to several more. At first they are probably confined to the nidus, but as they increase in numbers they pass from this through the lymphatics into the circulation." Now, as we have before stated, the whole book is a process of theorising from beginning to end, and it is therefore, perhaps, quite justifiable to speculate upon a subject of which so little is known as the reproduction and development of these lowest organisms. As a matter of fact we know, however, that, as a rule, if a given organism grows in any particular medium it increases in numbers at the same time, and if it does not multiply it either remains stationary or dies; and it would therefore be an exceedingly interesting fact if it could be proved that this double existence of disease germs actually occurs. But we must point out that this life-history, which we think might well have been given as a text to the earlier part of the book, still leaves very important questions unexplained. What, for instance, is the condition of things during the period of incubation? Is the local lesion already present, although to so slight an extent as to be inappreciable? or, if it be not present, how have the myriads of germs come into existence, which give rise, according to our author's theory, to the symptoms of fever, often very severe before our utmost skill is able to detect any local lesion whatever?

Dr. Maclagan does not add any new observations to those already before the public, and some of his conclusions are based upon those of Dr. Klein, which have recently been shown to be erroneous. There are some signs of haste, not only in the subject-matter, but in the style of composition. Most of the theories propounded are very ingenious; many of them, we suspect, will require modification on further consideration; scarcely any are at the present time capable of proof. It is for these reasons, and not because we have ourselves any doubt as to the dependence of specific fevers on organic germs, that we must hesitate to accept all that Dr. Maclagan would have us to believe.

The Abridged Medical Account-Book or Index-Ledger. Edinburgh: Sang and Barker, Barony-street. 1877. Pp. 144.

Any method of keeping medical accounts which promises to economise time is worthy the attention of the busy practitioner. We have therefore pleasure in directing attention to the Index-Ledger just published by Messrs. Sang and Barker, the use of which not only insures correctness, but effects a vast saving of time in comparison with the old system of posting from the day-book. The system of the Index-Ledger proceeds upon the assumption that it is not necessary to detail the visits in the ledger, hence the numbers of visits only are entered under the respective heads of the months. It may be objected to the system of lumping visits and attendances in this manner, that it might create confusion where an account is disputed, but in such cases the day-book or visiting-list could be referred to. The accounts are intended to be entered in the ledger in alphabetical arrangement, according to the initial letters of the patients' surnames, by which the writing of a separate index is avoided. Three lines are allotted to each name, so that if an account is rendered once in a year only, one line is filled up, and if twice, two lines are required. If used with the "Visiting-List and Register" of the same publishers, the "Index-Ledger" will be found to be, as regards time, a very economical method of keeping accounts.

Hospital Saturday Fund.—The Hospital Saturday Board, it is stated, will hold a meeting on February 10, at which the amounts awarded to each institution will be announced, and arrangements made for the next collection.

The Weekly Returns of the Registrar-General of Ireland.—We notice two improvements in these valuable Returns since the commencement of the new year. First, we have a development of the meteorological information, abstract reports being now published from Greenwich, Glasgow, Edinburgh, Dublin city, Armagh, and Parsonstown, in addition to the observations taken at the Ordnance Survey Office, Phœnix-park, Dublin. Secondly, the Registrar-General now gives a very full table containing statistical information as to births, deaths, and meteorology for a period of twenty-six weeks. In thus enlarging his Returns, Dr. Burke is showing himself to be fully alive to the advance of sanitary science.

Preventing the Tarnishing of Mirrors by the Breath.—A correspondent of the *Union Méd.* states that he has discovered by chance the means of preventing laryngoscopic and other mirrors becoming tarnished by the breath. It consists simply in passing lightly over the polished surface a rag moistened with glycerine. The vapour contained in the expired air is completely dissolved in the glycerine, and no cloud is formed on the mirror. This is a preferable procedure to that of plunging the mirror into warm water, or heating it by the flame of a lamp; for then there is fear of causing pain by introducing the mirror when too warm, while it soon becomes tarnished again on losing its acquired heat. The slight film of glycerine is unattended with these inconveniences, for a mirror so prepared may be breathed upon for a quarter of an hour without becoming tarnished. The glycerine may be useful in the same way under a variety of circumstances, as to astronomical observers, the wearers of spectacles in misty weather, and persons who shave with their faces close to the mirror, etc.—*Revue Méd.*, December 26.

GENERAL CORRESPONDENCE.

ANIMAL VACCINATION, CONSIDERED AS A MEANS OF OBTAINING PLENTY OF PURE LYMPH.

LETTER FROM DR. C. R. DRYSDALE.

[To the Editor of the Medical Times and Gazette.]

SIR,—That vaccination is the most splendid triumph of preventive medicine possessed by science is, I suppose, admitted on all hands by persons with capacity for estimating evidence. There are, however, I believe, two objections against vaccination from arm to arm, or to humanised lymph. Firstly, some diseases may be conveyed by such lymph; and, secondly, there is apt to be a great paucity of vaccine lymph at a time like the present, just when it is most needed for revaccinations, etc. Both of these objections must, I think, be admitted to have a certain weight; for that syphilis is now and then communicated from an infant that is apparently perfectly healthy to other healthy children, by vaccination, is now admitted by all. In a country, then, like this, where the law forces all parents to vaccinate their infants, it would seem not unfair that timorous parents should, if possible, be allowed to ask from the hands of the Government a supply of lymph which should be *sans peur et sans reproche*.

The practice of animal vaccination is now very successfully carried on in Belgium, and also in the State of Massachusetts, U.S.; and it seems to me that it deserves our most close and sympathetic attention. Having lately written on this subject in one of the daily papers, complaining of the great difficulty I had recently found in obtaining lymph from the Government Vaccine Department in Whitehall, I have had many letters from medical men in London and the provinces, complaining of the same difficulty. Hence I think none will deny that the Government is at present totally unable to meet the emergency of a sudden epidemic by merely using ordinary humanised lymph. But, were animal vaccination made use of, an unlimited supply of vaccine could be had in a week or two.

At the Belgian "Institut Vaccinal de l'Etat," we are informed by Dr. Warlomont that animal vaccination is rapidly superseding humanised lymph. Thus, of 2000 practitioners in Belgium, some 1000 gentlemen practise vaccination; and of these I find, from a pamphlet I lately translated at the request of Dr. Warlomont, that 768 applied to the State Vaccinal Institute for animal vaccine points in 1873—showing that the whole of Belgium is rapidly taking up the idea that animal vaccine ought alone to be relied on, as being superior to that from arm to arm. It appears, too, that vaccinations made with ivory points of animal vaccine matter, delivered by the Institute, succeeded in 96 per cent. of the cases vaccinated; and that, in revaccinations, as many as 62 per cent. were successfully inoculated by it. And it is alleged that, out of more than 10,000 children vaccinated at Brussels by animal vaccine from 1865 to 1870, and passing through that great epidemic of small-pox of 1870-71, not a single child was attacked by variola, whilst the same immunity was noticed in all persons who were successfully revaccinated by animal vaccine—a far greater number, of course, than 10,000.

With regard to the dearth of vaccine virus, about which so many of us have at present a good deal to say in London, this, I suppose, cannot, or need never, exist in Brussels. In the time of the epidemic in Belgium, the said State Institute of Brussels furnished animal vaccine for more than 500 vaccinations daily, and sent off a great deal of lymph to foreign countries. And if 5000 vaccinations a day had been needed, all that the Institute would have required would have been to hire a greater number of young calves. The calves are lent by a butcher to the establishment for a week, and then removed in perfect health and undiminished value, after furnishing lymph and keeping up the supply. The origin of the vaccine lymph at present at Brussels is from an outbreak of cow-pox in 1869. Indigent persons are vaccinated gratis by the State in Brussels; others pay for vaccination from the calf at the Institute; and medical practitioners desiring points (by far the best way of preserving animal vaccine) can get them by payment from the Institute. I have more than once written to Brussels for lymph, and found it very successful.

The moral of all of this is, I submit, very evident; and I am informed that you have already called attention to this question in your journal in former years. In a country like this it would be most advisable to have, in addition to the present admirable system of vaccination—which, if perfect, I hold ought to be certainly compulsory on all parents who have assumed the responsibility of carefully rearing children,—a department for the culture and practice of animal vaccination in connexion with the Government. Dr. Warlomont, whilst passing through London recently, informed me in conversation that he had urged this on one of the most well-known medical officers of Government. That gentlemen met his observations by the reply that our system of vaccination was now so well organised that the introduction of animal vaccine would be apt to throw it out of working order. "Then," said Dr. Warlomont, "you might practise animal vaccination only at some stations." To this the reply was (and it proves Dr. Warlomont's argument) that, if animal vaccination were put in competition with humanised lymph, people would all flock to the stations where it was procurable, and desert the others.

In conclusion, allow me to recapitulate. Animal vaccination is free from the slightest imputation of impurity, and would possibly minimise the frantic opposition of so many people in this country to having their children vaccinated; and it has this immense advantage over humanised lymph—that it is obtainable in unlimited quantities in times of epidemics.

I am, &c., CHARLES R. DRYSDALE,
M.D., M.R.C.P. Lond., F.R.C.S. Eng.

[*** This letter arrived too late for insertion last week.—ED. *Med. Times and Gaz.*]

GOVERNMENT SMALL-POX HOSPITALS.

LETTER FROM DR. EDWARDS CRISP.

[To the Editor of the Medical Times and Gazette.]

SIR,—Whether or not you approve of the plan I have long advocated, as regards the establishment of Small-pox Government Hospitals, you will perhaps have no objection to insert the enclosed resolution which I moved yesterday at the Chelsea Vestry. I scarcely expected to have had it seconded. It was lost by nineteen to three. It is, I believe, the first attempt, at a London vestry, to show that the present system is utterly inefficient. The rejection of 200 persons last week by the London Asylums Boards probably added 1000 to the list of small-pox patients.

I am, &c.,
29, Beaufort-street, Chelsea, Jan. 17. EDWARDS CRISP.

"That, looking to the past and present history of small-pox epidemics in the metropolis, the disease has been much spread and extended in consequence of the inadequate provision made by the Government for the reception of persons, paupers or otherwise, affected with the disease, as well as from the absence of convalescent asylums for the seclusion of patients until the danger of contagion has passed. That this Vestry is further of opinion that such permanent hospitals, on a large scale, in suitable localities, and with proper ambulances, should be provided by the Government; and that a petition be presented to Parliament by the Vestry at the earliest opportunity, embodying these views, and praying for an alteration of the law."

PRIVATE SCHOOL OF ANATOMY.

LETTER FROM MR. THOMAS COOKE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Would you kindly do me the favour of inserting the following letter in your next issue (though it has already appeared in some of the daily papers), and further allow me to make two important quotations, and add two remarks:—

1. A nuisance was defined "anything annoying," "affecting the enjoyment of others," "offensive to the general idea of the public" (Mr. Besley, the counsel for the prosecution). "Offensive to the senses, but not necessarily detrimental to health" (Sir Thomas Gabriel, the magistrate).

2. My rooms were screened from the gaze of all except trespassers on my roof, the staircase of my floor leading to no other rooms but mine, and therefore strictly private; well ventilated by a "strong up-current," and "there was nothing to find fault with" (Dr. Sedgwick Saunders, Medical Officer of Health for the City of London).

3. By Sections 1, 12, 5, 3, and 2 of the Anatomy Act

(2nd and 3rd William IV., chap. 75), the licence to practise anatomy is personal; the choice of the site rests with the licensee, who is simply to give one week's notice thereof to the Home Secretary; the "inspector of places where anatomy is carried on" is merely to "visit," "inspect," and "superintend" such places. No blame whatever attaches, therefore, to Mr. Hawkins with regard to the granting of the licence for New Bridge-street.

4. I believe myself justified, however, in feeling aggrieved that Mr. Hawkins did not come to see my premises as soon as dissatisfaction appeared to exist. A word from Mr. Hawkins would probably have dispelled the unenlightened prejudices by which I was assailed. Instead of that, Mr. Hawkins, without taking the trouble to acquire any personal knowledge of the facts, suddenly ordered me to remove a body (the only one I had) which was in a state of perfect preservation, and which he had previously authorised me to keep, if necessary, the full period of six months, instituted by order of Mr. Home Secretary Bruce.

This arbitrary decision appears to have caused the ruin of my school. It took out of my hands the only absolute proof I had that my school had been carefully conducted.

It, further, drove my friends to the stratagem of the empty coffin, about which you have doubtless heard. My friends thoroughly believed, as did also the City sanitary authorities, that all that the complainants had smelt was the smell of carbolic acid. And this turned out to be the case, since, on seeing an empty coffin brought in, and believing that there was a body in it, they again said "they perceived the same smell as before."

I beg, sir, on account of the painful and most serious circumstances in which I had been placed, to crave indulgence for anything that was objectionable in this empty-coffin-stratagem, and also, for the future, to solicit the protection which would, I believe, certainly result from more frequent visits of the Government inspector. I am, &c.,

School of Anatomy, &c. Thomas Cooke, F.R.C.S.

Sir,—After the concluding remark of Sir Thomas Gabriel upon my case, that "nothing could be more honourable than the high and public spirit in which I had treated the matter," it is doubly painful to me to recall attention to the "atrocious trick" on which the magistrate commented so severely. A misstatement of Sir Thomas, highly prejudicial to me, having, however, found its way into the public press, I trust you will allow me to correct it through the medium of your columns. Sir Thomas stated in summing up "that the nuisance had been abated since Saturday, January 13, and that the witnesses had not complained of it since, even though they were led to believe that a body was in the house. Nothing," added Sir Thomas, "could be more conclusive evidence of a nuisance." The facts are as follows:—At the first sitting, on Monday, January 15, Mrs. Benbow stated that she saw the body removed on Saturday night, January 13, and that since then (that is, till Monday, January 15) no further smell had been perceived. At the adjourned sitting on the following Saturday, January 20, Mr. Benbow stated that another body had been brought in on Thursday, January 18, at 2 a.m., and that since then on coming near the skylight he had smelt the same smell as before. This smell, he added, was not quite so strong then, but would, he expected, be quite as strong in about two or three weeks' time. Now, sir, what was brought in on Thursday, January 18, at 2 a.m., was an empty coffin profusely sprinkled over with carbolic acid. I make but one remark: The circumstances connected with the smell—*i.e.*, its occurrence, its cessation, its recurrence, and even its varying intensity—accurately coincided, not with facts, but with the idea present in Mr. and Mrs. Benbow's minds. This bears out the belief of the sanitary authorities, that what was smelt all the time was the carbolic acid only. Since I promised to do so, I must abide by the magistrate's decision, and remove my school, even at a loss of perhaps £500 or more; but I do ask, in all justice, that a false inference, based on a *lapsus linguæ*, be not allowed to circulate, backed by the high authority of Sir Thomas, without being corrected. The Medical Officer of Health of the City of London—the only truly scientific witness called in the case—stated that he put his nose within an inch of the body, and remained half an hour in my rooms, yet neither perceived any smell, except that of pure carbolic acid, nor saw anything to find fault with; and reported the same to the sanitary authorities. He added that precautions were taken in my school with more care than in the rooms at hospitals. The testimony of the inspector of nuisances was to the same effect. I am, &c.,

Thomas Cooke, F.R.C.S.,
Senior Assistant-Surgeon to the Westminster Hospital.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 9.

R. P. Cotton, M.D., Vice-President, in the Chair.

Large Pendulous Tumour from the Cheek, removed by Operation.

Mr. E. Law Hussey (Oxford) gave the particulars of the case of a gentleman, seventy-three years of age, who was the subject of a parotid tumour of unusually large size, which had been growing slowly for more than fifty years, and hung down far below the jaw, resting on the clavicle and shoulder. The opinion of a medical practitioner had been taken in an early stage of the growth, but the patient had never consulted one in subsequent years, notwithstanding the increase of the incumbrance, and the attending deformity. In May last he had a sudden and alarming attack of hæmorrhage from the superficial vessels, and after this the tumour was observed to be growing more rapidly. After a consultation with Mr. Prescott Hewett, who concurred in the opinion given of the practicability of the operation, and advised the performance without delay, the tumour was removed by Mr. Hussey, and the patient recovered perfectly. The operation was attended with profuse and almost fatal hæmorrhage. Great difficulty was experienced in securing the large arteries in the pedicle. It was found to be impossible before operating to compress the pedicle in any way so as to arrest the hæmorrhage which was to be expected upon division of the vessels. In general structure the tumour seemed to be of the usual nature of parotid tumours; the older part was of firmer consistence and darker colour. It was free from cartilage, and from purulent or malignant deposit. The weight was three pounds avoirdupois. The preparation had not been preserved for minute examination.

Dr. P. Black said he had known the subject of this deformity for many years. It was first noticed about 1832. From that time it grew gradually, and ought to have been removed, but the patient was timid about the matter, and would not consent to an operation. He saw the patient a few weeks ago quite well.

Case of Sclerema Adultorum.

Mr. George Gaskoin read the notes of this case, which was that of a married woman, aged forty, who experienced a mental shock when six months advanced in pregnancy, and was subsequently affected on various parts of the body with certain stains or patches, which had generally the character of morphœa,—they were large in size, and in shade of colour mostly dark, but varying from dark-red to yellowish-white, with much diversity of tint. These patches were extremely hard, and were the seat of pain, anæsthesia, pruritus, and constriction. A certain proportion of them were marked by a notable subsidence of the central portion of the patch. There was, besides, a temporary œdema and condition of tenderness. The stains were far more numerous on the lower than on the upper limbs. The region of the head and face were alone exempt. The constitutional symptoms were not strongly marked, but assimilated to those of anæmia. During the course of the past year these patches had gradually disappeared, and had given place to an intense staining of the general integument, so as to rival the colour of a negress, but by no means with the same uniformity of tint nor with the same universality in its distribution. It affected the greater part of the body, but more the lower half and the limbs. It was attended by a condition of sclerema which answers generally to the sclerema of Thirial—*i.e.*, the limbs were like logs of wood, they set firm and icy cold like those of a corpse, and the skin was tightly stretched, with a glossy, shining superficies. The sclerema affected not only the integument, but the muscles, aponeuroses, and tendons; the joints were painful and contracted, and there was also pain in the bones. The

origin of the complaint seemed to have been tubercular. Certain knots or aggregations of tissue were found in the deep and superficial tissues. These ran a certain course, which anticipated the tension and the hardness. In the process of their development a blackness was added to the skin. The sclerema appeared to be of a mobile character. All the limbs were affected, and much of symmetry was discerned, but in point of time there was inequality—the invasion of these parts not being simultaneous. The disorder seemed influenced by damp and cold; it appeared to have something in common with the well-known arthritic affections. The urine was clouded with lithates; the catamenia scanty and abnormal; in other respects the functions were not disturbed, and the patient's strength, after three years' illness, was not materially impaired.

Mr. Sedgwick had first seen the case referred to in 1875, and he was able to confirm Mr. Gaskoin's statement. In another case the patches also disappeared, and the skin got quite normal.

Dr. Tilbury Fox thought such cases were now well made out. But the cases reported indicated that scleroderma and morphœa were closely allied. The treatment ought to be directed to the general improvement of the health.

Dr. P. Black thought we had no real knowledge of the physiology of the subject, and could only treat symptoms.

After Mr. Gaskoin had briefly replied the Society adjourned.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 16.

Charles Murchison, M.D., F.R.S., LL.D., President, in the Chair.

The President's Address.

The President, having taken the chair for the first time, delivered an address. Having thanked the Society for the honourable office to which they had elected him, Dr. Murchison referred briefly to the history of the Pathological Society, which had been founded by those who were now leaders of the profession, and for more than thirty years had been the nursery of the rising physicians and surgeons. Not only had it stimulated research, but had given rise to a more rational system of treatment. One characteristic of the Society was that it was strictly practical. At present the danger was in an embarrassment of riches; discussion was choked, and the proceedings wanted life. It had been recommended to make a selection, but this duty would be invidious, and the remedy must rest with the members. Dr. Murchison said it was remarkable how rare were records bearing on accurate prognosis, on the duration of various lesions, and the amount of health with which they were associated. This might be done by members of the Pathological Society, and especially in family practice. Referring to the considerations that should influence the exhibitor in bringing forward a specimen, the President said he ought first to ask himself whether his work was calculated to advance pathology. Keeping his object in view, the exhibitor should set it prominently forward, reserving lengthy descriptions for the *Transactions*, so that the audience might not lose the point, but be able to discuss it. To promote discussion certain evenings had lately been set apart for special debates—and with very great success—on tubercle, cancer, bacteria, and syphilis. An attempt was being made now at the classification of specimens, by arranging special meetings for the exhibition of a class of specimens, thus facilitating comparison and discussion. The first experiment in this direction would be made this evening, the subject being Visceral Syphilis. Other subjects would follow in order. Dr. Murchison proceeded to say that the Pathological Society must not consider its work as done; they were but on the threshold of pathological knowledge; death was still silent as to the cause of most diseases. In many cases only the coarse results of an obscure process were presented; and in such conditions as the acute infective diseases, neither the mode of operation nor the origin of the process had been discovered. The microscope had done much lately; but it had to be confessed that in chemistry and experimental pathology the Society had done but little. It had been found difficult to obtain material fit for chemical investigation. It was a question how far the Society should not in various ways assist members in chemical investigations at an earlier period. But it was to experimental pathology that they had now chiefly to look for the solution of problems of disease. He regretted that so few of the recent brilliant results in this department had been communicated to the Society, and suggested that the offer of a medal by the Society might encourage such investigation. Members were certainly competent, and laboratories abundant. Meanwhile, a beginning had been made in this direction. The Council had decided that evening to apply to the Government Scientific Grant Committee for money to undertake an investigation into the intimate pathology of the processes known as pyæmia, septicæmia, and purulent infection. Dr. Murchison then read a list of subjects promised to be introduced during the present session, among which were: Contagion—by Dr. Sanderson, Mr. Lister, Dr. Braidwood, and Mr. Vacher; Vascular and Renal Disease—by Sir William Gull, and Drs. Sutton and Johnson; Bacteria—by Dr. Bastian; Scarlet Fever, and Typhoid Fever in the Pig—by Dr. Klein; Cancer—by Dr. Creighton; Scurvy and its relation to Diet and to the Urine—by Dr. Ralfe; Pectous Changes—by Dr. Richardson; the Coagulation-Effects of various Reagents—by Dr. Creighton. The address concluded with a confident hope that the Society would still continue to be truly a Pathological Society—not one for the mere prosecution of morbid anatomy.

Intussusception.

Mr. Morris related the leading features of a case of intussusception presently under his care, and exhibited a portion of the intestine removed by operation. A boy of twelve had suffered from symptoms of obstruction of the bowels for seven days, and intussuscepted bowel could be felt per rectum. As a last resort, the abdominal cavity was opened in the usual way: the involved portion of gut was found in the situation corresponding to the external tumour; but the parts could not be disengaged *in situ*. On bringing them to the opening in the abdominal wall, it was discovered that there were several points of perforation or threatening perforation, and that pressure could not be borne. The intussuscepted portion was therefore removed, and the ends brought to the abdominal opening. The latter part of the operation was followed, inasmuch as the intussusception in the lower bowel was found to be still unrelieved. Seventeen inches of the ileum were found to constitute the portion removed; both the contained and the containing part were in a sloughing condition. The patient was still alive.

Discussion on Visceral Syphilis.

1. *The Spleen in Congenital Syphilis.*

Dr. Barlow brought forward a living specimen, illustrating enlargement of the spleen in congenital syphilis. A female infant of four months, with severe symptoms of congenital syphilis, presented considerable enlargement of the spleen. Dr. Gee had been the first to draw close attention to this condition; he had said that the spleen was enlarged in about half the cases of congenital syphilis, and much enlarged in about one-fourth: that the liver and lymphatics were sometimes also involved: that cases of great enlargement were generally fatal; and that splenic enlargement persisted in the survivors after the cachexia had disappeared,—as a monument of its amount. In the present example the symptoms of syphilis were in abeyance, while the spleen remained large. Dr. Barlow could not venture to say what the nature of the change was. In three cases examined there was firm enlargement and thickening of the capsule, without either amyloid disease or gummata. One might, pursuing Mr. Hutchinson's parallel, compare the condition with that of the spleen in typhoid fever; but in that disease the enlargement was soft and evanescent. The child exhibited had also congenital heart disease, with a systolic murmur at the apex. Was there a gumma in the walls?

2. *Syphilitic New Growth, connected with the Vessels, Brain, Lungs, etc.*

Dr. Greenfield showed a series of specimens illustrating these points. During the last two years he had examined twenty-two cases of visceral syphilis, twelve of whom were females; and in whom the age varied from twenty-three to fifty. All the cases did not die from the effects of syphilis; the fifteen cases that did so were comparatively young. Lardaceous disease was less common than might have been expected, being absent in eighteen out of the twenty-one cases; in two cases it was very advanced. Coming to the individual organs, the liver was diseased twelve times out of twenty-three; the dura mater four times; the cerebral arteries in four; the brain contained a gumma in two instances; while in others

the pia mater was locally diseased. The spleen contained gummata in three; the kidneys in one; the larynx and trachea were diseased in four cases; in three cases of young women the aorta was markedly atheromatous; and in such instances the disease was hardly sufficiently advanced to be called a degeneration. One noteworthy fact with regard to the organs affected was that with extensive disease of the cerebral vessels or of the dura mater no trace of affection of the skin could be found. Passing next to consider more particularly disease of the cerebral arteries, Dr. Greenfield exhibited two marked specimens. The first was from a man of forty, who had osteosclerosis of the skull, gummata of the dura mater, gumma of the cerebrum, infiltration of the pia mater, and transformation of some of the small superficial vessels into white cords. The last-named appearance was found to be due, not to atheroma, or to nodular disease, but to a change that ran along the vessel-wall for a considerable distance. It could be seen from the microscopical preparations and from the drawings that the wall was greatly increased in thickness, and this chiefly from growth of the intima, although the externa was also, like it, infiltrated with small cells, which formed an organised and vascular granulation-like tissue. In the intima four layers could be recognised—(1) the endothelium; (2) flattened cells; (3) a looser texture; and (4) layers of stratified cells. Altogether, the appearance closely agreed with Heubner's description. In the second specimen the growth was almost entirely limited to the intima, and was more laminated and less loose than in the other; the lumen was almost obliterated, and occupied by a thrombus. The disease of the brain in this case was extreme. The next specimen was from a minute gumma near a syphilitic ulcer of the leg; and it consisted almost entirely of small spherical cells like white corpuscles, some spindle-shaped cells, and a delicate stroma. In all situations, and in all organs, syphilitic new growths presented the same appearance, beginning in the small vessels. This tissue underwent organisation, much like ordinary granulation-tissue, and might even develope into firm fibrous tissue. The important point was, that such growths, instead of becoming caseous or lowly organised, became highly organised, and then suddenly degenerated. The cause of this was obstruction of vessels from proliferation of their endothelium. Perhaps there might also be thrombosis. The cells of certain gummata were found to be remarkably large, but the nature of this enlargement was doubtful. Similar changes in the vessels of the kidney to those of the brain had also been observed by Dr. Greenfield. The last specimen shown by him was from the lung. It was taken from the lower lobe of the left lung of a woman of twenty-five, who had almost certainly had syphilis. The upper lobe was healthy, but the lower presented radiating bands of white tissue; and in one of these a small calcified nodule. The appearance was different from that of ordinary fibroid phthisis. Somewhat similar disease was found in the lower lobe of the right lung. In the second case the lower lobe of the right lung presented on its surface depressed and puckered scars, and with these there corresponded on section bands of pigmented fibroid tissue, with cretaceous masses. In both cases thickening was found around the branches of the pulmonary artery; and the whole appearance reminded one of the cicatrices in syphilitic disease of the liver. It was remarkable, Dr. Greenfield said, that he had met with this condition of lungs only twice out of nearly 700 post-mortems.

3. *Syphiloma of the Brain and of the Lungs, and Syphilitic Disease of the Cerebral Arteries.*

Dr. Gowers exhibited several specimens. The first illustrated the mode in which the syphilitic disease invaded the brain. A growth on the membranes was found to send processes inwards, and from each of these a vessel could be traced. However isolated the growths might be, they could always be traced to some process of the pia mater. The second specimen was a portion of a hardened growth from the dura mater of a child with congenital syphilis. The dura mater was thickened, and the growth consisted of a number of coalesced nodules; and these, again, of rounded, nucleated cells—in some places alone, in others accompanied by fusiform cells. The great rarity of such a growth in congenital syphilis rendered its structure of the utmost importance. The third specimen was one of syphilitic disease of the cerebral vessels. A man, who had had syphilis fourteen years before, died of a large gumma in the anterior lobe of his brain, and various nodules on the larger arteries, in one instance causing obliteration. Microscopically, the disease was a small-celled growth, the elements being chiefly round or fusiform, and a delicate stroma; and it seemed to have begun in the outer coat, while the lumen of the vessel was apparently occupied by a clot, but really with an infiltration of similar cells. The fourth specimen was a nodule from the lung of a patient that died with cerebral symptoms, and had cerebellar tumour. The pulmonary nodule was small, was partly caseated, and consisted of a small-celled growth, similar to that in the vessels; not, however, proceeding from a centre, but scattered through the changed area. The growth was continued along the walls of the vessels, and infiltrated the alveolar walls, while the vesicles were also invaded by inflammatory epithelial products. The whole was, therefore, somewhat like a tubercle, but its true nature was decided by other evidence. The histology of such growths was not sufficiently decisive. A more widely diffused change of this kind might produce an appearauce closely resembling that of tubercular phthisis.

Mr. Jonathan Hutchinson said, with reference to Dr. Gowers' second specimen, that it was very unusual as one occurring in congenital syphilis. He inquired what the age of the patient was, and what the evidence of the syphilis having been congenital.

Dr. Gowers replied that the patient's age was twelve years, and that the evidence of the syphilis having been congenital had been sufficient for Dr. Hughlings-Jackson.

4. *Syphilitic Disease of the Choroid and Meninges.*

Dr. Barlow showed these specimens. The first was from a female child, aged one month when first seen, with a specific history on the father's side. Three months later the child again came under observation, having in the meantime had eleven fits; and now ulcers on the nates. It improved under treatment at first; but after a few months got worse, and suffered from carpo-pedal contractions and laryngismus. The fundus of the eye presented on ophthalmoscopic examination spots of disseminated choroiditis; and inflammation of the cerebral membranes was suspected. The child died from exhaustion. Post-mortem, the viscera of the thorax and abdomen were found healthy. The membranes presented several limited local adhesions; there was a small patch of green lymph at the base; the Sylvian fissures were glued by exudation; and the pia mater was thickened and calcified in some places. Certain of the cerebral vessels were white, like pieces of thread; no granulations could be found in the pia mater; there was no excess or turbidity of the liquor;—in a word, there was every evidence of chronic disease. With regard to the choroid, collections of small cells, like pus corpuscles, were found in the capillary layer, but not in relation with the vessels; there was no perforation of the external elastic lamina, but collections of cells immediately external to it. The difference of this from tubercular disease was very striking, in the absence of perivascular disposition, in the absence of massing together of the cells, and in their less tendency to caseation. The pia mater presented in places great excess of fibrous tissue and well-formed lymphoid cells, arranged diffusely, without aggregation or caseation, or perivascular disposition. The thread-like vessels showed growth in their walls, but in which part of the wall was doubtful. And in some instances this condition had advanced to complete occlusion.

The President suggested that on the next occasion members should, if possible, bring forward specimens illustrative of visceral syphilis in the earlier stages.

Drs. H. Crookshank (Lond.), S. J. Gordon (Dub.), Charles Monks (Dub.), and J. Williams (Lond.) have received from the Imperial Ottoman Government the Military War Medal, in recognition of their services during the Turco-Servian Campaign.

Preliminary Injections of Morphia in Paracentesis Thoracis.—M. Vibert, as the result of several cases in which he has tried it, states that the advantages of the preliminary injection of morphia in the operation of thoracentesis, and indeed in any operation which may give rise to syncope, may be thus summed up:—1. It very much mitigates the suffering inherent to the operation. 2. It protects those operated upon from syncope, and its redoubtable consequences. 3. It obtains for them a sense of comfort, which is produced as soon as the operation is finished, which persists for many hours, and which may be prolonged by additional injections.—*Jour. de Thérap.*, December 25.

OBITUARY.

JOHN ADAMS, F.R.C.S.

We are pained to have to record the death of Mr. John Adams, of the London Hospital. He commenced his professional career there as a student, and was an "apprentice" of Mr. J. G. Andrews; who was himself, in some respects, an excellent master, though it will be remembered by a few living surgeons that, owing to his peremptory manner, and use of the sometimes rough language of those days, he was a terror to candidates for the membership of the College of Surgeons. In due course Mr. John Adams became, in 1828, one of the Demonstrators of Anatomy at the London Hospital Medical School, and one of its Assistant-Surgeons. He soon became noted for his amiable, though dry and few, words, his characteristic manner, and for his success as a practical surgeon. He was not considered brilliant and enterprising as an operator; but he was painstaking and successful with his patients, gentle and attentive to their weaknesses and sufferings, celebrated for his *bonhomie*, and beloved by the students both in the wards and in the anatomical theatre and dissecting-room. After a few years' experience of active teaching as a demonstrator, he became co-Lecturer on Anatomy and Physiology with Mr. Luke, and, some years later, sole occupant of the chair on those two important subjects, the proper study and teaching of which is the only safe foundation of medical knowledge. In those days Mr. Adams' reputation as an anatomical teacher extended far beyond the walls of the Hospital. He had, owing to long hours and years devoted to anatomy—living, as it were, in it, and favoured by his natural gifts,—acquired the art of clearly imparting knowledge, and of investing even the "dry bones" with an interest seldom excited. "Regional anatomy" then scarcely existed in books, but his close familiarity with surgical injuries, owing to the unrivalled opportunities afforded by the London Hospital, through its being situated among the working population of the docks and riverside factories, enabled him to illustrate every process, foramen, and articulation by some telling fact from his own experience.

From London Hospital men he obtained the worthy title of "honest Jack Adams." He wrote little, but apparently thought more. We do not know whether the habit of medical authorship is calculated to engender some of the reputed faults of general literary authorship. Certainly, Mr. John Adams merited the honourable and cordial epithet bestowed upon him by his contemporaries. He spared himself the opportunity of plagiarism, and in his professional intercourse with his brethren never sought to rise to notice in the busy stream of active life by climbing over the shoulders of a neighbour, purposely sacrificing him in the crowd. The relatively limited amount of anatomy and physiology taught forty years ago may be estimated from the fact that both of these important subjects were allotted as a task to one teacher. Mr. Adams' death appears to us to close the list of a class of men who did great and good service in their day. Their excellence was greatly determined by the union of practice and observation in the wards with the daily life of the dissecting-room and museum. In the extreme specialisation of the study and teaching of the present day we have to guard against the evil of hypothesis and theory predominating over the practical character which distinguished the age in which Mr. John Adams lived and taught. On account of failing health and threatened heart disease Mr. Adams begrudged the less his forced retirement from the post to which he had reached of Senior Surgeon to the Hospital, in accordance with a wise regulation of that institution, which compels retirement of the staff after twenty years' service as full physician or surgeon. He then became one of the Consulting Surgeons, and has since gradually forsaken the labours of private consulting practice. His close devotion to the Hospital and to the teaching department had always prevented his getting into what is considered very full private practice. He died at the honoured age of seventy-one years, leaving at the old Hospital an able and intelligent representative in his son, Mr. James Adams.

German Surgical Chairs.—Professor Czerny, of Freiburg, has been called to Heidelberg to occupy the Professorship of Surgery vacant by the death of Professor Gustav Simon; and Professor Maas, of Breslau, succeeds him at Freiburg.

MEDICAL NEWS.

University of Dublin.—At the Hilary Term Commencements, held on Saturday, January 20, in the dining-hall of Trinity College, under the presidency of the University Caput, the following degrees were conferred:—

Baccalaureus in Chirurgiâ: Ricardus Henricus Dowse.
Baccalaurei in Medicinâ: Howard Blyth, Ricardus Henricus Dowse.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 18th inst., and when eligible will be admitted to the pass examination, viz.:—

Burton, Alfred H., student of Guy's Hospital.
Chard, Richard A. S., of University College.
Crisp, Thomas, of St. Thomas's Hospital.
Dyson, Thomas S., of St. Bartholomew's Hospital.
Gray, Walter, of Guy's Hospital.
Haycroft, Charles H., of Guy's Hospital.
Hine, Harry, of Guy's Hospital.
Hope, James L. A., of St. George's Hospital.
James, Philip, of Guy's Hospital.
Jeffreys, John P., of St. Thomas's Hospital.
Jenkins, Thomas G., of St. George's Hospital.
Jones, Arthur C. B., of St. George's Hospital.
Jones, George H. W., of Guy's Hospital.
Lavis, Henry J. J., of University College.
Leigh, William W., of Guy's Hospital.
Maddick, Edmund D., of St. Thomas's Hospital.
Parke, Charles J., of Guy's Hospital.
Protheroe, John, of St. Bartholomew's Hospital.
Redmayne, Hugh, of St. Bartholomew's Hospital.
Stein, Charles G., of University College.
Stone, John W., of St. Bartholomew's Hospital.
Thorpe, Henry S., of St. Bartholomew's Hospital.
Weston, George E., of St. George's Hospital.
Wilkinson, Francis T., of Guy's Hospital.

Thirty-five candidates out of the 127 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months.

The following gentlemen, having undergone their necessary examinations, were admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst., viz.:—

Brett, James, L.S.A., Leamington, student of the Birmingham School.
Diggle, Charles Frederick, Manchester, of the Manchester School.
Frobisher, William Martin, Leeds, of the Leeds School.
Goulder, Frank Samuel, L.R.C.P. Lond., Norwich, of University College.
James, Thomas, L.S.A., Aberdare, of the Middlesex Hospital.
Kirkpatrick, John, M.D. Toronto, Toronto, of St. Thomas's Hospital.
Locker, John Evans, Altrincham, of the Manchester School.
Macintire, John Henry Lee, L.S.A., Richmond-road, of the Middlesex Hospital.
Mansell, Edward Rosser, L.S.A., Upper Norwood, of Guy's Hospital.
Stone, Herbert Stanley, M.B. Ed., New Brunswick, of the Edinburgh School.
Ward, William Tilleard, M.D. McGill, Stanhope, Canada, of St. Thomas's Hospital.

The following gentlemen were admitted on the 23rd inst.:—

Archer, William Gammon, M.B. Cantab., Edgbaston, Birmingham, student of St. Bartholomew's Hospital.
Armstrong, William, Manchester, of the Manchester School.
Cross, Horace Edward Fermin, L.R.C.P. Ed., Craven-st., of King's College.
Davies, Richard, Birmingham, of the Birmingham School.
Devenish, Wilhelm, Trinidad, of St. Thomas's Hospital.
Green, Alfred Withers, L.R.C.P. Lond., Lee. Kent, of Guy's Hospital.
Griffith, Thomas Nugent, L.R.C.P. Ed., Oakley-sq., of University College.
Law, Edward, Sheffield, of the Sheffield School.
Ling, Charles Arthur Squire, L.S.A., Gorleston, Suffolk, of the London Hospital.
Luscombe, William Edmund, Porteous-road, of St. Mary's Hospital.
Morgan, John, L.S.A., Strata Florida, S. Wales, of Guy's Hospital.
Rhodes, William, Birmingham, of the Birmingham School.
Richards, Philip Morgan, L.S.A., Fennant, Denbighshire, of the London Hospital.
Winterbottom, Arthur Thomas, Manchester, of the Manchester School.

The following gentlemen were admitted on the 24th inst.:—

Anderson, Alexander Richard, L.S.A., Plymouth, student of St. Bartholomew's Hospital.
Barrow, Lancelot Andrews, Camden-road, of St. Bartholomew's Hospital.
Blaxland, Herbert, Ryde, New South Wales, of University College.
Clowes, Joseph Smith, Merrick-square, S.E., of Guy's Hospital.
Craddock, Frederick Hurst, Finsbury-park, of St. Bartholomew's Hospital.
Creed, Charles Philip, Greenwich, of Guy's Hospital.
Davey, William Thomas, L.S.A., Leyton, Essex, of St. Bartholomew's Hospital.
Fletcher, Charles William Corrie, Leicester, of St. George's Hospital.
Gillam, Thos. Henry, L.S.A., Weaversham, of St. Bartholomew's Hospital.
Green, Alfred Pierce, St. John's-wood, of King's College.
Hayward, Thomas Ernest, Tewkesbury, of St. Bartholomew's Hospital.
Hawlett, Edmund Henry, Stafford-place, S.W., of King's College.
Hopwood, Wilfred Francis, Stalybridge, of University College.
Longstaff, George Blundell, M.B. Oxon., Wandsworth, of St. Thomas's Hospital.
Malpas, Douglas Dent, Sevenoaks, Kent, of Guy's Hospital.
Ogle, John Reynold, L.R.C.P. Edin., Newport, Shropshire, of the Birmingham School.

Steele, Henry Frederic, L.S.A., Stoke Ferry, Brandon, student of St. Bartholomew's Hospital.
Stewart, Howard Douglas, St. James's-gardens, N.W., of King's College.
Stokes, Richard Lingard, Redmarley, Worcestershire, of University College.
Tarrant, William O'Callaghan, Clapham, of Guy's Hospital.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, January 4:—

Wood, Edward Joshua, Higham, Kent.

The following gentlemen passed on the 18th inst.:—

Jaynes, Victor Alexander, Hucclecote, Gloucester.
Earle, Joseph Herbert, Brentwood, Essex.

The following gentleman also on the same day passed his primary professional examination:—

Middleton, Charles Fredk., University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DUNCAN, WILLIAM, L.R.C.S. Edin.—Parochial Medical Officer to the Parishes of Dunrossness, Sandwich, and Cunningsburgh, in Shetland.

JONES, ARTHUR H., M.B. Lond., M.R.C.S.E., L.S.A.—House-Surgeon to the Northampton Infirmary, *vice* G. F. K. Smith, F.R.C.S., resigned.

MCCOMBIE, JOHN, M.A., M.B., Assistant Medical Officer, Homerton Fever Asylum—Medical Superintendent of the Limehouse Small-Pox Hospital.

SNELL, SIMEON, M.R.C.S. Eng., L.R.C.P. Lond.—Ophthalmic Surgeon to the Sheffield General Infirmary.

NAVAL, MILITARY, &c., APPOINTMENTS.

The Duchess of Edinburgh has been pleased to appoint William S. Playfair, M.D., to be one of the Physicians-Accoucheurs to her Royal and Imperial Highness.

BIRTHS.

HILL.—On January 13, at Grosvenor House, Lymington, Hants, the wife of William Robinson Hill, M.D., of a son.

ROBERTSON.—On January 20, at the Friarage, Penrith, the wife of J. D. Robertson, M.D., of a daughter.

SHELDON.—On January 22, at 123, Cornwall-road, Notting-hill, W., the wife of Thomas Sheldon, M.D., of a son.

SMITH.—On January 19, at Christ's Hospital, London, the wife of Alder H. Smith, M.B. Lond., F.R.C.S.E., of a daughter.

MARRIAGES.

BUTCHER—BAZETT.—On January 4, at St. Mary's parish church, Reading, William Deane Butcher, M.R.C.S., to Fanny, younger daughter of Lieut.-Col. Bazett (late Bengal Cavalry), of Springfield, Reading.

DE BRENT—MACLELLAN.—On January 23, at Chatham, Mortimer John de Brent, M.R.C.S.E., L.S.A. Lond., of Church House, Aveley, Essex, to Aileen, only daughter of the Rev. R. E. B. Maclellan, of Rochester.

DIXON—COOKE.—On January 18, at the Church of Holy Trinity, Eastbourne, Edward Livesey Dixon, M.D., M.R.C.P., of Preston, to Elizabeth Anne, only daughter of the late John Swinhoe Cooke, of Liverpool.

HANSEN—MEINIK.—On January 11, at the English Church of St. Anne, Zürich, Ketel Peter Christian Hansen, M.D., of Nordstraud, Schleswig, to Julia Augusta, daughter of the late Charles Meinik, M.D., of New York, U.S.

LLOYD—WILLIAMS.—On January 18, at Trinity Church, Rhyl, E. J. Lloyd, M.D., of Bangor, to Mary, widow of O. T. Williams, M.R.C.S.

MOORE—MONTAGUE.—On December 21, at San Francisco, U.S.A., John Murray Moore, M.D., M.R.C.S., etc. (late of Liverpool), to Elizabeth Boardman Montague.

DEATHS.

ADAMS, JOHN, F.R.C.S., Consulting Surgeon to the London Hospital, at 2, Vanbrugh-park-road West, Blackheath, on January 18, in the 72nd year of his age.

DAVIES, HENRY, J. M. D., eldest surviving son of the late Rev. Henry Davies, of Regency-square, Brighton, formerly of Devonshire-place, W., on January 12, aged 62.

DAWSON, CATHERINE MASON, wife of Ebenezer Dawson, late of Dulwich, and eldest daughter of John Armstrong, M.D., J.P., of Green-street-green, Dartford, at Sutton, Surrey, on January 13.

EMBLETON, ROBERT CASTLES, L.R.C.S. Edin., at Beadnell, Northumberland, on January 16, aged 69.

HUTCHINSON, GEORGIANA CAROLINE, wife of Francis Hutchinson, L.R.C.P. Edin., F.R.C.S.E., at 29, Woburn-place, Russell-square, on January 20, aged 69.

KNIGHTON, JOHN FORTESCUE, M.R.C.S. Eng., of Dawlish, Devon, at 1, Mansion-terrace, Exeter, aged 61.

MARTIN, DOMINICK, L.S.A., M.R.C.S.E., at 86, Grafton-street, Dublin, on January 12, in the 72nd year of his age.

MAYNE, ROBERT FURLONG, M.D. Jena, L.R.C.P. Edin., of Honiton, Devon, on January 16, aged 45.

ROSS, MARTHA LOUISA, wife of William Ross, M.D., Fleet Surgeon, Royal Marine Infirmary, Walmer, at Royal-buildings, Walmer, on January 20.

SMITH, W. FRANK, M.B., M.R.C.S. Eng., son of Mr. Joseph Smith, of The Park, Nottingham, on January 17, at Torquay.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BARONY PARISH, GLASGOW.—District Medical Officer. Applications, marked "Medical," to be lodged with Peter Beattie, Inspector of Poor, 38, Cochrane-street, Glasgow, on or before February 1.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Extra Acting Physician. Candidates must be graduates in medicine of a British university recognised by the Council of Education and Registration, or Fellows or Members of the Royal College of Physicians of London, Edinburgh, or Dublin. Applications, with diplomas and certificates of registration, to the Medical Committee, Children's Hospital, Steelhouse-lane, on or before February 1.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Aural Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with copies of testimonials, to the Secretary, at the Hospital, on or before January 30.

HOSPITAL FOR DISEASES OF THE THROAT, GOLDEN-SQUARE.—Surgeon; also an Emergency Surgeon. Candidates for either appointment must be Fellows or Members of the College of Surgeons. Further particulars can be obtained from Dr. Morell Mackenzie, Hon. Medical Superintendent, to whom applications, with testimonials, should be addressed, on or before January 29.

HUNTINGDON COUNTY HOSPITAL.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials and references, to be sent to the Chairman of the Committee, County Hospital, Huntingdon, on or before February 3.

ROYAL SOUTH LONDON DISPENSARY, ST. GEORGE'S-CROSS, LAMBETH-ROAD, S.E.—Two Honorary District Surgeons. Applications to Mr. Hentsch, at the Dispensary, on or before January 31.

SCARBOROUGH DISPENSARY AND ACCIDENT HOSPITAL.—House-Surgeon and Secretary. Candidates must be registered medical practitioners. Applications, with testimonials, to the Secretary, on or before January 30.

WANTAGE UNION.—Medical Officer. The appointment will be made subject to the approval and regulations of the Local Government Board. Applications and testimonials to Edward Ormond, Clerk, on or before February 5.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Dore Union.—Mr. David W. Morris has resigned the Kentchurch District; area 23,368; population 3270; salary £50 per annum. Also the Workhouse; salary £30 per annum.

Maldon Union.—Mr. Joseph Thorp has resigned the All Saints District; area 9522; population 3080; salary £80 per annum.

Nantwich Union.—The Audlam District is vacant; area 11,045; population 2663; salary £30 per annum.

APPOINTMENTS.

Evesham Union.—Charles E. Hobbes, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., to the Fifth District.

Glanford Brigg Union.—James Couldrey, M.R.C.S. Eng., L.S.A., to the Scunthorpe District.

Hackney Union.—Mark Long, M.D. Ire., L.R.C.S., L.S.A. Lond., to the First District. Alfred T. Gibbings, M.D. Lond., M.R.C.S. Eng., L.S.A., to the Seventh District.

Leicester.—Henry Meadows, M.B., as Analyst for the Borough for one year.

St. Thomas's Union.—Frederick A. Gray, L.R.C.P. Lond., M.R.C.S. Eng., to the Newton Poppleford District.

Stafford.—Mr. Wentworth Lascelles Scott as Analyst for the Northern Division of the County for one year.

West Ward Union.—Francis McNalty, L.A.H. Dub., M.C. and B.M. Dub., to the Patterdale District.

West Ashford Union.—Francis Marshall, M.R.C.S. Eng., L.S.A., to the Fourth District.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The next meeting will be held on Wednesday, January 31, in the Town Hall, Hull, by the kind invitation of the Worshipful the Mayor, Kelburne King, Esq., M.D. General meeting 2.30 p.m. 1. Paper by J. F. Holden, Esq., "Night-soil Collection." 2. Paper by G. Goldie, Esq., "Climatic Diarrhœa and Typhoid Fever."

SUBCUTANEOUS INJECTIONS OF COLD WATER IN ACUTE RHEUMATISM.—Dr. Dieulafoy has for several years past been in the habit, in acute articular rheumatism, of injecting some ten drops of cold water around different parts of the affected joint as a means of relieving the pain. The results are most remarkable. The pains abate, and the patient is enabled to move the joint; and in some cases the rheumatism is even cured by this simple means. The same means may be employed also in muscular rheumatism, ischias, etc.—*Gazette des Hôp.*, No. 99.

THE RICHMOND METEOROLOGICAL ESTABLISHMENT.—It is stated that the Meteorological Establishment at Richmond, at present under the charge of General Sabine, will be discontinued on April 1 next, the commencement of the financial year.

FISSURE OF THE ANUS.—In place of sudden dilatation or complete incision, Prof. Gosselin combines the two methods in part. He introduces the index finger every day into the anus, until he is able to see the upper part of the fissure. He next incises this, but only dividing about a fourth of the sphincter ani. He then introduces daily a tent smeared with cerate of extract of rhatany. This method has proved very successful in his hands.—*Union Méd.*, January 16.

THE ENDOWMENT OF EDINBURGH UNIVERSITY.—At the annual meeting of the Association for the Better Endowment of the University of Edinburgh, on the 17th inst., it was reported that during last year the following new foundations in the University were intimated, viz.:—£250 for the Robert Wilson Prize in Chemistry, founded by Mr. John Wilson in memory of his son, who gained the "Hope" Prize in Chemistry in 1870; £1000 for the Fotheringham and Forrest Bursaries in Arts; £1000 for the Skirving Scholarship in Moral Philosophy; and £1250 for additional endowment of the Sanskrit chair, presented by Mr. John Muir, the founder of the chair. Since 1860 the University has received gifts and bequests amounting to £62,294 for fellowships, scholarships, or prizes. There have also been twenty-nine foundations instituted, of the value of from £30 to £160 a year; endowments of principalship and professorships, or for expenses of special chairs, £72,000; and subscriptions up to the end of 1876 for the new University buildings, £81,750.

BALSAM OF PERU AS A DRESSING FOR WOUNDS.—Dr. Wiss, in a paper read before the Berlin Medical Society, draws attention to the great value of this half-forgotten remedy in the treatment of all kinds of wounds. When first applied it causes a temporary burning sensation, after which all pain whatever subsides, and that in the most painful kinds of wounds. It quickly relieves any inflammatory action that may be present, and arrests the formation of pus. In none of the numerous cases treated by it has any septic condition arisen, and that even when local conditions and climate have been favourable to its production. It favours union by primary intention in a way that no other remedy does. Dr. Wiss thinks it especially claims attention as a means of checking exuberant and unhealthy granulations, while its antiphlogistic influence is most marked. Its antiseptic power also should command attention at the present time, when the efforts of surgeons are so much expended in the search after means of that character.—*Deutsche Med. Woch.*, No. 48.

SURGICAL EXAMINATION.—The following were the questions on Surgical Anatomy, and the Principles and Practice of Surgery, submitted to the candidates at the written examination for the diploma of Membership of the Royal College of Surgeons on the 19th inst., viz:—Surgical Anatomy: 1. Describe the anatomical relations of the last four inches of the rectum in the male, its structure, and the arrangement of its bloodvessels. 2. Mention, in order, the parts which would be divided in amputating through the knee-joint. Principles and Practice of Surgery: 3. A man has a penetrating wound of the chest and lungs; mention the complications that may arise in the progress of the case, and the treatment you would adopt. 4. What are the symptoms, progress, and results of gonorrhœal ophthalmia in the adult? Describe the appropriate treatment. 5. Describe acute inflammation of bone in youth, its symptoms, pathology, and treatment. 6. Mention the varieties of urinary calculus, and the circumstances which determine their composition. The following were the questions on the Principles and Practice of Medicine, viz.:—1. Describe the symptoms accompanying aneurism at the base of the brain, aneurism of the ascending aorta, and of the abdominal aorta; and the plan of the treatment to be adopted in each case. 2. Give the various causes of hæmoptysis, including the pathology, and the sequelæ, of the morbid conditions giving rise to it; and state the indications for treatment, with the usual remedial agents. 3. Write a prescription in full for a child of seven years at the outset of scarlet fever; and then for an adult in the first step of acute pneumonia; and give the uses, composition, and doses of the following preparations:—Ferri carbonas saccharata, unguentum gallæ cum opio, pilula hydrargyri subchloridi composita, linimentum iodi, infusum gentianæ compositum, and mi tura guaiaci.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Received with thanks:—Mr. John Forster, Adelaide; Dr. Reed, Pentridge.

Dr. Jenner.—The results of revaccination in the Prussian Army in 1841 were published in Forbes' *British and Foreign Review*, No. xxvii., page 237, being a translation from the original paper in the *Medizinische Zeitung*, No. xix.

Not a Member.—We are informed that there is but little chance of your being admitted to hear Sir James Paget's Hunterian Oration, as the theatre of the College of Surgeons is not calculated to hold even a tithe of its members.

A St. Bartholomew's Third Year's Man.—It was Southey who said that man was a "dupeable animal": adding, that there were quacks in medicine, quacks in religion, and quacks in politics who knew this, and acted upon that knowledge. There was scarcely anyone who might not, like a trout, be taken by tickling.

J. L.—No tickets will be required to gain admission to hear the Hunterian Oration. As a Member of the College you will hand in your personal card, and be at once admitted to the theatre. The Oration will be delivered at three o'clock.

Open Spaces.—The Banstead Downs are within the Metropolitan Police area, and therefore come within the Metropolis Commons Act of 1866. The Enclosure Commissioners have in consequence no power.

J. J. H. L.—In April, 1675, the first stone of the first building raised in England expressly for the accommodation of lunatics was laid by the President and Governors of the Bridewell and Bethlem Hospitals. The building was used for this purpose till 1815, when the present more suitable hospital was erected. The first Act of Parliament for providing county asylums for the insane population in England was passed in 1808. According to the census of 1871 there were 29,452 idiots and imbeciles in England and Wales. Of this number the males exceeded by four only the females. It is stated that from the desire to conceal idiocy in families the return is deficient in about one-fourth. The earliest medical writings which treat of insanity are those of Hippocrates. He says:—"And by the same organ [the brain] we become mad and delirious, and fears and terrors assail us, and dreams, and untimely wanderings, and ignorance of present circumstances. All these things we endure from the brain when it is not healthy."

Elector.—Yes; physicians, and some other classes of the population, have the right of voting for the members of the Italian Chamber of Deputies in virtue of their educational qualification, without regard to their property.

J. L. W.—Sir William Jenner was created a baronet in 1868, and made K.C.B. in 1872.

Literalist.—Science, in its most comprehensive sense, only means knowledge, and, in its ordinary sense, knowledge reduced to a system—that is, arranged in a regular order, so as to be conveniently taught, and easily remembered and applied.

C. M., Mayfair.—Dr. Clarke Abel was the historian of Lord Amherst's Embassy to China, which he accompanied as chief medical officer and naturalist. He died in 1826.

THE BOMBAY UNIVERSITY.

The result of the Bombay University examination, just concluded, says the *Bombay Gazette* of the 25th ult., is that 203 candidates were declared successful at the matriculation examination. The number of candidates was 1152. This is going from bad to worse. The result is very unsatisfactory.

MENTAL ABSORPTION.

Sir Isaac Newton was very negligent as to his meals, and had to be reminded by others of the time of them. The anecdote told on this subject in reference to Dr. Stukely, an intimate friend of Newton's, is as follows:—Dr. Stukely called upon Newton one day when his dinner was already served up, but before he had appeared in the dining-room. Dr. Stukely having waited some time, and becoming impatient, at length removed the cover from a chicken, which he presently ate, putting the bones back into the dish, and replacing the cover. After a short interval, Newton came into the room, and, after the usual compliments, sat down to dinner, but, on taking up the cover and seeing only the bones of the bird left, he observed, with some little surprise, "I thought I had not dined, but I now find that I have."

COMMUNICATIONS have been received from—

Mr. R. DAVY, London; Professor OGSTON, Aberdeen; Mr. C. F. MAUNDER, London; Dr. BRUCE, London; Mr. R. J. GODLEE, London; Dr. C. E. FRANCIS, Sutton, Surrey; Mr. JOHN CHATTO, London; Mr. CHARLES HIGGENS, London; Dr. DUNCAN, Dunrossness; Dr. SIMEON SNELL, Sheffield; Mr. JOHN MCCOMBIE, Homerton; Dr. FOX, Tillingham; Dr. DUNGLISON, Philadelphia; Dr. FRANKLIN PARSONS, Goole; Mr. GEOFFREY

HETT, London; Mr. R. REDMAYNE, Manchester; Dr. HENRY LAWSON, London; Dr. FOTHERGILL, London; Mr. KNOWSLEY THORNTON, London; Dr. R. DRUITT, London; Mr. B. WALKER, Spondon; Mr. J. B. BLACKETT, London; Dr. J. W. MOORE, Dublin; Dr. SPARKS, Mentone; Mr. GEORGE BROWN, London; Dr. CROOKSHANK, London; Mr. THOS. STONE, London; Dr. J. LAWRENCE HAMILTON, London; Dr. J. N. VINEN, London; Mr. HAYNES WALTON, London; Dr. H. W. ACLAND, London.

BOOKS AND PAMPHLETS RECEIVED—

George Wilson, M.A., M.D., and C.M. Edin., A Handbook of Hygiene and Sanitary Science—Wilhelm Braune, An Atlas of Topographical Anatomy after Plane Sections of Frozen Bodies, translated by Edward Bellamy, F.R.C.S.—George S. Gibbs, How and How Much the "Disease of Diseases" is Propagated by Vaccination—W. Douglas Hemming, M.R.C.S., Questions and Answers on Materia Medica, Medicine, Midwifery, Pathology, and Forensic Medicine—C. E. Armand Semple, B.A., M.B., M.R.C.P. Lond., Aids to Botany—Horatio B. Storer, M.D. Boston, U.S., On the Importance of the Uterine Ebb as a Factor in Pelvic Surgery—G. Rowell, M.D., Outline Diagram Forms for Chemical Case-Books—M. Foster, M.A., M.D, F.R.S., A Text-Book of Physiology—William Crookes, F.R.S., Experimental Contribution to the Theory of the Radiometer.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Toronto Sanitary Journal—Boston Journal of Chemistry—Students' Journal and Hospital Gazette—Leather Trades' Circular and Review—Révue Mensuelle de Médecine et de Chirurgie—Richmond and Twickenham Times—Chicago Medical Journal and Examiner—New York Medical Journal—Edinburgh Courant—Home Chronicler.

APPOINTMENTS FOR THE WEEK.

January 27. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

ROYAL INSTITUTION, 3 p.m. Mr. Ernst Pauer, "On the Nature of Music: the Italian, French, and German Schools." (With Pianoforte Illustrations.)

29. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Dr. Dowse, "A few Notes on Diphtheritic Paralysis." Dr. E. Woakes, "On some Sympathetic Ear Symptoms."

30. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

31. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

February 1. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Dr. Wright, "On Metals, and the Chief Industrial Uses of these Bodies and their Compounds."

2. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

ROYAL INSTITUTION (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. O. Reynolds, "On Vortex Motion."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 20, 1877.

BIRTHS.

Births of Boys, 1446; Girls, 1301; Total, 2747.
Average of 10 corresponding years 1867-76, 2375·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	791	700	1491
Average of the ten years 1867-76	793·7	806·3	1600·0
Average corrected to increased population ...	...	...	1712
Deaths of people aged 80 and upwards ...	...	...	79

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	...	1	1	1	...	1	...	7
North	751729	37	6	7	2	14	1	2	...	3
Central ...	334369	...	2	3	1	2	...	2	...	1
East	639111	14	3	12	...	6	1	...	...	2
South	967692	24	6	19	1	8	3	5	3	5
Total	3254260	79	17	42	5	31	5	10	3	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·791 in.
Mean temperature	45·5°
Highest point of thermometer	56·1°
Lowest point of thermometer	34·5°
Mean dew-point temperature	42·6°
General direction of wind	S.W.
Whole amount of rain in the week	0·39 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 20, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Jan. 20.	Deaths Registered during the week ending Jan. 20.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2747	1491	56·1	34·5	45·5	7·50	0·39	0·99
Brighton	102264	43·4	69	41	54·7	34·9	45·1	7·28	0·77	1·96
Portsmouth ...	127144	28·3	74	32	56·0	36·5	47·4	8·55	...	...
Norwich	84023	11·2	54	23	56·0	35·0	44·9	7·17	0·33	0·84
Plymouth	72911	52·3	35	22	54·0	32·0	45·4	7·44	1·62	4·11
Bristol	202950	45·6	152	76	55·5	32·3	44·8	7·12	0·75	1·90
Wolverhampton ...	73389	21·6	46	37	55·5	31·9	41·1	5·06	0·65	1·65
Birmingham ...	377436	44·9	312	159	57·0	35·2	45·6	7·56	0·62	1·57
Leicester	117461	36·7	97	48	57·0	36·0	44·2	6·78	0·42	1·07
Nottingham ...	95025	47·6	74	32	57·8	34·7	44·2	6·78	0·42	1·07
Liverpool	527083	101·2	370	270	57·2	36·8	44·4	6·89	1·07	2·72
Manchester ...	359213	83·7	305	190	57·0	31·0	43·2	6·22	0·84	2·13
Salford	141184	27·3	150	81	56·9	32·1	43·5	6·39	0·87	2·21
Oldham	89796	19·2	81	44	...	...	...	...	...	...
Bradford	179315	24·8	150	63	57·2	34·4	43·7	6·50	0·73	1·85
Leeds	298189	13·8	247	120	59·0	34·0	44·4	6·89	0·58	1·47
Sheffield	282130	14·4	240	107	56·1	34·5	44·4	6·89	0·76	1·93
Hull	140002	38·5	92	53	57·0	35·0	43·4	6·33	0·70	1·78
Sunderland ...	110382	33·4	93	54	57·0	34·0	42·6	5·90	0·66	1·68
Newcastle-on-Tyne	142231	26·5	126	70	...	...	...	...	...	...
Edinburgh	218729	52·2	131	87	52·0	34·0	40·2	4·55	1·01	2·57
Glasgow	555933	92·1	398	301	...	...	...	...	...	...
Dublin	314666	31·3	189	197	54·5	29·6	43·8	6·56	1·05	2·67
Total of 23 Towns in United Kingdm	8144940	38·3	6232	3598	59·0	29·6	44·1	6·73	0·75	1·90

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·79 in. The lowest reading was 29·38 in. on Sunday, and the highest 30·37 in. by the end of week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

AN ADDRESS

DELIVERED BEFORE

THE CLINICAL SOCIETY OF LONDON,

ON FRIDAY, JANUARY 26,

By GEORGE CALLENDER, F.R.S.,
Surgeon to St. Bartholomew's Hospital.

GENTLEMEN,—If an earnest desire to promote the exact observation of clinical facts should largely influence me as a member of this Society, that earnestness should be intensified by the responsibility I have incurred in venturing to accept office as your President—intensified by the knowledge that your friendly judgment has placed me in a position which demands that by precept and example I should plead for precision in clinical research.

If I had only to speak to you in words of thanks my duty would soon be ended, for I can but say that I value most highly the honour you have conferred upon me. In recalling your confidence, I shall be encouraged in the endeavour, so far as I can, to do it justice.

It has, however, become a custom of the Society that your Presidents should venture from time to time to offer suggestions as to how the objects we have in view may be best promoted; a custom which it grows more difficult to observe as its novelty wears off, and yet—having in mind changes in the grooves of thought, in the method of pursuing investigations, the gradual accumulation of facts tempering and consolidating the knowledge with which we begin each new session of work—one which it seems to me most desirable to conserve. In addresses which have been given from this chair, your Presidents, in a practical way, and with the force of experience (all the more forcible from the clear and thoughtful words in which it has been spoken), have described the duties we owe to a Society which is founded expressly for "the cultivation and promotion of practical medicine and surgery,"—words which express as could scarce any other the character and scope of our task, for they foreshadow an increase of knowledge, but, however far in advance of the past, a present knowledge which in its future must always be capable of cultivation and promotion. Our work is, indeed, bounded by a horizon which recedes before us, but, in our pursuit of it, as we ascertain and establish facts, and, so far as we can, as we eliminate sources of fallacy, we shall find that we are making progress and are strengthening our position for a further advance.

If I diverge in any way from the steps of my predecessors, who have spoken chiefly on the manner in which the objects of the Society may best be attained, it will be to take advantage of the experience we have thus far acquired, not only for the evidence which it gives of the extent to which we have acted up to the expectation of our founders, but as showing the direction in which we are being carried, and in which our future work promises, I think, to give the best clinical results.

We began by setting up for ourselves a high standard, and if we have not quite attained to it, we can trace through our *Transactions* an honest endeavour to do so; and we can be sure that we have encouraged—I would venture to say we have practically established—a precision and order in the observation of clinical facts, which by itself is a substantial gain. If we look away from our more immediate proceedings, and if we remember that those who were interested in the formation of the Society are largely responsible for clinical research in our hospital wards and elsewhere, we shall recognise in every direction that an effort is being made to observe disease and its treatment in a more critical and accurate manner than heretofore. In the treatment of wounds, for example, whatever plan is followed (and many are and have been advocated), all have in common the care which conducts them, and which insures that every detail shall be scrupulously attended to. If I may single out one fact in illustration of this, I would remind you that, after being present at and taking part in our debate on pyæmia, Mr. Cadge effected a revolution in the results of the treatment of wounds in the Norwich Hospital; above all things, by seeing that the nursing, the cleansing, and the dressing were strictly, and hence successfully, directed. I say work is more precise in hospital practice and elsewhere, for in using the latter word I would recall the fact that there are points, such as those of history and of affinity, and the close watching of disease through the course of many years, which are undoubtedly more fully and more surely elucidated in private than they can be in hospital practice; and I think the Society would gladly welcome the renewal of reports, as they may be termed, such as those brought before us by Mr. Prescott Hewett, and drawn from such experiences. Let me mention, too, in passing, and with reference to precision of observation, that by close watching of the sick we are constantly gaining information, as it were, in the by-ways of practice—not, it is true, respecting details of essential importance, and yet information which helps occasionally to stand us in good service. Of such is the fact that a rapid rise of temperature, after, for instance, an operation, may be due to emotional causes of an evanescent, and consequently of a comparatively unimportant, character, and of such is the knowledge of the exact rate of the repair of wounds, by which we can tell the time which a given surface will take to heal. Such too (and I take shame to myself for being unable to speak with certainty on the subject) should be our knowledge respecting the asymmetry of parts, to which attention has recently been directed in America, with reference more especially to the length of limbs, a detail which all students of art are aware received attention from the ancient sculptors.

But if medicine and surgery are being cultivated with greater care and precision, can it be added that we are thereby promoting our knowledge of the treatment of disease? I turn, perhaps with an undue bias, to surgery. I find that the careful supervision of operations and other wounds has proved, if rest and cleanliness and constant attention are combined, that the most serious hurts are repaired with an absolute certainty (not merely through a precarious convalescence), injuries being recovered from which some years ago would have been considered irremediable. If erysipelas, despite precautions, attaches itself to a wound, the close watching of the case now enables us to detect the earliest symptom of the disease, and, twelve or twenty-four hours before the outcome of a rash, to commence the treatment of the affection. Pyæmia has been proved to be a preventable disorder. Skin-grafting—to name some of the facts brought more directly under our notice—has been introduced; Esmarch has described to us his plan for operating without loss of blood; the use of torsion as a hæmostatic; that of various antiseptics for the dressing of wounds; the subperiosteal resection, and the subcutaneous section of bones; the surgical treatment of aortic aneurism; the removal of tumours by caustics and by the elastic ligature; the surgical treatment of neuralgia and of local paralysis, have been before us, among other subjects, for consideration, and surely some of them may be regarded as representing distinct gains to our means of treating surgical affections. In nearly every instance the gain, if any, in treatment has been due to precise observation of the cause and nature of the trouble to be remedied, and to the direction of natural forces for its relief; and, as in most instances of real progress, the means used for controlling these forces, when put before us, are found to be of the most simple kind.

Precise observations of the conditions which cause disease must always be a subject of great clinical importance for critical research. In this direction the study of material pathology, to a certain point, has been cultivated with success. There are, probably, no facts of greater practical moment than are such, for example, as taught us the connexion between rheumatic fever and various changes in the covering and lining of the heart; or those which throw light upon that form of embolism which results from the setting free in the circulation of small particles of fibrine. But there are inquiries beyond those which are satisfied by the examination of diseased structures—those which reach to the causes of disease,—inquiries which, amongst others, come within our province where we join hands with pathology in its experimental researches. Why, for instance, should such a degeneration of tissue arise as occurs when cancer is developed, and why should such degenerate cancer exhibit active growth? Or, what are the causes which determine the presence of tubercle? No higher duty can be ours than that which leads our inquiries in this direction, for of such causes at this time what do we really know? And how can we look—discuss each malady how we may, backwards or forwards—for any better treatment of these diseased conditions (save such as comes to us by hazard) until we have learnt more about the causes of those errors of nutrition which lie, in all probability, at the root of the mischief? By inquiries, too, directed to the causes of disease we may expect to advance in our knowledge of that

best of treatment, the preventive—the controlling of the forces of nature, so that disease may be avoided.

There is also good work to be done by the study of the natural history of disease—a part of our programme which will, I trust, be attended to in our future as fairly as, perhaps even more thoroughly than, in our past proceedings. This study is, in truth, that of disease as observed under the most careful supervision, with rigid exclusion of complications from preventable external influences; that is, free from errors of management—all, in a word, that due watching, rest, cleanliness, temperature, and suitable nourishment can do, and seeing (so far as we can without risk to the patient) how disease comports itself under such conditions: clearing, in fact, the ground for precise observations of the medicinal action of drugs, and for gauging their exact effects.

And this it is which must always be the great feature in our prospective work—the attainment of that knowledge of therapeutics of which, one of our Presidents told us, as a trustworthy science we have only the expectation; and of which he also said that he often wondered how vaguely, how ignorantly, how rashly drugs are often prescribed. I am far from saying that the Society might not have done more with reference to the study of the action of drugs; and yet our *Transactions* are not barren of laudable endeavours to obtain more knowledge of their influence upon disease. If it is a lesser function to discharge, we have at least sifted the reputed powers of various medicines, and have reported them as untrustworthy; and such inquiries have been illustrated by valuable experiences, and have led to interesting discussions. We may remember, indeed, that to this Society we owe the introduction of a discussion extending over several meetings, and setting an example which has been elsewhere followed, and if it has not been so here, it is because it is in the nature of the ordinary work of the Society that the subjects brought forward at its meetings should be freely discussed; and interesting as have been many of our communications, they have often been supplemented by most valuable comments from those who have spoken upon the subjects which they il ustrate.

But our *Transactions* show a long list of trials carefully conducted to test the action of various remedies. Amongst such may be mentioned notes on the local effects of opium upon the bladder, the influence of ipecacuanha upon diarrhœa, the value of quinine in pyrexia, the use of salicylic acid and of other antiseptics, the employment of copaiba in ascites, the local effect of the hypodermic injection of strychnia, the use of bromide of potassium in epilepsy, of nitrite of amyl in angina pectoris, the action of iodide of potassium upon tumours, the employment of salicylic acid in rheumatism, cold affusion in rheumatism, and cold baths for pyxexia in phthisis. If, then, we may not have attained to much, I think these examples—and others might be added—show that an attempt is being made to investigate the action of drugs.

When we reflect upon the difficulties inseparable from the work we profess,—work which is strictly limited to the record of facts, and of which mere opinions form no part,—when we consider the varied phases of disease, and the variable soil in which it acts, it is clear that it can only be by slow degrees that we shall attain to any fulness of knowledge of the means for combating disorders by the use of medicines. Were it not for the encouragement given by the facts thus far ascertained, which prove the influence over disease of certain remedies, and the potent action of drugs upon the healthy organs and tissues of the body, we should, I fear, be disheartened by the cloud of difficulties with which an empirical system, continued through ages, has been allowed to envelope the relations between disease and remedies for its cure. It is to remove this —to base our treatment upon facts—that we are trying to make therapeutics not an expectation but a trustworthy science. If I may point to an example of the system on which each one of us should work, I would instance the recent appointment, by the Council, of committees for collecting on definite subjects an array of facts from which definite conclusions will be drawn. We can each, individually, cast our work in a similar mould. It must be precise, and it must be matter-of-fact. In this spirit we must try to learn more about the causes of disease, and we shall have a better knowledge of preventive treatment. We must endeavour to learn more about the action of drugs, and we shall know better how to cure disease. Even now there is so much of which we are ignorant, and the field of inquiry is still so vast, that there can be no question as to any dearth of material upon which to energise our work. That work must indeed have led to an infinite advance beyond our present knowledge of the art of healing before the time shall come when we may slacken in our efforts for the cultivation and promotion of practical medicine and surgery.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XIV.

WOUNDS.

(*Continued from page* 84).

To complete our notice of the medico-legal points arising in connexion with incised wounds, some points still remain for consideration.

First, it may occasionally be of importance for the medical jurist to be familiar with the appearances put on by such *wounds during the process of healing*, the character of the cicatrices left by them, and *the date* probably to be assigned to such scars. Thus, as a general rule, it has been assumed that such a wound will be bloody during the first twelve hours; that about this period inflammation will have commenced in it, with secretion of serosity, which will continue during the second day; that on the third day sero-purulent matter will begin to exude; that by the fourth or fifth day, or even later, suppuration will be fully established; that in a simple wound, without loss of substance, suppuration may last from five to eight days; and that from the fifteenth to the eighteenth day the wound will be cicatrised.—(Devergie, "Méd.-Lég.," vol. ii. page 34.)

I need scarcely say, however, that various circumstances may influence the progress towards cure of an incised wound. (1.) In some healthy persons, for instance, such a wound may heal by the first intention, without going through any of these changes; while in an unhealthy subject, or under unfavourable circumstances, the cure may be long protracted. (2.) The ages of the parties may influence the result, wounds in early life, as a rule, healing quickly, though in aged persons slowly. (3.) The depth of the wound and the parts involved may also affect the time of the healing. (4.) The locality of the incision may have to be taken into account. Wounds, for instance, heal more rapidly in the upper than in the lower extremities, and on the face than on the head. (5.) While, again, cicatrisation may be facilitated on the one hand, or retarded on the other, by the ease or difficulty of securing rest of the wounded part, as in incisions away from or near large joints, at a distance from and not involving powerful muscles, or the reverse. —(Taylor, "Principles and Practice," page 595.)

Beyond a very limited time we have no data to enable us to fix the date of an existing *cicatrix*. At first, indeed, it has *a rose hue*, and shows little firmness or consistence; but after from forty to fifty days it is found to be white and firm—characters which are from henceforth persistent and unchangeable.—(*Ib.*, page 32.)

But from the careful study of old cicatrices some points regarding their originating causes may be gathered which may be useful, as in cases of disputed identity.

Thus, those left by *incised* differ from those which follow contused, lacerated, or gunshot wounds, not to speak of the effects of burns, scrofulous or syphilitic ulcers, scarifications, setons, etc. The shape of the weapon which inflicted them, or their original extent, cannot, however, be accurately judged, as such wounds in healing contract, and the skin at the part may pucker or otherwise alter to some extent.

Under *Identity* I anticipated the question of the possibility of a scar once formed ever disappearing, as denied by some authorities, and admitted in a qualified shape by others.

Once more, in connexion with incised wounds found on *the dead body*, a question of still more importance may arise in legal medicine—viz., whether these *had* or *had not been inflicted during life*. The determination of this point, in practice, will usually be found to hinge on the settlement of the period of the infliction of the wound—whether that had been *immediately before or after death*, or *at a period somewhat*

more removed from the moment of the extinction of life. Thus, the experiments of Orfila on dogs, and those of Taylor on limbs freshly amputated, showed that the appearances of wounds inflicted *immediately after death* so closely resemble those of wounds inflicted *immediately before death* as not to be distinguishable from each other. When, however, the infliction of the respective wounds dates a few hours from the period of the extinction of life, the characters of wounds inflicted before and after death present some marked distinctions which may serve for their ready discrimination in most cases. Thus—(1.) *As a general rule*, wounds inflicted *after death* do not indicate that *any*, or but the most sparing, *effusion of blood has taken place;* while wounds *during life* will have *bled freely.* (2.) In wounds inflicted *during life*, blood *in a clotted state* will usually be found in the surrounding tissues, or about the lips of the wound; while in wounds inflicted *after death* this will be almost invariably *wanting.* (3.) While *the edges of a wound* inflicted *after death* will usually be found in pretty close *apposition*, those of a wound inflicted *during life* will, on the contrary, be seen to have *retracted* to a greater or less degree, in proportion to its extent. Lastly, a wound inflicted a few hours *before death* will be found to have *its edges* more or less *swollen and injected*, and, if of small extent, its lips may be seen loosely agglutinated by the clotted blood, while a wound inflicted *on the dead body* will present *nothing* at all *corresponding to this appearance.*

A concurrence of *the whole* of *the positive appearances* we have noticed—*copious hæmorrhage, clotted blood in and around the wound*, with *retraction, swelling, injection*, and *partial agglutination of its edges*—would undoubtedly indicate that such a wound *had been inflicted during life;* while *the absence of the whole of them*, in any instance, would as certainly point to *its infliction after death.* It must be borne in mind, however, that some of the indications of a wound *during life* may be met with in wounds inflicted *soon after death—i.e.*, short of ten or twelve hours; while, further, some of the positive signs in the former case may either be nearly wanting, or be but slightly pronounced, or they may be present, to some extent, in the latter case. Thus the retraction of the divided artery within its sheath may limit the effusion of blood *in the living;* while a wound of the right heart, or the division of a large vein, may lead to a considerable effusion of blood around a wound in *the dead body.*

Further, in certain conditions of the blood during life, effused blood does not coagulate very readily, or only imperfectly, though this has been positively denied by Caspar and others; while, if we are to trust the author just referred to, blood drawn, or escaped from a body some hours, or even days after death, has been seen to coagulate, and in other cases coagula have formed in the body some time after death. Now, apart from the former of these statements, which requires more confirmation than has yet been adduced, the instances brought forward in proof of the latter statement—viz., the formation of coagula in the dead body at late periods after death—cannot be permitted to rest on data which do not bear out conclusions drawn from them. It is obviously no proof of the blood in or around *a post-mortem wound coagulating* that clotted blood has been met with near a contused or gunshot wound suddenly fatal, or in the umbilical vein or under the scalp of the still-born child. Nor is the experiment very free from self-contradiction or obscurity, that, after a blow intentionally made with a wooden block on the head of a drowned person three days after death, on examination a coagulum one line in thickness was met with under the pericranium, while *all the rest of the blood in the body was "remarkably fluid."*—("For. Med.," vol. i. pages 23-28, *pass.*)

Once more, *the swelling of the integuments* as a sign of vital reaction in a wound inflicted during life may not have had time to appear before the subsequent death of the person; while the amount of retraction of the edges of a wound in the living will be more or less marked according to the direction and position of the wound, the retraction in general being greater in wounds of the head and limbs than in those of the trunk; and in those of the wounds which are transverse the gaping will be greater than when their direction has been parallel with the limb.

In the case of incised wounds, then, the following are the positions we would be inclined to lay down as to the period of their production:—

(1.) That *the concurrence of the whole of the positive signs*—free bleeding, clots around the wound, retraction of its edges, with tumefaction and partial agglutination of these—would point with a probability approaching more or less to certainty, according to the degree of their distinctness, to the infliction of the wound found on a dead body having taken place *during life.*

(2.) That *the precisely opposite set of circumstances* would authorise the *probability* of its having only been made *after death;* and

(3.) That the only data which would point *with certainty* to the conclusion that the wound must have been inflicted during life would be the discovery on it of such vital changes as distinct tumefaction, vascular injection, and effusion of lymph or other inflammatory products.

ORIGINAL COMMUNICATIONS.

ON LUMBAR COLOTOMY.

By CHARLES F. MAUNDER, F.R.C.S. Eng.,
Surgeon to the London Hospital.

From time to time, instances in which I have performed lumbar colotomy have been recorded in the pages of the *Medical Times and Gazette.* I now add to that list six more, making fourteen—all that I have done:—

Case 9.—*Seirrhous Stricture of Sigmoid Flexure—Incomplete Obstruction.*

Mrs. ——, about fifty-five years of age, excessively stout, had suffered for three or four years from occasional attacks of constipation, associated with dyspepsia and vomiting. For very many months a thickening in the left iliac region, the source of discomfort and a dragging sensation to the patient, had been detected by her medical attendant, Dr. Robert Stilwell. This gradually increased, and a very little blood was occasionally passed per anum. These attacks became more frequently repeated and of longer duration, the last, and fatal one, having been prolonged very many days.

On June 8, 1871, I saw the case in consultation with Dr. Stilwell and Mr. Paul Jackson. A copious warm enema of milk was administered, and it was agreed that, should symptoms not be relieved, colotomy should be performed next morning. The inability to take food, and the constant vomiting of matter very similar to that which previous injections had brought away per anum, had so exhausted the patient that death by syncope was feared.

June 9.—10 a.m.: With the assistance of Dr. Stilwell, Mr. Jackson, and Dr. Brown, right lumbar colotomy was performed, the operation occupying twenty minutes; the bowel being found at a great depth of fat from the surface, the fat being, as it were, in two layers separated by a very thin muscular septum. The patient scarcely rallied. Some fæces passed at the wound; but fatal syncope occurred on the 10th, twenty-four hours subsequent to operation. At a post-mortem examination all the abdominal viscera were found to be smothered in fat. At the junction of the descending colon with the sigmoid flexure an annular thickening (scirrhus) of the bowel was found, about two inches in length, narrowing its calibre so as to admit only the forefinger, and glueing it to the abdominal wall. The mucous surface was slightly eroded at one or two points.

Dr. Stilwell and Mr. Jackson regretted that the operation had not been earlier performed, but in the face of the fact that the attack which carried off the patient was by no means the first which she had had in which the symptoms had apparently been of an equally alarming character, it was not unnatural that they should hope that she might have again recovered.

Case 10.—*Cancer of Rectum.*

Margaret C., fifty-four years of age, married, admitted January 27, 1874. For four years past she has suffered more or less from constipation. This has steadily increased, requiring stronger purgatives to obtain an evacuation, blood being occasionally passed. During the last few months the bowels have been moved about once a fortnight, and then the evacuation was very loose in character. She is losing flesh rapidly. The bowels have not been moved for a fortnight. The abdomen is greatly distended, and severe paroxysmal pains are experienced. She has not vomited, which she herself explains by the fact of her having taken very little nourishment, and that in minute quantities at a time. The finger detects scirrhous infiltration of the wall of the rectum obstructing the bowel.

January 28.—Colotomy was performed to-day in the left loin; and four pints of greenish liquid fæcal matter escaped at once.

29th.—The patient is very comfortable, and the bowels are gradually emptying themselves through the wound. She expresses herself as much relieved by the operation.

March 1.—The patient is decidedly thinner and weaker. Artificial anus adequate.

April 7.—Died to-day—ten weeks subsequent to operation—free from vomiting and constipation throughout.

Case 11.—*Cancer of Rectum—Obstruction Incomplete.*

Jane C., aged thirty, admitted October 15, 1875. Several years ago the patient felt throbbing and shooting pains about the rectum. These have greatly increased in severity and frequency, especially at the time of passing a motion, which latter often contained blood in large quantity. She has a desire to go to stool every hour, and her distress both night and day is consequently very great.

October 21.—Lumbar colotomy was performed on the left side with great facility, a longitudinal band being readily seen on the bowel. In due time the patient went home.

On March 31, 1876, I saw her in consultation with Mr. O. Taylor, her previous medical attendant. She was very comfortable, and the artificial anus afforded her perfect relief from her former distressing symptoms. She had no difficulty in managing it, and wore only a pad and bandage round the loins.

July 31.—The patient died a few days ago, probably—as her then medical attendant, Dr. Day, of Chapel-street, says—from cancerous deposits in the lungs. Dr. Day also remarked upon the great relief afforded by colotomy in this instance. A post-mortem examination was obstinately refused.

Case 12.—*Cancer of Rectum.*

Mr. ——, fifty-one years of age, had suffered from symptoms of obstructive disease of the lower bowel for about three years, culminating in complete occlusion a week ago.

To-day (November 25, 1875) I met in consultation Dr. Francis, of Northampton, and Dr. Maguire, of Stony Stratford. The patient was in great pain from abdominal distension, and it was agreed that left lumbar colotomy should be at once performed. With the assistance of the above-named gentlemen and a neighbour (the Rev. Mr. Bailey) the operation after the method of Amussat was performed by candle-light. A vast quantity of semi-solid black fæces flowed, and continued to do so copiously for many hours. An hour subsequent to operation the patient said that "the relief which had been afforded him was so immense that he could not understand how he had lived through the agonies of the past week."

On February 9, 1876, Dr. Maguire writes me—"The artificial anus is a perfect success in every way; it never attracts our attention, and we seldom bestow a thought on it. Mr. —— came downstairs to dinner on Christmas-day. He is now free from pain, and as comfortable as a man can be with an artificial anus and with cancer in the rectum."

September 26.—Dr. Maguire again writes me—"Mr. —— died on Friday last (September 22), just ten months after the operation. He enjoyed comparative comfort till lately, when the bladder became so much involved as to give rise to frequent and painful micturition."

Case 13.—*Cancer of Bowel—Obstruction—Right Lumbar Colotomy.*

(Reported by Mr. H. E. Price.)

W. H., aged sixty-eight, admitted October 15, 1876, under the care of Dr. Bathurst Woodman. Has always had good health and lived temperately. No history of tumour in his family. For years past his stools have been more or less loose, and for the last twelve months he has not had a solid motion. Four weeks ago diarrhœa set in, attended by pain in the lower part of the abdomen, the evacuations being very watery and always mixed with blood. This continued for a fortnight, when the diarrhœa ceased, the pain increased, the abdomen became much distended, and from that time he has had no action of his bowels. Vomiting soon set in.

To-day (October 15) the abdomen is greatly distended and tympanitic, and coils of intestine can be seen. Pressure causes pain, which is most marked about three inches to the left of the umbilicus.

October 16.—An enema was given, but without effect. Has hiccough.

October 17.—Mr. Maunder now saw the case with Dr. Woodman. The patient was anæsthetised, and an attempt made to pass the hand into the rectum, but this only partially succeeded. A tube was introduced fifteen inches up the bowel, and water injected quickly returned unstained with fæces. Evening temperature 100·6°.

18th.—Last evening Mr. S. H. Fisher, House-Surgeon, passed the tube seventeen inches. Lumbar colotomy was to-day performed by Mr. Maunder on the right side.

19th.—Several pints of fæces have flowed at the wound. Vomiting has ceased, but hiccough continues.

20th.—Comfortable and cheerful. Has no pain, but hiccough persists. Takes liquid nourishment.

22nd.—Feels very weak, but has no pain.

24th.—Death by asthenia.

At a post-mortem examination a cancerous tumour was found blocking the intestine about the junction of the descending colon with the sigmoid flexure.

Mr. Maunder said that the prolonged history of the case, the aspect of the patient, his age, and the blood in the stools, led him to suspect the nature of the obstruction to be cancerous, and its seat the large intestine. The use of the long tube and the enema pointed to the left side of the colon especially. Therefore, in order that he might be sure of opening the bowel above the obstruction in it, he selected the right loin.

Case 14.—*Intestinal Obstruction—Right Lumbar Colotomy.*

A. B., fifty-one years of age, during the last twelve months has had more or less discomfort about the bowels. In July he began to have difficulty in defæcation, passing his motions in slender, narrow pieces, with a good deal of flatus. In August constipation set in, and was with difficulty relieved by repeated doses of purgative medicines. Since then two or three other attacks of a similar kind, associated with vomiting, have occurred; and once there was a sharp attack of diarrhœa.

On October 25 I saw the patient in consultation with Dr. R. Neale and Dr. Wilks. The abdomen was greatly distended, the line of the colon being apparently empty, while convolutions of apparently small intestines, lying obliquely, were very visible. Vomiting was constant and distressing, but constipation was not complete, small quantities of fæces being occasionally passed. Temperature normal; pulse 120. Dr. Neale had already passed a tube about eighteen inches up the bowel, and had injected two or three pints of water; also he, having previously seen and examined the case, believed he had felt a lump in the region of the cæcum. Judging from the prolonged history of the case, my observation of the patient, and the information derived from Dr. Neale, I deemed the obstruction to be in the colon, but probably not low down on the left side. It was agreed that the patient should be fed by enemata, and friction was to be applied to the abdomen by the hand lubricated with castor oil.

October 27.—Has passed a large quantity of flatus per anum, and a small quantity of fæces. There is much less abdominal distension, and the vomiting has ceased. Pulse 80.

November 18.—During the above interval the patient became steadily worse, with an occasional interval of relief by the passage of some flatus per anum. I performed colotomy in the right loin, and found the ascending colon enormously distended with gas and fæces.

November 27.—The patient has been completely relieved by the operation, and says that one of the chief benefits derived from it is the intense relish for food which he now has. The fæcal matter passed at the wound contained some fruit-seeds, which the patient partook of not less than three months ago.

This case illustrates in a marked degree of what little value may be the information derivable from observation of the abdominal wall. Coils of intestine were very prominent, and moved about so as to constantly alter the shape of the belly. On my third visit, when the abdomen was comparatively flat and flaccid, I could put my hand deeply into the iliac fossæ, but could fell no tumour. Doubtless, that which had been felt previously was a mass of fæces, since dislodged. Notwithstanding the apparent absence of distension of the large bowel, I decided to explore the right loin, but, at the same time, the patient and his friends had been prepared for the possibility of a second incision in the right groin—gastro-enterotomy.(a) The prolonged history of the case, the alternating constipation and diarrhœa, associated with a knowledge of the fact that gradual occlusion is almost invariably seated in the large intestine, while the small bowel was seen contracting—an evidence of chronic disease (Hilton Fagge),—led to the selection of this site for operation.

This patient is out, and about his business.

(a) See successful case by C. F. Maunder, *Clinical Society's Transactions*, 1876.

LARGE DOSES OF ANTI-PERIODICS IN PERIODIC NEURALGIA.

By C. R. FRANCIS, M.B. Lond.,
Surgeon-General, Her Majesty's Indian Army (retired).

As the season when the victims of neuralgia usually suffer most keenly is at hand, will you permit me to record in your columns the result of my experience in the treatment of this disorder? I allude to neuralgia, not dependent on organic disease or injury, but to that of (presumably) malarious(a) origin; and where the nervous system has become much "shattered" and exhausted. I solicit this permission as, except in the case of practitioners who have had to deal in malarious climates with periodic ailments, there is a (not unnatural) disinclination to give anti-periodic remedies in the large doses from which alone we can hope, in obstinate cases, to derive any benefit. The administration of large doses of quinine in intermittent fever is, of course, no novelty, as the experience of medical officers abroad, both in Italy and in India, etc., and of one or two at home,(b) is duly recorded in works on medicine. At the same time, practitioners in other countries, without this experience, are apt to shrink from being so venturesome. The following observations and record of cases will not, therefore, I hope, be out of place. I am anxious to show that quinine (and arsenic also) may *often* be given in large doses with perfect safety, and with the happiest results, in those cases of neuralgia which depend upon the same causes, more or less modified, as intermittent fever. Great difficulty is often experienced in ascertaining that the neuralgia *has* a malarious origin, or that there is any periodicity in the attacks, which in many cases make their advent most irregularly and unexpectedly. But in these cases also, with careful observation and watching, the favourable moment for giving the anti-periodic in a large dose may be discovered. And even in those cases where there are, clearly, no periods and no evidence of malaria, it may be well to test the effect of such doses. Where, in persons with "shattered" nervous systems, neuralgia is added to their other sufferings without any assignable cause *except* debility, such cases must be treated on general principles. In *any* case, change of climate may be desirable; in *many* it would be a *sine quâ non*. A partially decayed tooth is often threatened with extraction by the sufferer from supposed toothache, whereas, in fact, the painful attack is one essentially of neuralgia taking up its residence in the tooth, and using it as a starting-point. The wisdom of removing teeth under such circumstances is very questionable. In neuralgic constitutions the disorder will only change its abode, and the individual have needlessly lost a (possibly) useful appendage to his jaw.

During the rainy season of 1856, Colonel ——, of her Majesty's —— Regiment, then resident at Nynee Tal, a comparatively damp(c) sanatorium (of which I was in medical charge) in the Himalayas, consulted me on account of a severe pain, which came on at night, in his right eye, extending to the spot over the supra-orbital foramen and the side of the head, seeming to follow the distribution of the anterior temporal branches of the auriculo-temporal nerve. Colonel —— had experienced similar attacks previously; but none were ever so severe as this. The pain, he said, was maddening. It was a sharp, plunging pain. On four successive mornings I found him quite exhausted with the sufferings of the previous nights. There were no external indications beyond slight lachrymation of the affected eye. During the day he was quite free from pain. The Colonel was a remarkably fine man, under forty years of age, and usually very hale and hearty. He indulged somewhat freely in the pleasures of the table, and had occasional attacks of dyspepsia. He had one then. The tongue was foul; the bowels constipated; and the urine loaded with urates. Colonel ——'s father had suffered from similar pain in the eye some years previously. The antiphlogistic system being at that time in fashion, he was leeched, cupped, purged, and blistered, without any relief. The disease then attacked his stomach, and he died. Colonel —— was treated in the usual routine way, generally and locally, but no amendment followed. Of local remedies, mustard to the temple, acting as a rubefacient, gave most relief. Seeing that the attacks of pain were so decidedly intermittent, I determined to give a full dose of quinine (which Colonel —— could bear) before the time when one was expected. I therefore prescribed twenty grains, with a quarter of a grain of morphia, having first rectified the digestive derangement. The result was most gratifying. Colonel —— had no pain at all that night, though he complained of vomiting, with tinnitus aurium and deafness from the quinine. The following evening the quantity was reduced to ten grains, and subsequently to five, which amount he took for a week. The neuralgia did not return. Colonel —— has been occasionally threatened since; but, by attention to diet, avoiding unsuitable wines, and taking quinine after a purgative, he contrives(d) to stave off the attacks.

Major ——, an officer of the Indian Army, forty-five years of age, a free liver, of gouty diathesis, and somewhat corpulent, twenty-five years resident in India, and with broken health, also living for a few months at Nynee Tal, asked me for some leeches for the ball of his right foot, which was inflamed, he said, from gout. The inflammation, he added, gave him great pain night after night. He described the pain as burning, and felt sure that, as leeches had relieved it before, they would relieve it now. On inquiry and examination I found that there was no gout, as Major —— supposed. Neuralgic gout I believed it to be, and accordingly treated the case much in the same way as that preceding it, with the same result: greatly to the astonishment of Major ——, who could not understand how a tonic should cure an inflammation!

Private J. L., formerly of the 1st Bengal Fusiliers, had contracted rheumatism in his joints in Burmah during the last campaign. It finally settled in the knees, where it was apt to recur occasionally in a chronic form. He was admitted, in 1860, into the regimental hospital of the 4th Europeans at Lucknow, complaining of rheumatic pain in both knees, shifting down to the ankles. The pain was worse at night; indeed, during the day he was tolerably free from it. This patient was put upon full(e) doses of quinine, the bowels having been first cleared. He left the hospital in a few days, quite well; saying, when he went, that he had fully expected to remain as many weeks. No other treatment was adopted.

My friend Dr. ——, a leading practitioner in Calcutta, asked me to see a gentleman who was a martyr to intermittent fever. The patient had just come back from a year's "sick leave" to Europe, where he had been free from attacks; but his circumstances were such that he could not arrange to go again. His old enemy had returned, and quinine did no good. My friend was anxious to try the effect of a large dose of arsenic, and asked me to share (if I would) the responsibility of giving it. Under the circumstances, and recollecting that it had been shown (in 1858) that arsenic could be borne in larger doses than was generally supposed, I did not hesitate, and thirty minims of Fowler's solution—equal to a quarter of a grain of arsenic—were therefore given in a little water half an hour before the attack was expected. No unpleasant symptoms ensued, nor did the attack recur. Smaller doses were afterwards prescribed with abiding benefit.

I subsequently recommended the medical officers who were serving in my circle to try the effect of large doses of arsenic in those cases of intermittent fever, or periodic neuralgia, in which quinine could not be taken. All who ventured to make the experiment were much pleased with the result; and I afterwards received many letters in which the writers expressed their full conviction of the utility and safety of large doses of arsenic in such cases.

Arsenic is a favourite anti-periodic with the natives of Bengal, who believe that quinine not only does not cure, but that it causes, intermittent fever. Arsenic is their sheet-anchor.

Since my return to England I have prescribed arsenic in full doses (in place of quinine) for obstinate neuralgia with marked benefit.

Both in India and in England I have met with cases of neuralgia where—quinine in *large* doses being inadmissible—

(a) I use the word as it is generally understood, without venturing upon any discussion as to the *nature* of malaria.

(b) Especially in the case of *quartan* agues.

(c) The climate of Nynee Tal appears to be peculiarly obnoxious to neuralgia. Those who have contracted the disorder in other parts of the world, and who may have been free from it for many years, are very apt to suffer again on coming to this station.

(d) This was his condition for several years. I have lost sight of him since 1868.

(e) Ten grains may be considered a *full* dose; and it would be more judicious, in uncertain cases, to give this quantity before venturing upon more, the tolerance of the drug being, of course, first ascertained by still smaller doses.

five grains of that drug, with from ten to fifteen minims of Fowler's solution, have seemed to produce the same effect that a large dose of either alone would have produced.

Sir Thomas Watson refers approvingly to the practice which has been recommended, of checking the paroxysm of intermittent fever with arsenic (where quinine has failed), and then, "the periodic recurrence" being broken, of employing quinine to prevent relapses, and *vice versâ*. In some cases this plan will doubtless answer; but in those of an obstinate and chronic nature a large dose (and this is the object of my communication) of whichever drug is used as the anti-periodic will, I venture to think, be required. Sir Thomas is content with moderate doses. The cases that came under his notice probably did not require more.

Quinine and arsenic are, of course, remedies to be used with caution; and the physician, before prescribing either in the full doses here advocated, will satisfy himself that his patient can tolerate them. The physiological action of arsenic is well known; and when the symptoms caused by it become distressing (although they may be controlled by a few drops of laudanum), the remedy should, as recommended by Sir Thomas Watson, either be suspended or altogether left off. The effects of quinine are not uniform. Singing in the ears, with deafness and headache, are the most common, even after moderate doses; attended with, occasionally (after those that are larger), confusion of intellect, dimness and obliquity of vision, and sometimes a tendency to a (temporary) want of co-ordinating power in the extremities. Vomiting is now and then a distressing symptom. In large doses, quinine in some persons causes great and even dangerous prostration. As a rule, these effects, all of which I have seen, pass off after a time. A certain amount of tinnitus, with deafness (and even slight headache), need cause no apprehension. Where quinine agrees with a patient, very large doses may be tolerated. I have given eighty grains in the course of twelve hours with the happiest result.

With regard to the mode of exhibiting anti-periodics, I would observe that a preliminary evacuation of the bowels is essential, especially where quinine is used. Constipation will, in all probability, prevent success; and the disappointed practitioner may be disposed to condemn the remedy, whereas, in truth, he has not used it *secundum artem*. I have always given the anti-periodic from half an hour to an hour (so as to secure its full operation in the system) before the expected attack; and in very obstinate cases a smaller dose after it, followed by still smaller doses during the interval between the paroxysms. Generally, however, the one prior dose has been sufficient, supplemented by subsequent small doses extending over a few days, to fortify the constitution. Arsenic should not be taken on an empty stomach. Where this organ is irritable, the anti-periodic, in similar doses, may be introduced with equal benefit by the rectum; but a more elegant mode is by hypodermic injection. This plan is more economical, too; five grains of quinine thus introduced corresponds to twenty grains by the mouth. For hypodermic injections the neutral sulphate,(f) which dissolves readily in water (one grain to twelve minims), without the addition of any acid, should be employed; otherwise, if acid be present, troublesome boils(g) may follow the puncture. Where large doses of quinine are swallowed, pills or confection are the best form; but if this be objected to, suspending the dose in water, or mixing it with a glass of sherry, is a convenient and agreeable mode of administration. When dissolved in acid the natural bitterness of the drug becomes intensified.

Since writing the foregoing I have had under my care another case of periodic gout, assuming a neuralgic character, which has yielded at once to a large dose of quinine. A lady, in whom the catamenia have ceased to appear, sent for me yesterday (November 1) in a great hurry, having for the last few days suffered severe (so-called) rheumatic pains in her back and thighs, which, the night previously, had become so intense that she "got frightened, and thought it best to call in a doctor,"—having also visions of kidney disease and paraplegia. Her legs were heavy, and felt as if dead. I found her covered up in bed, and scarcely able to turn on account more of general stiffness and subdued pain and uneasiness than any acute suffering. It appeared that during the night of the 29th ult. the lady was seized with violent "grinding" pain, commencing in two distinct spots, one on either side of the spinal column in the lumbar region, which "ground round the trunk" and extended to the hips. The attack began about 2 a.m., and continued with more or less severity till the morning. During the day she was comparatively free from pain, but not well. The attack returned, with the same character, the following night; and again, with still greater intensity, the night after. I saw her about noon of the succeeding day.

Her father and grandfather were both gouty, and the lady herself has deposits on one or two of her fingers. The nature of the diathesis was very clear. I ascertained, on inquiry, that she had been, for two or three years past, subject occasionally to (to her) unaccountable attacks of paroxysmal pain flying about from part to part of her body. On one occasion the pain—which usually began in the loins, as it did then—was so agonising that she held on to a table with both hands until the paroxysm was over. Being a homœopath, she treated herself, and went about her ordinary avocations, not caring for chills or exposure to bad weather. She had flying (rheumatic?) pains in her back and legs for a few days prior to the 29th, when they culminated in the severe night attack. Her own explanation of the cause of her more recent sufferings was that about six months ago she had slept in a damp bed. During the past two years she has been to the seaside and Matlock on account of her health.

Being desirous of testing the efficacy of quinine in breaking through the periodicity of the attacks, and finding that she could well bear it, I ordered ten grains to be taken the last thing at night, with eight minims of dilute nitro-hydrochloric acid, the dose having been preceded by some aperient pills. The bowels were somewhat constipated, and the tongue rather white, and the urine had a pinkish sediment. The patient being very thirsty, I had told her to drink, during the afternoon, as much of Brockendon's syrup of orange and quinine, in tumblers of water, as would secure her taking six grains of quinine. She took a quantity of the syrup corresponding to four grains, so that fourteen grains in all of the drug had been swallowed when night set in. I saw the lady again this afternoon (November 2), and was much struck with the change in her appearance. Whereas yesterday she was uneasy and dejected, to-day she was comfortable and cheerful, and talked of returning to her daily duties. There had been no return of pain during the night. Now, on prophylactic grounds, I have directed her to take lithia water and lithia lozenges, to be alternated occasionally with preparations of bicarbonate of potash; and to-night she will have five grains of quinine. The rest of the treatment has nothing unusual about it; plenty of light nourishment, with weak gin-and-water for drink. The seats of pain have been rubbed with liniment. saponis e. opio, and chloroform; but I observed, at my visit to-day, that an almost inappreciable quantity of the liniment had been used, and the patient complained of the rubber—so that full credit may fairly be given to the quinine for cutting short an attack which, it was quite expected by the lady's friends, would lead to an illness of some days' duration. The lady is so situated that a rapid recovery was of great consequence.

Sutton, Surrey.

(f) Surgeon-Major A. D. Campbell points out that medical officers need not be deterred from injecting quinine hypodermically by Surgeon-Major's operations being followed by "inflammation, abscesses, ulcers." If the neutral sulphate be used, there is nothing, generally speaking, to apprehend. Dr. Campbell's rules are excellent; he says, "Have the solution carefully filtered, and the syringe perfectly clean; be certain that the needle is well under the skin in the loose cellular tissue. After withdrawing the needle, knead the part most carefully, so that the fluid be thoroughly dispersed. . . . A syringe with a simple sliding piston without screw action. . . . is the most convenient."—*Lancet*, July 22, 1876.

(g) Mr. Dawson thinks that the inflammation is caused by some of the quinine not being thoroughly dissolved by the acid.—*Lancet*, July 8, 1876.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.—Professor Erasmus Wilson, F.R.S., commenced his annual course of six lectures on Dermatology in the theatre of the Royal College of Surgeons on Wednesday last. Professor W. K. Parker, F.R.S., will commence his course of nine lectures on the Osteology of Birds on the 16th inst.; to be followed by Professor Flower, F.R.S., who will deliver nine lectures on the Comparative Anatomy of Man, in conclusion of his course of 1873, commencing on the 9th prox. The series of College lectures will be concluded in June next with courses by Messrs. Carter and Lowne, the subject of the latter being Teratology.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

SUPPURATING HYDATID OF THE LIVER—TREATMENT BY DRAINAGE-TUBE — RECOVERY.

(Under the care of Dr. F. TAYLOR and Mr. GOLDING-BIRD.)

[From notes by Mr. J. W. BULL.]

S. B., aged sixteen, was admitted under Dr. Taylor's care on June 2, 1875. He has been a healthy boy, not having suffered from fevers or any other complaints. For the last four years the patient has noticed a swelling in the situation of the liver, which has gradually increased in size since. Eighteen months ago it had reached over to the cartilages of the left side. Three months ago he received a blow on the left side, which caused acute pain over the right side, and the liver, back, and shoulder. He recovered from this, and was not bad again until five weeks after, when he was ill in the same manner. For the last year and a half he has had vomiting after meals, without nausea or pain in the stomach or hæmatemesis. He has, however, now and then a bitter taste in the mouth, with flatulence and sense of weight after food. Has had occasional attacks of diarrhœa for the last two years. Two or three years ago he suffered from round worms, of which he was cured by medicine. Six months ago, also, he was troubled with thread worms and slimy stools. He felt quite well until May 17, when he had pain in the side. Four days afterwards it was so severe that he could not walk or sit comfortably; but he now has only slight pain on the right side. Since May 22 (twelve days ago) he has been losing flesh and strength, and has perspired much on going to sleep.

On admission the patient is rather emaciated; the tongue is clean and red; the lips red; slight colour in face. The right side of the chest is uniformly bulged at its lower part, measuring in circumference one inch more than the other side, which is unaffected. The right apex is hyper-resonant, with increased vocal resonance and fremitus; the left apex is duller, with normal sounds. Posteriorly, the right chest is wanting in resonance below the level of the fifth dorsal vertebra, and below the eighth it is absolutely dull. The heart beats between the third and fourth ribs, internal to the nipple; the sounds are normal. The liver is greatly enlarged, dulness extending upwards to the fourth rib, and downwards nearly to the umbilicus, one inch above which the edge is distinctly felt; laterally it extends completely across the abdomen. The surface of the liver presents two rounded prominences—one in the middle line midway between the umbilicus and the ensiform cartilage; the other on the left side of the abdomen. Obscure fluctuation can be obtained from one side to the other of the liver, but it is most distinct between the two prominences mentioned. There is evidence of a slight degree of ascites. There is no pain on pressure over the liver at any part. Urine, specific gravity 1025; no albumen. Temperature 98·6°; pulse 80. From June 3 to June 9 the temperature ranged between 98·4° and 99°.

June 9.—Chloroform was administered, and Mr. Golding-Bird explored the tumour by introducing a small trocar and canula into the central prominence, and withdrew seven ounces of thin purulent fluid. Moderately firm pressure was maintained during the operation, and the canula being removed, the opening was closed with a thick pad of lint firmly strapped on. An abdominal bandage was also applied, and perfect rest in the horizontal position enjoined. Both tumours were much more flaccid after the operation. The fluid was of specific gravity 1020, alkaline in reaction, and contained hydatid hooklets. The boy was sick after the operation. Pil. Doveri gr. v. t.d.s.

10th.—He is to-day comfortable; has no pain; but has passed no urine since the operation. This latter symptom was relieved by the application of warm poultices to the abdomen.

11th.—He has no more sickness; no pain; no shivering. The tongue is clean. He is taking eggs and milk.

19th.—He has continued in much the same condition. The liver is much the same in size as it was before the operation. He has complained of slight pain across the abdomen, which is not increased by pressure.

29th.—It was now determined to empty the cyst completely, and promote its contraction by the use of a drainage-tube. Mr. Golding-Bird introduced a large trocar and canula into the prominence in the left hypochondrium, and drew off twenty ounces of pus, containing flakes and shreds, and one acephalocyst. The canula was retained *in situ* by means of strapping, and a piece of indiarubber drainage-tube was passed in through it, and also kept in its place by plaster. The other end of it dipped into a vessel at the bedside containing some carbolic lotion.

30th.—Morning temperature 99°; pulse 114. Evening temperature 100°; pulse 114. Has some pain round the seat of puncture for two or three inches. No general pain or shivering.

July 1.—Morning temperature 99·3°; pulse 104. Evening temperature 100·3°; pulse 124. Severe pain over the puncture was relieved by ten grains of Dover's powder. At 6 p.m. had a rigor.

2nd.—Morning temperature 103·2°; pulse 154. He is worse this morning. Furred tongue; sordes on lips; dark circles round eyes. Much pain over the wound. At 5 p.m. Mr. Golding-Bird removed the indiarubber tube, cleansed and replaced it, with much benefit to the patient. The cyst was also washed out with carbolic acid lotion (one part to forty).

3rd.—Temperature 99·7°; pulse 130; respirations 18. Pain less. Patient generally better.

4th.—The canula was taken out by Mr. Golding-Bird on Saturday, but the elastic tube was still left in.

19th.—Much pus has been discharged by the cyst. To-day the tube was blocked, and was therefore removed. As it could not be reinserted, a No. 8 gum-elastic catheter, with holes cut in the side, was passed in nearly up to its extremity, and there fixed; the indiarubber tube was then fitted to it, and drained into carbolic lotion as before.

24th.—A No. 11 catheter was fixed in to-day, and the cyst washed out with carbolic acid lotion.

28th.—The cyst has been now washed daily with about a pint of this fluid. The size of the liver is much diminished, and there is scarcely any difference between the two sides of the chest. The prominences of the liver formerly described have disappeared, and it is difficult to feel its lower edge, but percussion dulness reaches only within three or four inches of the umbilicus. The patient is in good health, and eats well.

August 18.—The cyst has been washed out daily, and now the patient does this for himself. Much pus has come away, with shreds of hydatid membrane.

26th.—The patient got up for the first time yesterday. He still wears the gum-elastic catheter, in which is placed a wooden plug. The instrument gives him no inconvenience as he walks about. By attaching to its free end a piece of elastic tubing connected with a funnel, he is enabled to wash out the cyst for himself with facility.

September 9.—The cyst now only retains about two ounces of fluid. Healthy pus and shreds of membrane still come away.

On the patient's discharge from the hospital, in September, he wore a piece of stout elastic tubing in the place of the catheter. In proportion as the cyst contracted, so was the tube shortened. In six weeks from his going out the cyst ceased to discharge, and the tube only passed for a couple of inches; it was therefore withdrawn for good, and the opening allowed to close. When last seen, some months after his discharge, nothing but a scar remained. The liver had shrunk so that the left half of the abdomen was entirely resonant, and, indeed, the cicatrix was below the level of hepatic dulness.

The ultimate surgical aim was, as soon possible, to place the patient in a position to leave the hospital, and have the benefit of exercise and change of air; and, as in cases of open empyæma, the dressing was left in the patient's own hands.

LONDON HOSPITAL.

CLINICAL REMARKS BY MR. HUTCHINSON.

On Eruptions (not Corymbiform) produced by Nerve Influence.

IN some former remarks I asked your attention to the importance of the symptom of corymbiform arrangement of the spots in cases of skin eruptions, as an indication of their location by the nerves of the part. This, however, is only one division of the class of skin disorders which are excited through the nervous system. I now wish to bring before you certain other disturbances in the nutrition of the skin, and especially of its

glands, which occur not in connexion with changes in or irritation of certain single nerve-trunks (or their nuclei), but which are produced by a general change—let us say in nerve-tone,—which, induced by many and various causes, has at once for its result the production of very definite and peculiar results.

I will take, first, the common malady known as acne. In this disease the sebaceous glands of certain special parts inflame and show a tendency, more or less slowly, to suppurate. Closely allied to acne—indeed, often only local varieties of it, or great exaggerations—are styes on the eyelids, ecthyma, and boils. Now, let me assert that all these forms of skin disease can be proved in many instances to have far more to do with disturbance of nerve-tone than with either blood-poisoning on the one hand, or blood-impoverishment on the other. Blood-changes may be, and usually are, to some degree present; but, let me repeat, the local acne-spot is due not to it, but to the nervous system. Do not allow the apparent irregularity of results to mislead you. Many coincident conditions are, no doubt, necessary to the occurrence of visible results, and in unravelling the cases we must take cognisance of all; but try carefully to assign to each its special share. We will then admit, *in limine*, that by no means in all persons can nerve-disturbance excite acne. A certain favouring state of body is undoubtedly essential. You cannot fire off an empty gun, however good your percussion-cap. A person to be predisposed to acne must have a more or less coarse skin, with large sebaceous glands.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, FEBRUARY 3, 1877.

GERMS AND THE GERM THEORY.

The germ theory continues to ferment, and we have as a result a more or less chaotic collection of observations and theories. A few probably will stand the test of time; many are most likely sound, but irrelevant; and many more, if not the greater number, are destined to oblivion. It requires, no doubt, a calm judgment and more knowledge than most possess to discriminate between the good and the bad: for in the first place the study of the lower organisms in their life-history is one of very great difficulty, requiring almost boundless patience and considerable skill in manipulation; and, in the second place, their characteristics are so little and so vaguely understood, that an ingenious mind will find in them a plausible basis for the wildest speculations. How grievous was the fall when the typhoid plant turned out to be nothing more venomous than altered mucus! How complicated is the ingenuity which will explain all the symptoms of fever from the development of germs within the system!

No better illustration of our position could be afforded than the description of his experiments given by Professor Tyndall in his lecture on Friday last at the Royal Institution. Last year he was able to report almost absolute uniformity in the results obtained by his own method of experimentation. Air which had purified itself, by the subsidence of its germ-bearing particles of dust, was allowed to come in contact with boiled organic infusions, and sterility was the result in all. The same experiments were repeated with even greater precaution during last autumn, and in almost all his tubes putrefaction set in. If the second set of observations had been made before the first by a man with a less truly scientific mind, or one with a bias in favour of so-called heterogenesis, can it be doubted that they would have been adduced as arguments in opposition to the views maintained by Professor Tyndall? But by observing still greater care, and by shifting his scene of operations to a new laboratory at Kew, Professor Tyndall has proved that the difference in result depended upon errors of method, and that the putrefaction of his infusions in 1876 was due to an epidemic of germs in the Royal Institution, which had set in since the performance of his experiments in 1875. Another very instructive source of fallacy was also explained in the course of the lecture. It was found that a neutral infusion of hay made from the crop of one year required much longer boiling to render it sterile than did that made from the crop of another year: showing that the germs in one were more tenacious of life than those in the other. This was illustrated by the Professor, in a most telling way, by an observation made by Pouchet and others on the very varying powers of resisting boiling possessed by different specimens of the buds of the same plant. Some have been found capable of germination after having been boiled for four hours, whilst others are rendered swollen and pulpy in a comparatively short time. The same explanation will almost certainly account for the apparently inconsistent behaviour of some infusions.

Dr. Murchison, in his inaugural address at the Pathological Society, showed that he intends to enlist its members in a struggle with the question with which the germ theory is so intimately connected, not only by means of the proposed committee the appointment of which he hinted at, but also in debates on the formidable array of communications which he stated were to be forthcoming. We shall look forward to the term of Dr. Murchison's presidency as to a possible epoch in the history of this discussion. Let us in the meantime glance at one of the latest additions to its literature. Billroth, as is well known, published some years ago a work of enormous size, which dealt very minutely with the whole subject; and to him we are indebted for the sounding term "coccobacteria septica." As regards the different kinds of bacteria, he has probably fallen into the error which is common to all the earlier observers—Kohn himself, to a certain extent, among the number—of making differences in appearance a ground for classification. Lister has shown by very careful experiments that bacteria growing in one medium may differ most remarkably in shape and size from others, growing in a different medium, of which they are undoubtedly the offspring. He has also shown that the effect produced upon the medium in which they grow is a more characteristic attribute than mere outline and size, thus indicating how imperfect are our present attempts at classification, and how enormous must be the labour before a trustworthy basis for it can be arrived at. Billroth, again, does

not, we believe, attach much importance to the presence of organisms in the secretions of a wound, nor does he look upon them (as do the upholders of antiseptic surgery) as in themselves the originating cause of the various forms of toxæmia. He has recently published a long series of observations on what the Germans now have taken to call the "Bacterien-, Sepsis-, und Lister-Frage."(a) We will give a very brief *résumé* of them. The first in the list are two cases of inflammation of the bursa patellæ, in the pus of which at the first evacuation masses of motionless bacteria-chains were found. The second series comprises cases where bacteria are found in an inflamed cavity, which, though closed, may be supposed to have some connexion with an open wound; it is illustrated by an acute hydrocele following the operation for inguinal hernia, in which the fluid contained organisms, and was found on inoculation to be very virulent. The third class is that of metastatic abscesses, in several of which he has found organisms at the first opening. The description of these bacteria is not always quite intelligible to those who have not mastered Billroth's special nomenclature, so that a doubt as to the authenticity of the organisms is not altogether out of the question; it is very easy to mistake a chain of aggregated granules in pus for a chain of micrococci, and as such chains are often, if not generally, motionless, confusion is very apt to arise. Such mistakes have, indeed, undoubtedly often occurred. Still, Billroth's observations tend to show that, under some circumstances at least, these minute organisms are present in the body without introduction from without—a position which has long been maintained by some, and to which arguments by analogy may be drawn from some of the lower animals. The possibility of this occurrence at one time hardly entered into the calculation of the antiseptic school; but even if it should be proved to take place in rare instances, it would not invalidate the principles which underlie their treatment. In conjunction with F. Ehrlich, Billroth has also published some interesting observations on the presence of bacteria in the skin and tissues during erysipelas and under other conditions, to which space will not allow us to refer. He concludes his paper with a eulogium of Lister's treatment, modified in respect of many appearances hitherto not adequately explained.

Thus does opinion vary towards one direction or the other—a fresh instance, if one were needed, of Herbert Spencer's assertion that opinion, like all other forms of motion, is subject to the law of rhythm. Who can guess the point to which it will ultimately drift?

HOSPITAL ELECTIONS.

The first stage of the difficulty as to the elections for honorary appointments in the Liverpool hospitals has now been overpassed, and by a majority the trustees of the Royal Infirmary have decided to postpone the final decision of the question for a month. We are not sorry for this result; it will give both sides breathing space—one side time to modify its views, the other side time more definitely to formulate its demands. For it must be confessed, on a nearer view of the whole question, that amendments are required on both sides. First, to give some idea of the position assumed by the medical profession in Liverpool, we subjoin the following extracts from the proceedings of the Liverpool Medical Institution, forwarded to us by the Secretary:—

"At a special meeting of the members of the Liverpool Medical Institution, held on Friday, January 26, to consider the present method of electing the honorary medical officers to the Liverpool charities, Dr. Turnbull, the President, in the chair, the following resolutions were passed:—

"Proposed by Dr. Waters, seconded by Mr. Bickersteth: 'That, in the opinion of this meeting, the election of the honorary medical officers of the great medical charities by so limited a body as a committee of management is open to grave objection and liable to abuse; and that it is calculated materially to affect the interests of these charities.'

"Proposed by Dr. Cameron, seconded by Mr. Shadford Walker: 'This meeting, having heard that it will be proposed at the annual meeting of the Royal Infirmary to alter the laws of the institution, so as to place the election of the honorary medical officers in the hands of the Committee, would earnestly impress on the trustees the desirability of not making the proposed change.'

"Proposed by Dr. Vose, seconded by Dr. Carter: 'That copies of the foregoing resolutions be sent to the President and Chairman of the Committee of the Royal Infirmary, to the Liverpool daily papers, and to the medical journals.'

"James Turnbull, M.D., President.
"Richard Caton, M.D., Hon. Secretary."

From the above it will be seen that the whole profession in Liverpool make common cause. They speak of the elections to the various Liverpool medical "charities,"—for it is well known that if the new rule should be carried as regards the Royal Infirmary it will be speedily applied to the other institutions of the kind. This manifesto of the profession in Liverpool deserves, however, a word or two of comment. It is simply a manifesto of opposition. Nothing is suggested in the place of the present system, which must by degrees become intolerable, if not so at the present time. It was stated at the meeting of the Royal Infirmary trustees that every clergyman, of whatever denomination, who on Hospital Sunday invited his hearers to contribute to the Hospital Sunday Fund, and obtained from them any contribution whatever, was in the position of a voter. How gentlemen of position and education can bring their minds to the solicitation of votes from all of these (presumably) men of some education, and to take to it kindly, we know not. Can it be possible that the suggestion of one of the speakers at the meeting of the Infirmary trustees was true? This gentleman said that the medical profession in Liverpool did not object to canvass a large constituency, nor to the expense thereof, as it brought their names prominently before the public. And this statement, according to the report which has reached us, remained uncontradicted.

The medical practitioners assert that their appointment to an honorary post, if made by the Committee, would be derogatory to their position. They ought, say they, to occupy a position similar to that of the Committee itself, but the proposed change would reduce them to the position of inferiors. We cannot see the force of these arguments. The Committee and the medical officers are alike the servants of the trustees of the charity. If the Committee appoint, instead of the whole body of electors, we fail to see the difference thus said to be entailed on the status of those appointed. It is clear, however, that the profession in Liverpool is strongly opposed to the proposed alteration. But we cannot help thinking they have been wrong in thus opposing the whole scheme as it stands, and without any qualification. They would have been far wiser to have accepted the principle, which we hold to be good, and to have directed their attention to securing those safeguards from insolence and oppression for which the scheme as originally proposed possibly opened up the way.

For when we come to examine the proposal as submitted to the meeting of the Royal Infirmary Committee, we cannot fail to be conscious of many defects in it. It is as follows:—"That the first clause of Law 7 be repealed, and that in lieu thereof it be resolved that the Committee shall at the first meeting in every year elect three physicians and three surgeons to attend the Infirmary, together with one additional obstetric physician or surgeon (as the case may be) to take charge of the patients in the Thornton ward. Any one or more of the first-named three physicians or surgeons may take charge of patients in the Lunatic Asylum when requested by the friends of any patients

(a) *Archiv für Clin.-Chir.*, 1876, Bd. xx., Heft 2.

Two surgeons shall also be elected by the Committee to attend the Lock Hospital. That, in the event of a vacancy occurring in any of the said offices of physician or surgeon, the same shall be filled up by the Committee as soon after the expiration of one month as possible. That in case there shall be an equality of votes at any meeting, the chairman shall have a casting vote in addition to his individual vote." Now, this scheme is as different from the scheme briefly indicated by us last week as may be. It is a scheme empowering an oligarchy to perform acts usually performed by the voters at large, and—which to us is the great point—these powers are to be relegated to a body not chosen with any idea of executing them. We repeat, that for an electoral body to be satisfactory it must be representative; the medical staff should be there to advise on qualifications and other like matters of purely professional interest. The board of management or committee should be represented, and so should the body of electors. This is a very different thing from the board of management or committee assuming the whole power themselves. True, we have examples of such committees here in London working well. We have an instance in our eye at this moment, where the appointments have been uniformly good; but this has arisen, we believe, almost entirely from the fact that the profession has been most powerfully represented on the committee, and that the medical members of this committee worked unceasingly to keep down private influence in favour of the general good and welfare of the institution. Curious attempts we have heard of to bribe this committee; but, again from the strong medical element, these have been vain and futile.

A committee for elections should be a special committee—one which sits once, and no more; at each election it should be in part, at least, changed. A permanent committee, apt to be ruled by permanent officials, is not the beau-ideal of an electoral body; and for this reason we are glad that the authorities of the Liverpool Royal Infirmary have had time given them for reflection. Both sides of this very important question may well be weighed in a month. The authorities propose their ordinary committee as the future electoral body. The profession is opposed to this body as the source whence honours flow. Surely a *via media* can be found; the number of electors may well be diminished, but the new electoral body may surely also be made representative.

SANITARY DIFFICULTIES IN COUNTRY TOWNS.

Probably few of the inhabitants of great cities, who, weary of work and oppressed by the monotony of daily life, fly for relief to the bracing winds of the uplands, the soothing zephyrs of the valleys, or the briny breezes of the ocean, have not, sooner or later, asked themselves the questions, Why are our health-resorts, our pleasant villages, our marine bathing-places not made more pleasant, more health-restoring than they are? Why, when Nature has done so much, should man have done so little to assist her in the difficulties which he himself has created for her? Why should men ignore the facts that the cesspools they have made pollute the fresh springs of water, and that the drainage they have attempted is insufficient to remove their own impurities? Perhaps the sanitary inquiry which took place at the end of last November at Axminster may throw some light upon the matter, and point out one great condition which has to be fulfilled, before sanitary efforts can be very successful in the small towns and villages of England—*the old inhabitants must be born again*. They must become the beings they now denounce and fear; they must be transformed into the Novi Homines they now abuse and execrate. The Axminster inquiry may be summed up shortly. Some of the residents petitioned that a Poor-law Inspector should be sent from London, on the grounds that the local authorities had made default, in not furnishing Axminster with sufficient sewers and with a supply of water. With the exact merits of the case we need not here concern ourselves, the matter being still *sub judice;* but we wish to point out how the old inhabitants met the allegations. They simply denounced their accusers as being Novi Homines, and apparently considered that the question was thereby settled. According to their view, one qualification is necessary, and only one, for any inhabitant to express an opinion: he must be a relic of the past. A man must not only have been born in Axminster, but his father also must have lived there before him; and if he aspires to be an authority, his grandfather and grandmother must lie in the local churchyard. Possessing these qualifications, a man may assert anything without argument; he may be positive without facts; and learned without knowing how to read or write. If he is wanting, however, in the matters of ancestry and local tombstones, he must have no voice; nor is he supposed to be capable of seeing, smelling, or tasting. Tainted himself by the fact of short residence, he can detect no taint in others, and he and all Novi Homines are considered more pestilent than full-flavoured drains or polluted drinking-water. In fact, these "modern men," with their new-fangled ways, are, as the local newspaper expresses it, "*would-be office-seekers*," seeking to deprive the ancient inhabitants of their lawful perch upon their hereditary dunghills. Sanitary inquiries which might upset these unsavoury hills would disturb the equilibrium of the old inhabitants, and it is not to be wondered at that the local editor remarks, with regard to these innovations, that "*all these things are simply planned and intended to give office and pay to a pareel of lazy fellows unwilling to do honest work*." In short, those who complain are Novi Homines. Among this disreputable body of men was an admiral. Alas! poor man, he had only been a few years in Axminster; and a nose which had been tried in all quarters of the globe was worthless here! Why did he not confine himself to bilge-water? No ancient inhabitant of the little town would have interfered with him on board his ship. What did he mean by coming to Axminster to find fault? Another of these Novi Homines was "the curate in charge." No wonder the ancient inhabitants were roused. A curate in charge, a temporary resident, a man who had only lived three or four years in the place, to pretend to have the power of smell at all! Of course the old inhabitants fell back upon their antiquity. One gentleman unhesitatingly asserted that the parish of Axminster had enjoyed its present water privileges in the time of the Romans! Surely the Poor-law Inspector, if he had been a reasonable man, would have been satisfied with this, and have immediately discontinued the inquiry. Perhaps he had read "Hallam," and did not exactly hold with the theory that parishes existed in Devonshire during the time of the Roman occupation. One can fancy how the curate at least must have burned to call up the shade of Boadicea to point out that in her time the Romans themselves were but "Novi Homines" in Britain. Not that it would have been of any use, for the ancient inhabitants of Axminster have apparently drawn a line at the time of the Romans, and would refuse to hear of anything before, as they decline to learn anything since. Some of them have the Roman self-assertion, at all events, and perhaps can afford to dispense with argument. What, for instance, can be done with an old resident who gives *as evidence*, when asked if he considers the water-supply pure, "*I am not an analyst, nor have I any faith in analysts!*" and who bases his opinion of the quality of the water-supply on the undoubted fact that he is not in the habit of drinking cold water at all? This is the sort of treatment, however, that all Novi Homines must be prepared for. If one of that wretched class speaks of fever, the old inhabitant asks him how long he has lived in the place; if he complains of the drains, the descendant of the Romans inquires what he came there for; and if

he speaks disparagingly of the water-supply, the old man of Axminster asks him why he does not go away. What can the Novi Homines do? They must go somewhere. Railroads were invented in order that they should go anywhere. They cannot, indeed, all become "old inhabitants," but surely they have a right to reside in the ancient parish towns! They don't want to interfere with the hereditary rights and privileges of the ancients: all they say is, that dirt and disease were not included in the old title-deeds. It would be unfair to impute bad motives to the local authorities of Axminster. Even those who complain of their stupidity give them credit for the best intentions. They only worship the past too much to care about the present, and their reverence for the Romans prevents them from understanding the wants of the coming generation—"the Novi Homines." "Virtue itself turns vice being misapplied," and respect for their forefathers prevents the Axminster authorities from having anything to do with science. No one complains of parsimony, with the exception of the "Inspector of Nuisances," who does indeed hint that a man cannot do his duty thoroughly who has to inspect seventeen parishes for a salary of £60 a year! But surely the pay is handsome when his duty consists in keeping things as much as possible as they were in the early days of Britain? In the meantime the Novi Homines must wait a little, but they will prevail at last. At present they lie prostrate under the lash of the local newspaper, which describes their voices as "the *fawning* complaints of a few meddlesome persons." "Fawning" is a good word,—it lets the Novi Homines know what to expect when they attack the abuses which visitors do not care, and many residents do not dare, to notice; but surely the state of things must be unsatisfactory indeed when "Novi Homines" dare to face such scathing words as the Axminster local press and authorities have in store for them.

THE WEEK.

TOPICS OF THE DAY.

In accordance with resolutions unanimously passed by the Society of Medical Officers of Health at a recent meeting, a deputation from the Society last week waited upon the President of the Local Government Board on the subject of epidemics and infectious diseases, and the difficulties experienced by medical officers of health in dealing with such cases. Dr. Buchanan, President of the Society, explained that their object was to secure that means be established for limiting the spread of dangerous diseases. He complained that their work was much hampered in this respect by their not having knowledge of the existence of such diseases. He contended that it should be made a duty on the part of the occupier of a house, or the medical officer in charge of the case, to give information to the sanitary authority. Other members of the deputation having spoken to the same effect, Mr. Sclater-Booth replied that all the suggestions then made were present to the mind of the Government when the Public Health Act of 1875 was in preparation; they had purposely omitted them, because they would have provoked opposition to the Bill, and delay would have ensued, which might have proved fatal to the passing of the measure. Although public opinion was fast ripening in the direction of something more authoritative and vigorous in the way of interfering between the medical attendant and his patient, yet he was not at all of opinion that they could have pressed Parliament to go further than it had done. He believed the time would soon come when they would be able to introduce some improvements in the law with the general consent of the public. With regard to the wishes of the deputation respecting notice being sent in to the central authority of the existence of disease, he believed public opinion was tending that way. He could not promise at that moment to take up the Public Health Act, but anything that could be done to secure publicity for infectious diseases undoubtedly would be done, and any suggestions that would improve the law in that respect would have his best attention. As we have before pointed out, the occupier of the house is the person who should be compelled to give the notice of any outbreak of disease, and not the medical attendant, who, for various obvious reasons, should not have this duty imposed upon him.

Recently some stir has been made with regard to a matter which is still, in the minds of many, of doubtful value. Pictures in hospitals are, no doubt, pleasant to the sight; but are they always wholesome? At all events, where circumstances do not oppose, many a rough sketch, now thrown heedlessly by, might become a fund of amusement and interest to the suffering and despondent. The manager of the *Graphic* states that he has for some time past distributed parcels of engravings and coloured pictures, suitable for framing, to charitable institutions for the adornment of their walls; and it is certain that the present appeal has only to be made public to insure a hearty response from many of those whose talents enable them to amuse and instruct the less gifted portion of their fellowmen.

The following case abundantly testifies to the insurmountable difficulties encountered by the medical profession in endeavouring to check the spread of infectious diseases. The Sanitary Inspector to the Board of Works for the Poplar District made an application last week to the magistrate at the Thames Police-court for the removal of the body of Ann Haggerty (twenty-one), who had died from small-pox in a room in Robin Hood-lane, Poplar. The certificate of the Medical Officer of Health to the Board of Works set forth that the body was kept in a room in which persons lived and slept The inspector said that when he visited the house he found the body lying on the ground-floor. There was a large fire in the room, and about fifteen men and women, more or less intoxicated, were holding a "wake." The door was wide open, and persons passing could actually see the body. He wished the body to be removed at once, as people were continually going in and out of the house with cans of beer. The magistrate made an order for the immediate removal of the body to the mortuary, to be buried within twenty-four hours at the cost of the parish authorities.

An alarming occurrence is reported to have happened at a Wesleyan chapel at Ditton, near Widnes, on the evening of Sunday week. Shortly after the beginning of the service several of the congregation, mostly youths and children, were observed to close their eyes, and then fall from their seats in a state of insensibility. At length the continued recurrence of this extraordinary state of things alarmed the congregation, who at the same time became aware of some depressing influence in the atmosphere of the chapel. The fainting persons were carried out; but finally the minister himself succumbed, falling fainting in the pulpit. This was the signal for a general departure, and subsequent examination elicited the fact that the heating apparatus of the chapel had become disarranged, and, the flue being choked up, noxious gases were generated, which found their way into the building, and the congregation had narrowly escaped asphyxiation where they sat.

Colonel Cox, of the Local Government Board, opened an inquiry last week, at Kingston-on-Thames, as had been previously announced, to ascertain the advisability of combination by the various sanitary authorities of the Thames Valley for the disposal of their sewage by main drainage. Fifteen boards were represented, and counsel appeared for the landowners and persons locally interested.

We are glad to be able to record that further steps are being

taken to utilise some of the intramural burying-grounds no longer required for their original purposes. By this means valuable open spaces are being acquired, which will ultimately prove a great boon to the crowded neighbourhoods which surround them. In the session of 1875 the Vestry of St. Pancras succeeded in obtaining an Act of Parliament with reference to the two large spaces known as the disused burial-grounds of Old St. Pancras and St. Giles's-in-the-Fields, situate on the eastern side of the Pancras-road, and comprising an area of about nine acres. The Bill gave the Vestry powers to lay out these grounds as an ornamental garden and recreation-ground for the public in perpetuity. A sum of £3000 has been spent in planting and laying out the grounds in a manner which will in no way interfere with the sanctity of the dead. These grounds have now been opened, and an open space has thus been secured to the entrance of the Crowndale-road and Great College-street, near the Veterinary College, which must prove highly acceptable to the inhabitants of the densely populated districts of Camden and Somers Towns. The disused churchyard of the parish of St. George's-in-the-East was also formally opened last week as a public garden by the Vestry, in the presence of Sir James Hogg, M.P., the chairman, and several of the members of the Metropolitan Board of Works; the Lord Mayor and a large gathering of persons interested in the locality, assisting. The steps for carrying out this improvement were likewise inaugurated in the year 1875, the area acquired being about 13,640 feet; and it was further determined to purchase the adjoining disused chapel burying-ground, so as to form a footway between Cable- and Ratcliff-streets, and thus obtain an additional area of 11,440 feet for the garden. The garden has been tastefully laid out by Mr. Veitch, of Chelsea, and will no doubt prove a vast boon to the surrounding population, composed almost entirely of the labouring classes, the nearest public grounds available to them up to the present time having been the Victoria-park.

The first of a series of popular lectures on "The Laws of Health" was delivered on Saturday evening last at the establishment of the Society of Arts, by Professor Corfield, M.A., M.D. The Dean of Westminster, who presided, opened the proceedings in a brief speech; and Dr. Corfield, entering upon his subject, explained that different diseases might be looked for at different periods of life, and counselled everyone to endeavour to find out his weak point—if any such should exist from hereditary tendencies or otherwise—in order to guard against its being fixed upon by disease. Treating at great length of the causes of infant mortality, he strongly urged upon mothers to nurse their own children; and, alluding to infectious maladies, stated that in the first forty-six weeks of last year only one among such children as were between the ages of one and five, and had been vaccinated, died of small-pox, and it was found that this child had contracted the disease before vaccination.

At the meeting of the managers of the Metropolitan Asylums District Board, held on Saturday last, two deputations attended—one from the inhabitants, and the other from the Vestry of Limehouse,—and urged the Board not to establish a small-pox hospital in Dod-street, Limehouse. It was stated, amongst other objections, that the accommodation was insufficient, and the institution unhealthy. It was observed, at the Board, that probably the site in Dod-street would not have been selected if the Board had been going to build; but the Board had had to refuse 200 cases of small-pox for which it was their bounden duty to provide; and until the new hospitals at Deptford and Fulham were ready, these buildings in Limehouse must be used. The Board have, it was remarked, to act for the whole of London, and the East had been very content to send their patients to Hampstead, though they did not like to have an Asylum Hospital at home; but Limehouse must, if necessary, bear its share of the burden. The Dod-street premises are, however, to be used as a "temporary" hospital only, and will not be used except in case of absolute necessity. After a discussion amongst the managers, it was resolved, by thirty votes to four, to retain the premises for the purpose for which they had been taken.

The Guardians of the Westminster Union have again adjourned the adjourned consideration of the order of the Local Government Board respecting the land and buildings on Wandsworth-common, for two months.

A serious outbreak of scarlet fever of a malignant type has recently occurred at Brownhills, near Walsall. Twenty children have already died from the complaint, and many more are ill. All the schools in the locality have been closed. There are many nuisances, arising from bad drainage, and the medical officer for the district, Dr. McCully, describes many of the places round as "dreadful." Now that the penalty of so much negligence has been paid in human life, a drainage scheme, at an estimated cost of £5000, is to be carried out in the district.

It is stated that several of the large railway companies are about to adopt a new system for warming their carriages. Pipes are to be placed beneath the floors of the carriages of every class, which will be connected with the engine, and heated vapour will be passed into them. One of the advantages of this new system is to be that travellers will be able to regulate the temperature of the carriages in which they are travelling by means of an index handle inside each compartment. If this communication with the engine, which must be somewhat elaborate, can be successfully carried out, why should there be any difficulty in establishing communication with the engine-driver to be ready in case of an emergency? On some lines this means of attracting attention is said to be fitted to every train despatched, but it is certain that the precaution is by no means universal.

Their Royal Highnesses the Prince and Princess of Wales and the Royal children have been vaccinated recently. By command of their Royal Highnesses all the members of the household, both at Marlborough House and Sandringham, have also been vaccinated.

THE REPORT ON FRIENDLY SOCIETIES AND TRADE UNIONS, 1875. The First Report of proceedings under the Friendly Societies Act of 1875 has, in accordance with the instructions of the House of Commons, just been published. The portion of it which falls within our province to comment upon is that which deals with the insurance of the lives of children in Friendly Burial Clubs. Although apparently a most inhuman suggestion, it is nevertheless notorious that infantile mortality has largely increased in this country by the amount of money receivable by the parents at the death of their offspring. Only recently, at a meeting of the Sedgley Local Board, the question of infantile mortality was considered, when it was stated that the parents of eighteen of the twenty-two children, out of a total of twenty-nine deaths, belonged to death clubs, and some of the parents had received money from the clubs for previous deaths, and in one case for five previous deaths. By Section 28 of the Friendly Societies Act of 1875, the avowed object of which was to provide greater security for the lives of children, the important change is made of substituting the production of a registrar's certificate of death as a primary legal condition for that of the medical certificate. But the registrar's certificate itself can only be issued on one of the four following classes of evidence:—(1) The previous entry of the cause of death in the register of deaths on the certificate of a coroner; (2) such previous entry on the certificate of a registered medical practitioner who attended such deceased child during its last illness; (3) the production

of a certificate of the probable cause of death, under the hand of a registered practitioner; (4) other satisfactory evidence. Of these four conditions, the third corresponds to the previous law. The first and second afford a still higher kind of evidence. The fourth (introduced, it is understood, at the suggestion of the Registrar-General for England, in place of the words "except on production of such medical certificate of the probable cause of death as the registrar of deaths shall deem sufficient," which stood previously in the Bill) may be either useful, or the reverse, according to the manner in which it is interpreted and carried out. The following is the paragraph of the Registrar-General's "instructions" on this point:—"The Registrar-General desires that in every case in which the issue of a certificate of the death of a child depends upon the production of 'satisfactory evidence' of the *probable* cause of such death, the registrar will exercise the utmost caution in determining whether the evidence produced is really 'satisfactory.' A statutory declaration of the *probable* cause of death by a person who is not the parent of the child, and is not interested in any moneys to be received at his death, may be accepted as satisfactory evidence; but where a statutory declaration is not produced, the registrar may accept the next best evidence he can obtain, such as the statement of an unregistered medical attendant, or of a person who was in attendance on the deceased child during its last illness, but is not a parent of the child, and is not interested in the money to be received." On this point the Chief Registrar of Friendly Societies, in the report under notice, remarks that "whilst believing the requirement of a certificate by a registrar of death, in place of a mere medical certificate of a child's death, to be in itself exceedingly beneficial, he cannot but look with apprehension on the very wide construction which the Registrar-General has put upon the term "other satisfactory evidence." It appears, from the "instructions" above quoted, that a registrar of deaths may accept the evidence of a herbalist or of a nurse as "satisfactory," such evidence being thus placed on the same footing with the certificate of a registered medical practitioner; and since the cheapest mode of procedure is generally the one which will in the long run be adopted, it is to be feared that, as soon as this new state of things is understood, registered medical men will less and less be applied to in such cases. Further, the Chief Registrar feels himself constrained to say that the frequency with which sums exceeding the legal limit are now shown to have been paid, on the death of children in Lancashire and Yorkshire, appears to him to give a new importance to the question discussed by the Friendly Societies Commissioners in Part I. of their Fourth Report on "the bearing of burial benefits on infant mortality," as it is impossible for him to doubt that the sums illegally received by insurers have been largely in excess of the cost of burial.

It scarcely needs the opinion expressed in this Report to convince every thinking person that, so far from relaxing the *necessity* of medical proof of the cause of death in infants, a more stringent interpretation of the rules should, if possible, be insisted on, and we must express our regret that the Registrar-General should have seemed ready to admit, by his "instructions," the evidence of unregistered medical attendants and ignorant nurses.

DEPUTATION ON THE LONDON WATER-SUPPLY.

On Monday last a large and influential deputation waited upon the Home Secretary to present a memorial on the subject of the London water-supply. The deputation was introduced by Sir Charles Russell, M.P., and included members of the various metropolitan vestries and district boards, and of the National Chamber of Trade. The memorial set forth that since the passing of the Metropolis Valuation Act in 1869 the water companies had taken advantage of the largely increased value of property to raise their rates, giving in some cases a less supply of water without assigning any reasonable cause, thereby adding to the cost of one of the primary necessaries of life; and it suggested that the metropolis could be supplied with water on much more reasonable terms if the whole management was placed under the control of a central authority. Several members of the deputation addressed the Home Secretary, and from their remarks it was gathered that they wished to get the opinion of the Government as to what would be the best course to obtain the relief they desired. They were at the present time in the hands of eight water companies, who possessed what might be considered arbitrary powers under promises which had not been fulfilled; also, as to whether the general laws, controlling the private joint-stock profits at the expense of the community, had not become, in a certain sense, obsolete. Mr. Cross, in reply, said the deputation had raised several questions of very great importance, which they could not expect him to answer upon that occasion. First, as he understood them, they complained that the interpretation of the Act of Parliament was wrong. That was a question for the courts of law. Then they submitted that the interpretation of the Act by the companies themselves was not the meaning which Parliament meant it to bear. If that were so, it was a question which they could bring before Parliament in the usual manner. Then they had raised other important questions as to the making a central body over all the water companies by purchasing them. He was not so sure about that,—it was a very large question indeed, and he was not prepared to give them an answer. All that he could say was that the matter had not escaped the attention of the present Government, although, as they knew, it was a very difficult question to deal with. In answer to a question whether Government would support a movement for the purchase of the water companies, Mr. Cross said he must decline to give an opinion.

A PECULIAR SEQUELA OF TYPHOID FEVER.

At the meeting of the Berlin Medical Society, November 1, 1876, Professor Henoch related the following interesting case:—A girl, aged nine years, entered his wards in the Charité Hospital on December 3, 1874, and remained there until she went out cured on January 27, 1875. During the previous four weeks she had had an attack of undoubted typhoid fever; but on admission her temperature was quite normal, and remained so for days together, only once rising to 39·8° Cent., owing to the presence of abscesses on her scalp, which, however, were quite well by December 13. At this date the child's weakness and emaciation were so great that it seemed scarcely likely that she would recover. Her tongue was still coated, and there were evidences of coryza and bronchitis present. The most striking symptom was a very marked œdema of the eyelids, which, however, was proved not to depend on renal disease, for the urine, though tested daily, never contained a trace of albumen. Still more remarkable was the discovery of a considerable amount of abdominal distension, which was proved to be due to the presence of ascites. Besides the above there were no other morbid symptoms present, and all the organs of the body performed their functions normally. A few days later there was a good deal of œdema of the hands, while the feet always remained free from it. The child was treated with good food, red wine, and quinine, and the dropsy rapidly began to diminish. On December 8 the œdema of the hands was gone, and there was very little prominence of the abdomen remaining. On December 16 the ascites was still less marked, and in the beginning of January it had completely vanished. In his remarks on the case, Professor Henoch stated that this was the only instance of such a sequela that he had met with in a series of nearly 100 cases of typhoid fever in children. He believes that such a sequela may be due to

one or more of three causes—1. To a state of anæmia or hydræmia, which would render serous transudation easier than in the normal state. 2. To weakness of the heart, probably dependent on the molecular changes in its muscular fibres, which Hoffmann has proved to occur in the various organs of the body during typhoid fever. Such weakness of the heart in this case would favour stagnation of the blood in the venous system, and hence give rise to dropsy. 3. To the pressure which the so-called "cloudy swelling" of the liver-cells, which is known to occur in typhoid fever, might exert on the finest branches of the portal vein, so as to cause stagnation of blood in the peritoneal veins, and hence, in conjunction with the weakness of the heart, produce ascites. The existence of tubercular peritonitis in this case could be excluded, partly by the absence of abdominal pain, partly by the accompanying œdema of the eyelids and hands, which it would be difficult to refer to a peritoneal affection, but mainly by the fact that the child recovered, whereas Professor Henoch, at least, has never seen a case of recovery from true tubercular peritonitis.

THE CLINICAL SOCIETY.

At the meeting of the Clinical Society on January 26, Mr. Callender, the new President, delivered an excellent address (which will be found elsewhere in our pages) on precision and order in clinical work. It was practical, as is especially becoming in an address to the Clinical Society; it was instructive and suggestive; and it was short,—so that some of the ordinary business of the Society was got through during the same evening. The subject of the address was well chosen, and the President was justified in saying that the Society had not only encouraged, but "practically established a precision and order in the observation of clinical facts, which is by itself a substantial gain"; and as a consequence, in great measure at least, of its example and work, we may "recognise that in every direction an effort is being made to observe disease and its treatment in a more critical and accurate manner than heretofore." Facts were given illustrating the gains in our knowledge of disease, and of its treatment, from this more precise work in "hospital practice and elsewhere." Thus we have learned, by the careful supervision of operations and other wounds, that "if rest and cleanliness and constant attention are combined, the most serious hurts are repaired with an absolute certainty (not merely through a precarious convalescence), injuries being recovered from which some years ago would have been considered irremediable"; close observation of a case of wound enables us to detect the oncoming of erysipelas, and to commence the treatment of it, twelve or twenty-four hours before the outcome of the rash; pyæmia has been proved to be a preventable disease; skin-grafting has been introduced; and so on through a long list. And it was observed that "in nearly every instance the gain, if any, in treatment has been due to precise observation of the cause and nature of the trouble to be remedied, and to the direction of natural forces for its relief." The great importance of precise observations of the conditions which cause disease was dwelt on; and also the good to be gained from the study of the "natural history of disease"; but Mr. Callender did well to point out that "this study is, in truth, that of disease as observed under the most careful supervision, with rigid exclusion of complications from preventable external influences; that is, free from errors of management—all, in a word, that due watching, rest, cleanliness, temperature, and suitable nourishment can do,"—in fact, "clearing the ground for precise observations of the medicinal action of drugs, and for gauging their exact effects." The behaviour of a malady under such circumstances certainly cannot, with any pretence to precision, be termed, as it has been, the natural history of disease. The attainment of a trustworthy, precise, and scientific knowledge of therapeutics must always be, Mr. Callender observed, the great feature in the prospective work of the Society; and he concluded his address by remarking on the difficulties inseparable from such a work, and on the vastness of it; by urging and encouraging everyone to join honestly and earnestly in it; and by observing that this "work must, indeed, have led to an infinite advance beyond our present knowledge of the art of healing before the time has come when we may slacken our efforts for the cultivation and promotion of practical medicine and surgery."

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 116, 100, and 79 in the first three weeks of the year, rose in the week ending January 27, to 86, of which 38 were certified as unvaccinated, and 22 as vaccinated; in the remaining 26 cases the medical certificates did not furnish any information as to vaccination. In order fully to appreciate the remarkable tendency of small-pox to single out the unvaccinated for its victims, it should be remembered that the vaccinated in the present population of London are probably nine times as numerous as the unvaccinated. The 86 deaths from small-pox included 36 in the Metropolitan Asylums Hospitals at Homerton, Stockwell, and Hampstead, 2 in the Highgate Small-pox Hospital, 2 in the North-street Infirmary, Poplar, and 1 each in the Clerkenwell Workhouse and the House of Correction at Clerkenwell; the remaining 44, or 51 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 9 of the deceased small-pox patients had resided in Lambeth (including 3 at Lower Norwood), 6 in St. George's, Southwark, 6 in Battersea, 5 in Hackney, 5 in Newington, and 5 in Poplar; 8 belonged to the West, 17 to the North, 4 to the Central, 20 to the East, and 37 to the South groups of districts. The fatal cases showed a decline in East London, whereas they were more numerous in the West, Central, and South districts. The Metropolitan Asylums Hospitals, with accommodation for 900, contained 830 small-pox patients on Saturday last. Two unvaccinated children of a bootmaker died from small-pox in the Holloway-road, Islington, on the 24th and 26th ult., aged seven months and four years respectively. As to the other nineteen English towns, the mortality in which is noted in the Registar-General's weekly returns, deaths from small-pox were recorded in three only—viz., 19 in Liverpool, 12 in Manchester (exclusive of 3 fatal municipal cases in Monsall Hospital), and 6 in Salford.

"CLEOPATRA'S NEEDLE."

It was stated in our contemporary the *World*, last week, that a promise has been formally given by the Metropolitan Board of Works that a site shall be found on the Thames Embankment for "Cleopatra's Needle"; and that, though it has been repeatedly declared, on official authority, that the nation cannot afford to pay for the transport of the Needle to this country, the promise given by the Board is no idle form; for "a distinguished and public-spirited surgeon has offered to defray the necessary expenses." It was added that this gentleman, "with a modesty which he would hardly have displayed had he not been an unassuming professional man, but a Birmingham capitalist or a retired East India merchant, does not wish his name made public till the work be accomplished." It is hardly possible, however, to keep secret the name of the doer of such deeds,—it is sure to ooze out sooner or later, and generally sooner; and we are not guilty of any breach of confidence in saying that Mr. Erasmus Wilson, already so honourably known for many acts of munificence, is the "distinguished and public-spirited surgeon" who is about to adorn the Thames Embankment with the famous and beautiful obelisk known as "Cleopatra's Needle," which, though long ago presented to the English nation, has hitherto been allowed to remain buried in the sands of Egypt.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At the ordinary meeting of the Royal College of Physicians held on Thursday, the 25th ult., a letter was received from the Executive Committee of the General Medical Council, asking on what conditions of exemption graduates of foreign universities would be admitted to examinations at the College. The Committee appointed to confer with Dr. Munk on the subject of a new edition of the College Roll, reported that a new and revised edition, bringing the Roll down to the year 1825, when the College took possession of the present building, might be brought out at a cost not exceeding one thousand guineas. This sum would provide for an edition of 1500 copies, and include editorial expenses and the purchase of the copyright. Much new matter will be given in the revised two volumes of the first edition, and a third volume will be added. The Committee added that an inspection of the Treasurer's accounts for the last two years convinced them that the College would be justified in undertaking the necessary cost of such a new and enlarged edition of the Roll, and they therefore recommended that it should be ordered, and that any Fellow, Member, or Licentiate of the College should be entitled to purchase the work when brought out, at cost price. The report was adopted, and the committee authorised to carry it out. A report was also received from the committee for considering the best mode of preparing a new edition of "The Nomenclature of Diseases." The preparation of the first edition took twelve years, and on its title-page is the statement that it is to be "subject to decennial revision," according to which a revised edition ought to be brought out ere long. It appears, moreover, that the first edition is very nearly exhausted, and as it would be very expensive to reprint a small number of copies, the committee recommended that a new and revised edition should be prepared without delay, and a committee appointed for the purpose, with power to add to their numbers. The report was adopted, and the following committee constituted:—The President; Drs. Peacock, Wilks, Bristowe, Radcliffe, Barclay, Bucknill, Barnes, Balfour, Hilton Fagge, Payne, and Galabin; Mr. Simon, Mr. T. Holmes, Mr. Hutchinson; the President of the Royal College of Surgeons, or his representative; Sir Joseph Fayrer; the Directors-General of the Medical Departments of the Army and the Navy, or their representatives; and the Registrars-General of England, Scotland, and Ireland, or their representatives.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

On Monday last, January 29, Dr. James Emerson Reynolds, Professor of Chemistry in the University of Dublin, gave the second of the annual series of scientific lectures for 1877, in the College Hall. The lecturer continued and concluded the subject of "The Influence of Chemical Constitution on Physiological and Therapeutical Action." His third proposition was—That certain unsaturated bodies, which contain different elements within their molecules, but which agree in their chemical relations, agree in physiological action. He referred to the relatively varying toxic properties of the ortho-, pyro-, and meta-phosphates; of the ortho-, pyro-, and meta-arsenates; of the ortho-, pyro-, and meta-vanadates; and of the methyl-, ethyl-, propyl-, butyl-, and amyl-alcohols. He also compared the poisonous effects of phosphorus and of pyro-gallic acid. The fourth proposition was that the result of chemical addition to unsaturated bodies is either to destroy or to materially modify their physiological action. This part of his lecture was illustrated by frequent allusions to the investigations by Drs. Crum-Brown and Fraser in 1868 on the actions of carbonic acid and of carbonic oxide; and on the changes produced in strychnia by the addition to that alkaloid of various salts of methyl. The comparative innocuousness of iodide of methyl-strychnium was instanced. The extraordinary changes effected in the physiological action of morphia and of atropia by certain chemical additions were also described. Finally, Professor Reynolds sought to show how far a knowledge of chemical principles and of the habits of chemical compounds enables us to understand the kind of influence exerted by many physiologically active bodies within the animal organism. The third lecture of the series will be delivered on Monday next, February 5, by Dr. Macalister, Professor of Zoology in the University of Dublin. The subject is "Researches on the Development of the Muscular System in Vertebrates."

THE HEALTH REPORT OF PADDINGTON PARISH.

Although somewhat late in reaching us, we have felt compelled to notice the very carefully compiled Annual Report on the Health of the Parish of Paddington for the year 1875, prepared by Dr. James Stevenson, the Medical Officer of Health for that district. In addition to the usual information contained in reports of this nature, Dr. Stevenson has prepared a table which, to quote his own words, is "an epitome of 1855 lives; a register of lives ranging from an ephemeral duration of ten minutes to the monumental age of ninety-six years. It has the brevity and simplicity of patriarchal records: under its proper heading as to age, and opposite the name of the disease as the cause of death, stands the numeral indicating the '*fuimus*' of so many of our fellow-parishioners." From it may be gathered the various diseases to which, in the absence of accidental disturbing influences, a town population of upwards of 100,000 is subject, and more particularly those to which it is most prone, and also the ages at which it is most apt to succumb to those diseases. At the same time it furnishes a very fair indication of the measure of health and comfort enjoyed by the lower-middle and working classes of such a population. The labour expended in the compilation of a table of this nature is amply repaid by the instructive and interesting results elicited; and the parish of Paddington is to be congratulated on possessing the services of a Medical Officer of Health who assuredly devotes himself without stint to the onerous duties such an appointment entails upon him.

HEALTH OF SIR WILLIAM FERGUSSON.

Sir William Fergusson has lately been suffering from a return of some distressing symptoms resulting from his chronic renal disease. There has been of late increasing weakness, with difficulty of breathing, and consequently disturbed and restless nights. These symptoms, we regret to learn, are now causing much distress to the patient, as well as considerable alarm and anxiety to his numerous friends. Sir George Burrows and Dr. George Johnson are in constant attendance upon their friend.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of Saturday, January 27, Dr. James Little showed a striking example of the pathological changes wrought in the bladder, ureters, and kidneys by old-standing enlargement of the prostate. "Surgical kidney," dilatation of the calyces and pelvis, a sacculated dilatation of the ureters, and hypertrophy of the bladder without cystitis, were the chief features of interest in the case presented by Dr. Little. Dr. Gordon exhibited a specimen of aneurism of the thoracic aorta. The large tumour occupied the upper and posterior portion of the transverse aorta, and pressed on the trachea, œsophagus, recurrent laryngeal nerve, and left subclavian artery. Dr. Finny showed an example of extensive carcinoma of the liver, gall-bladder, and peritoneum in the person of a gardener aged seventy-six. There had been jaundice, with great debility, and a slate-blue tinge on the malar prominences and backs of the hands. Professor E. H. Bennett presented the bones of the amputated leg of a man aged thirty-six, and also the cast of the limb. The head of the fibula was the

seat of a very large giant-celled sarcoma, which, however, did not engage the superior tibio-fibular articulation. Some lymphatic glands in the neighbourhood were enlarged, but (as might be expected in this form of growth) they contained no sarcomatous elements—they were merely dropsical, with an abundance of lymph-cells.

BRITISH MEDICAL BENEVOLENT FUND.

The annual general meeting was held on January 10, Sir George Burrows, Bart., President, in the chair. The report having been read by the Honorary Financial Secretary, was approved and adopted. The receipts for the year 1876 have been so far unfavourably influenced by the prevalent financial depression, and the loss by death of generous friends, that the amounts received as donations have been less by nearly one-half than in 1875—the sum received under this head being £473. The subscriptions have, however, reached £955. A legacy of £500 from the late Sir James Bardsley has also been received and invested for the Annuity Department. The amount voted to cases of distress from the Immediate Relief Department was £1379, in 130 grants, benefiting over 330 persons. A further sum of £689 has been distributed amongst thirty-six annuitants, the total number assisted during the year being upwards of 380 individuals at a cost of £2068. Votes of thanks were passed to Sir George Burrows, President; to Messrs. Churchill, for their liberality in providing a committee-room; to the staff of the Fund; to the Auditors; and to the editors of the medical journals, for their kind and liberal advocacy of the claims of the Fund.

UNIVERSITY OF DUBLIN.—TRINITY COLLEGE.

The following resolutions, among others, were adopted by the Academic Council on January 24, 1877:—1. That the following resolution, adopted by the Board of Trinity College, and previously recommended at the meeting of Examiners in State Medicine, be agreed to, viz.: "Candidates for the Diploma in State Medicine shall be allowed to present themselves for examination at any time after passing their M.B. and B.Ch. examinations, instead of waiting, as at present, for the standing of M.D." 2. That the following motion be referred to the professors of the School of Physic for their report upon it, viz.: "That the appointment of a special teacher of Ophthalmic Surgery in the School of Physic is desirable." In our announcement last week of the names of the Extra Examiners appointed in the School of Physic, the name of Henry Wilson, Esq., as Examiner in Ophthalmic Surgery was inadvertently omitted.

BARONY PAROCHIAL BOARD, GLASGOW.

At the monthly meeting of the Barony Parochial Board, held on the 30th ult., it was resolved by a majority of sixteen to seven to adopt the recommendation of the Committee—"That, for the distribution of medical relief, one man, with a salary of £300 (including vaccination and lunacy fees), and devoting his whole time to the discharge of the work, should be appointed to attend to the wants of four districts in the East-end, presently under the charge of four officers." Notice was also given that at next meeting a motion would be proposed to the effect that a similar arrangement should be provided for the western districts of the parish.

CLINICAL DEMONSTRATIONS AT BROMPTON.

We would remind those of our readers who may be specially interested in diseases of the chest and their physical diagnosis, that the next series of clinical lectures and demonstrations at the Brompton Hospital for Consumption will commence next week. Dr. C. Theodore Williams will open his course on Monday, February 5, at 3 p.m.; and Dr. Mitchell Bruce will give his first demonstration on Wednesday, February 7, at the same hour.

CLAPTON ASYLUM FOR IDIOT CHILDREN.

A very enjoyable evening was spent at the Metropolitan Asylum for Imbecile Children at Lower Clapton on Thursday, January 25, when the annual new year's entertainment was given to the inmates. A concert, entirely performed by some of the imbecile children, was followed by the fairy burlesque of *Red Riding Hood*, the characters being taken by the staff and inmates, under the direction of Dr. Fletcher Beach, the Medical Superintendent. The acting was exceedingly good for amateurs, and the piece was pronounced a great success. The "Anvil Chorus," with dumb-bell accompaniment by some of the larger boys, concluded the entertainment. Dr. Brewer, Chairman of the Metropolitan Asylums Board, Sir Edmund Currie, Chairman of the Clapton Committee, and a large company of visitors, sat out the entire performance.

ROYAL INSTITUTION OF GREAT BRITAIN.

The following is a corrected list of the probable arrangements for the Friday evening meetings before Easter, 1877, to which members and their friends only are admitted:—February 9, Francis Galton, Esq., F.R.S., M.R.I., "Typical Laws of Heredity"; 16th, Professor F. Guthrie, F.R.S., "Solid Water"; 23rd, J. F. Moulton, Esq.; March 2, Professor Huxley, LL.D., F.R.S.; 9th, Frederick J. Bramwell, Esq., F.R.S., M.R.I.; 16th, Professor James Bryce, D.C.L.; 23rd, Professor Gladstone, Ph.D., F.R.S., M.R.I. On March 30 and April 6 (the Fridays in Passion and Easter weeks) there will be no evening meetings. After Easter the Friday evening meetings will be resumed on April 13, and continued till June 8, without intermission.

SCHOLARSHIPS AND EXHIBITIONS FOR NATURAL SCIENCE AT CAMBRIDGE.

The following is a list of the Scholarships and Exhibitions for proficiency in Natural Science to be offered at the several Colleges and for Non-Collegiate Students in Cambridge during the present year:—

Trinity College.—One or more Foundation Scholarships of £100, and one Exhibition of £50. The examination for these will commence in the first week of April. The Scholarships are open to undergraduates of Cambridge who have passed the Previous Examination, including that in the additional subjects. The Exhibition is open to persons under twenty, who have not yet commenced residence at the University.

St. John's College.—One of the value of £50 per annum. The examination (in Chemistry, Physics, and Physiology, with Geology, Comparative Anatomy, or Botany) will commence on April 7, and will be open to all persons who have not commenced residence at the University, as well as to all who have entered and have not completed one term of residence. No candidate will be examined in more than three of the above subjects. There is a separate examination in Natural Science at the time of the annual College examination at the end of the academical year in May; and Exhibitions and Foundation Scholarships ranging in value up to £100 will be awarded to students who show an amount of knowledge equivalent to that which, in Classics or Mathematics, usually gains an Exhibition or Scholarship in the College.

King's College.—On Wednesday, April 4, 1877, and following days an Exhibition in Natural Science will be offered for competition to all persons, being British subjects, under twenty years of age, who bring a satisfactory certificate of character, as well as to undergraduates of the College in their first or second year. The Exhibition is worth about £90 a year, and is tenable for three years, but not with any other exhibition or scholarship of the College. The examination will consist of Physics, Physiology and Chemistry, together with Elementary Classics and Mathematics. Exhibitioners are eligible for the Undergraduate Scholarships given annually by the College.

Christ's College.—One or more in value from £30 to £70, according to the number and merits of the candidates, tenable

for three years and a half, and for three years longer by those who reside during that period in the College. The examination will be on March 20, in Chemistry, Chemical Physics, Geology and Mineralogy, Botany, Comparative Anatomy and Zoology, Physiology, and will be open to anyone, whether a member of the College or not (provided his name is not on the boards of any other College in the University), who is not of sufficient standing to be admitted *ad titulum Baccalaurei in Artibus*. The candidates may select their own subjects for examination. There are other Exhibitions which are distributed annually among the most deserving students of the College.

Gonville and Caius College.—One of the value of £60 per annum. The examination begins on the last Tuesday in the Lent Term, and is open, without restriction as to age, to candidates who intend to commence residence in October. Subjects:—Chemistry and Physics, Zoology with Comparative Anatomy and Physiology, and other branches of Natural Science. College Examinations are held annually in the Easter Term, for Medical and Natural Science Students who have passed the University Previous Examination in Anatomy, Physiology, Physics, Chemistry, etc., at which Prizes and Scholarships of the value of from £60 to £20 are awarded to members of the College of the first, second, and third year, on precisely the same conditions as those for other branches of learning. Scholarships are in general tenable till the student is of standing to take the B.A. degree; and in cases of sufficient merit the tenure is prolonged till the holder is of standing to take the M.A. degree. Examinations are also held, as vacancies occur, in Botany and Comparative Anatomy in its most general sense (including Zootomy and Comparative Physiology), for two *Shuttleworth Scholarships*, each of the value of £60 per annum, and tenable for three years. The candidates must be registered medical students of the University who have kept eight terms, have passed the additional examination required for candidates for honours, and produce satisfactory testimonials of good conduct. A successful candidate, if not a member of Gonville and Caius College, must become a member of the same. They are tenable with any other Scholarship at the College. The successful candidates for the *Tancred Medical Studentships* are required to enter at this College; these Studentships are five in number, and the annual value of each is £100. Information respecting these may be obtained from B. J. L. Frere, Esq., 28, Lincoln's-inn-fields, London.

Clare College.—One of the value of £60 per annum, tenable for two years at least. The examination (in Chemistry, Chemical Physics, including Light, Heat, and Electricity, Zoology with Comparative Anatomy and Physiology, Botany with Vegetable Anatomy and Physiology, and Geology) will be held on March 20, and will be open to students intending to begin residence in October.

Downing College.—One or more of the value of £60 per annum. The examination (in Chemistry, Physics, Comparative Anatomy and Physiology) will be on, or about, April 9, and will be open to all students not members of the University, as well as to all undergraduates in their first term.

Sidney College.—One of the value of £60. The examination will be on March 20, and will be open to all students who intend to commence residence in October. The subjects will be Chemistry, Chemical Physics, Geology, Zoology and Physiology, Botany.

Emmanuel College.—One Foundation Scholarship of £70, tenable till the holder is of standing for the degree of B.A., and four minor scholarships (two of £70, and two of £50), tenable for two years, will be awarded for proficiency in Classics, or Mathematics, or Natural Science (Botany, Chemistry, Chemical Physics, Geology and Mineralogy, Zoology, Comparative Anatomy and Physiology). The examination will take place on March 20.

Non-Collegiate Students.—An Exhibition each year is given by the Clothworkers' Company, value £50 per annum, tenable for three years. Examination about Christmas, open to Non-Collegiate Students who have commenced residence in the October term, and to any who have not commenced residence. Information to be obtained from the Rev. R. B. Somerset, Cambridge.

Further information must be obtained from the Tutors of the respective Colleges; and the names, with certificates of character, date of birth, etc., must be sent to the Tutor of the College, in each case, several days before the examination. Although several subjects for examination are in each instance given, this is rather to afford the option of one or more to the candidates, than to induce them to present a superficial knowledge of several. Indeed, it is expressly stated by some of the Colleges that good clear knowledge of one or two subjects will be more esteemed than a general knowledge of several. In some instances, as at Caius College, each candidate is required to furnish beforehand a list of the subjects in which he desires to be examined. Candidates, especially those who are not members of the University, will, in most instances, be required to show a fair knowledge of Classics and Mathematics—such, for example, as would enable them to pass the Previous Examination. There is no restriction on the ground of religious denominations in the case of these or any of the Scholarships or Exhibitions in the Colleges or in the University. It will be observed that in several instances the time of the examination is the same, certain of the Colleges having combined together so as to hold one or two examinations, instead of each College holding a separate examination; and the arrangements are such that a student who is a candidate for a Scholarship at one College may be eligible without further examination to a Scholarship at another College in default of properly qualified candidates at that College. Some of the Colleges do not restrict themselves to the number of Scholarships here mentioned, but will give additional Scholarships if candidates of superior merit present themselves; and other Colleges than those here mentioned, though they do not offer Scholarships, are in the habit of rewarding deserving students of Natural Science. It may be added that Trinity College will give a Fellowship for Natural Science, once, at least, in three years, and that such a Fellowship will be given in the present year. The examination will take place at the end of September, and will be open to all Bachelors of Arts, Law, and Medicine of the University of not more than three years' standing from their first degree. Application should be made to the Rev. Coutts Trotter, Tutor of Trinity. Most of the Colleges are understood to be willing to afford Fellowships for merit in Natural Science equivalent to that for which they are in the habit of giving them for Classics and Mathematics.

FROM ABROAD.

Paris Statistics of Therapeutical Agents.

In the *Archives Générales* for January a very interesting paper appears, the joint production of Profs. Lasègue and Regnauld (the Director of the Pharmacie Centrale), bearing the title "La Thérapeutique jugée par les Chiffres." The figures here referred to are not derived from the consideration of the effects produced by the various therapeutical agents, but from the amount of these supplied by the Pharmacie Centrale to the various hospitals and charitable institutions under the governance of the Assistance Publique. These exhibit some curious variations and oscillations in the employment of various medicinal substances, which may serve as an indication of the amount of favour these have enjoyed or continue to enjoy.

The "Pharmacie Centrale des Hôpitaux et Hospices Civils de Paris," the authors of the paper observe, is an establishment positively *unique* in the world, wherein is centralised the preparation, the purchase, and the distribution, *without exception*, of all the medicinal substances employed in the hospital establishments of the metropolis. First founded in 1794, its definite organisation was due to Souberain; and subsequent improvements have constituted it an establishment of exceptional importance, where all the pharmaceutical preparations are made, and simple drugs and chemical products are submitted to the most rigorous examination by a large committee chosen from among highly competent persons. A strict account is kept of all medicinal substances which enter or are sent out of the establishment; and the tables exhibiting these are the sources whence the material for this paper has been derived. Unfortunately, it is not possible to exhibit the revolutions that medical practice has undergone in this respect during the early years of the existence of the Pharmacie Centrale, as the books of the establishment after they had served their immediate purposes of control were successively destroyed. So that the tabular statements for the last twenty years only are available, with the single exception of those relating to leeches, which go back uninterruptedly to the year 1820.

To instance the increase in consumption of some medicinal substances which have only come into use in recent times, it is stated that while 195 kilogrammes of *sulphuric ether* were consumed in 1855, these increased to 614 kilo. in 1875; and *chloroform* rose from 141 kilo. to 308 kilo. in the same period. *Chloral* first appears as 5 kilo. in 1869, and in 1875 had increased to 360 kilo. *Iodoform*, first entered at ¼ kilo. in 1859, reached 28 kilo. in 1875. The *bromide of potassium*, which figures only at 3¼ kilo. in 1855, and in 1863 had only reached 7¾ kilo., then succeeded in establishing itself in professional favour, and rose progressively from 22 kilo. in 1864 to 731 kilo. in 1875. The consumption of *opium* has undergone little change, this having been 148 kilo. in 1855, and 151 kilo. in 1875; but *morphia*, as would be expected from the generalisation of hypodermic injections, has made an immense stride from ¼ kilo. to 10⅓ kilo. The *sulphate of atropia*, from 9 grammes in 1855, rose to 1 kilo. in 1873, falling to 780 grammes in 1875. The quantity of leaves of *hyoscyamus* amounted to 15 kilo. in 1855, and after undergoing great variations in the interval, was 90 kilo. in 1875. Passing over some observations on emetic and antispasmodic substances, we come to *alcohol*, which has assumed a "colossal" rate of increase: in 1855 there were 1270 litres consumed, and 37,578 litres in 1875. Brandy, rum, and red wine have manifested the same progression, while white wine has greatly decreased in consumption, especially during the last two years. In curious contrast with this increase in the consumption of alcoholic liquids is the utter decline in the employment of *leeches*. Of this an account has been preserved since 1820. Between that year and 1824 the mean annual number was 183,000, and this rose during 1824-30 to 508,000. The hirudomania attained its apogee during 1830-37, when the mean annual number of 828,000 was reached; it amounted on three occasions to more than 1,000,000 per annum. From 1837 the numbers began to decline, moderately at first, but since 1863 precipitately—so that in 1874 only 49,000 were employed. The expenses have followed the same course, these amounting on three occasions between 1830-42 to 100,000 fr., being nearly equal to 200,000 fr. at the present time. In 1875 they fell to 1600 fr., which would not be more than 1000 fr. in 1840, *i.e.*, a sum 200 times less. The amount of *sulphate of quinine* consumed has about doubled, 24,525 grammes having been employed in 1855, and 53,734 in 1875.

Profs. Lasègue and Regnauld terminate their paper with the following observations:—

"The medicinal substances which we have now passed under review act, for the most part, as modifiers of the nervous system, with various titles, and under sufficiently different rubrics. Without attaching to the gross figures more importance than should belong to them, we may be allowed perhaps to hazard some deductions. Medical curiosity has, especially within the last ten years, undergone a change in its direction, abandoning local inflammatory affections, and even general diseases of the zymotic type, to occupy itself with nervous affections. In this respect science has made enormous progress. New species have been discovered, and confused agglomerations have been subjected to skilful analysis. In this work, so fertile in a pathological point of view, therapeutics as yet has not found its place. Medicinal indications are neither augmented nor perfected, and we witness the spectacle so often renewed of a pathology without a parallel therapeutics. Nevertheless, progress has been made by the introduction into the materia medica of new remedies directed almost exclusively to sensibility, in order to diminish or annul it. It is thus that chloral has followed, as we have seen, an enormously increasing march, while neither opium nor other anæsthetics have diminished in amount. When we consider, summing up the figures, that there are consumed annually in the Paris hospital establishments 350 kilo. of chloral, 250 of iodoform, 300 of chloroform, 250 of opium, 10 of morphia, and 750 of bromide of potassium, we are struck by the immense favour which these agents, all more or less anæsthetic, enjoy. On the other hand, the stimulants of sensibility, and especially those of motion, have either kept at uniform figures or have undergone a notable decrease. The more that disturbances in locomotion have found their explanation in definite lesions of the nervous centres, the less has the efficacy of *tétanisantes* substances been relied upon. [A table is given showing the stationary condition or decreased employment of nux vomica, St. Ignatius bean, strychnia, brucine, ergot, etc.] Antispasmodics lend themselves little to statistics. Administered without conviction, and destined to produce only doubtful effects and at long intervals, they are usually but an expression which fill up the vacuities of treatment. Perhaps the time is approaching when, in place of addressing ourselves to consequences, we shall endeavour to ascend to causes. The therapeutics of the nervous system will then essentially consist of medicinal substances intended to modify the general or local circulation, and to struggle with reflex affections at their point of origin. Then, with the exception of anæsthetics, which respond to an immediate necessity, the nervine remedies of heretofore will become mere accessories of a second order."

Reduction of Dislocation of the Femur by Manipulation.

We give below a brief abstract of an interesting clinical lecture delivered by Prof. Frank Hamilton at the Bellevue Hospital, and reported in the *New York Medical Record* of December 2.

The subject of it was a strong, muscular man, aged thirty-three, who fell while in a state of intoxication, and dislocated the right hip. Prof. Hamilton found him, about twenty-four hours after the accident, lying on his left side, the thigh flexed to about 75° with the usual immobility. When brought under the influence of ether flexion was increased to nearly a right angle, the limb, however, being easily brought into the same position as prior to etherisation. Prof. Hamilton observed that in nearly all his operations he preferred ether to chloroform, as being equally efficient and more safe; but as in the reduction of dislocations complete muscular paralysis is required, which is much more quickly and certainly attained by chloroform, he is in the habit of using this in these accidents. However, he had learnt that the "Commissioners have lately forbidden its use in this Hospital."

The difficulty in the exact diagnosis in these cases was illustrated in this instance by the fact that of the four surgeons of the Hospital who were present, two declared the dislocation to be ischiatic, while a third, with Prof. Hamilton, thought that the head was on the dorsum ilii. Fortunately, the decision of the question was not of much practical importance, as the mechanism of reduction by manipulation is much the same in either case,—"the chief point of difference being, that when the head is in the ischiatic notch there is more danger of carrying it around the lower margin of the acetabulum into the foramen thyroideum, and it is necessary to be more careful, in flexing the thigh, not to throw the head too low down."

"Dr. Hamilton then stated that he would proceed to attempt the reduction, first by gentle and very guarded manipulation—a method which has often succeeded, and which causes little or no additional injury to the capsule. If this failed, then, second, he would resort to violent or more forcible circumduction, by which additional injury would probably be inflicted on the capsule. If this failed also, he would, third, try extension as recommended and practised by Sir A. Cooper. The patient resting pretty fairly on his back, Dr. Hamilton, standing upon the right of the patient, *first* took hold of the dislocated limb (which was large and powerful) by placing the palm of his left hand under the knee, and grasping the top of the ankle with the right hand. The leg was brought to a right angle with the thigh, and the thigh flexed to a right angle with the body—the whole limb being still in a position of adduction and inward rotation. When the thigh reached the position of a right angle with the body, there was evident resistance, indicating that it could be carried no further in this direction without the application of considerable force. *Secondly*, the thigh was abducted moderately, or as far as it could be carried without force. Attention was called to the fact that even this amount of abduction was impossible when the thigh was in the position which it occupied before the manipulation was commenced; but the abduction did not exceed 8° or 10°, and was not sufficient to elevate the thigh to a perpendicular line—indeed, it was considerably short of this position. *Thirdly*, the whole limb was rotated outwards, and here was the first point of delay in the process of manipulation. During a few seconds no further progress was made towards reduction; but the position was steadily maintained by continued forcible rotation outwards. Dr. Hamilton remarked that he felt no yielding, but the observation had scarcely been made, when the head suddenly slipped into its socket, and the limb fell, with a peculiar oscillating motion, upon the table, parallel with the sound limb. Before the patient was removed, a small pillow was placed between the knees, and the legs loosely tied together to prevent a relaxation."

Prof. Hamilton concludes his lecture in these words:—

"I wish to call your attention again to the fact that, in effecting reduction, the thigh was only moved in those directions in which it could be easily moved. It could not, at first, be abducted, or adducted, or extended. In all these directions it was nearly, or quite, immovable. It could, however, be flexed easily to a right angle with the body, and this was the first thing done. Dr. Read declares that the thigh must be flexed until the knee touches the belly; but I have never found this degree of flexion necessary, except in old dislocations; nor is it proper, in recent cases, to make this extreme flexion, unless moderate (right-angled) flexion has failed, since it increases the laceration of the capsule, renders liable the displacement of the head of the bone into the foramen thyroideum, and endangers a fracture of the neck of the femur. When the thigh-bone had arrived at a right angle with the body, a slight abduction became practicable, and now the head of the femur, situated behind the acetabulum, was ascending the inclined plane towards its posterior lip or margin. Steady and forcible rotation outwards of the knee and thigh finally carried the head into the socket. This might have been facilitated by lifting the knee, or by a slight rocking motion, as first described by Nathan Smith; but neither of these aids were required in this case."

In a note to the case it is stated that the man was able to walk without limping on the fourth day after the reduction; and on the seventh day ascended five or six flights of stairs to the amphitheatre, and walked in the presence of the class, declaring he felt no pain or soreness. However injudicious his doing this may have been, it serves to show how little injury reduction by manipulation sometimes causes to the parts in and about the joint.

Rarity of Stone in the Bladder in Finland.

Dr. Estlander, Professor of Surgery in the University of Finland, read a paper on this subject at the Philadelphia Medical Congress, which is published in the *Boston Medical and Surgical Journal* for November 2. He observes that, as regards the etiology of this affection, it may be divided into two groups—the one in which there is no disorder in the urinary organs, the stone seeming to be of constitutional origin; and the other in which the calculus clearly depends on local disorder. When cases of the first group are very frequent in a country, endemic causes clearly prevail. Where no such endemic causes exist, the cases of stone are then derived from local disorders, such as affections of the kidney, and the various circumstances which prevent the bladder from emptying its contents. In a country where there are no endemic causes, the number of cases of stone arising from local causes will also be found to be less than elsewhere, and also principally occurring among the wealthier classes.

This is the case in Finland. The case-books of the Clinic of the Finland University show that for the last forty-four years only one case of stone occurred in a Finlander, although several operations have been performed in the Clinic on Russians, chiefly coming from the province of Jaroslau. As Finland had in 1875 a population of 1,829,919, and a surface of 6783 Swedish square miles, and as means of intercommunication remained until within the last ten years undeveloped, it might be supposed that cases of stone occurred in some of its eight provinces without presenting themselves at the University Clinic, although it is the only special hospital of the country. To ascertain how far this was the case, Prof. Estlander issued a circular to the surgeons superintending the hospitals erected by the Government in each of these provinces, asking for information on this point; and they all returned the same answer—viz., that during the ten or fifteen years that they have been attached to these hospitals, they have never met with a case of stone. Cases of calculus due to local causes (as paresis vesicæ) are also exceedingly rare amongst the hospital population, and not one single case of renal calculus is recorded in the hospital books. All cases of calculus have, in fact, occurred in Finland almost exclusively in the upper classes, originating most frequently in disorders of the urinary organs, especially hypertrophy of the prostate; and even these last are few in number, as Prof. Estlander has only met with twelve in natives of Finland during his practice of seventeen years as the only *ex professo* operating surgeon of the country.

The causes of this immunity extending over a whole country might seem easy of discovery; but such is not the case, the fact probably resulting from many co-operating circumstances. Among these, stress should probably be laid upon the purity of the water of Finland, which, derived principally from granite mountains, contains but small quantities of alkaline salts. The food of the people consists chiefly of cereals, fish, potatoes, and milk, there being probably no other people which consumes so little flesh and so much lactic acid. Another peculiarity is the habit of taking a bath in a room filled with hot steam. This habit seems to be as old as the Finnish people itself, and is so common that the poorest peasant never would neglect to take his bath once a week all the year round. "It would, perhaps, not be difficult to find out some relation between flesh as food and the uric acid which forms the greater part of the calculi of constitutional origin, or to show a certain connexion between the functions of the skin and the functions of the kidneys; but I prefer simply to point out the most striking features in the manner of living of the Finnish people, hoping that a comparison with other peoples enjoying the same immunity will show, better than any hypothesis, whether the national mode of life exercises any influence in this respect or not."

REVIEWS.

Clinical Lectures on Diseases Peculiar to Women. By Lombe Atthill, M.D., President of the Dublin Obstetrical Society, Master of the Rotunda Hospital, etc. Fourth Edition, revised and enlarged. Dublin: Fannin and Co. 1876. Pp. 316.

We agree with the author of this book when he says, "It is impossible that a fourth edition of any medical work can be reached without its influencing to a considerable extent the management of the diseases of which it treats"; and we would add that its doing so is a proof that it has met a general want. As former editions have been fully noticed in these columns, we need not again inform our readers as to its plan and character. The fourth edition differs from the third only in that one or two subjects are more fully treated—*e.g.*, the treatment of uterine fibroids by the subcutaneous injection of ergotine. It remains, as before, a clinical rather than a pathological book—clearness, more than profundity, being its merit. It is an instructive and useful book, and we wish it a large circulation.

Antiseptic Surgery. By John Bishop, M.D. Edin. Savill, Edwards, and Co. Pp. 18.

Dr. Bishop has reprinted in the form of a pamphlet the chapter on Antiseptic Surgery which he has contributed to Swain's "Surgical Emergencies." Those who know most about the practical working of the treatment founded on antiseptic principles will at once recognise that in these few pages most, if not all, the essential points are included; and when it is remembered that from Dr. Bishop's special advantages no one is better qualified to describe what is going on at the fountain-head except Mr. Lister himself, none will doubt the accuracy of his information. The practitioner may rely on finding a trustworthy guide to assist him in the ordinary emergencies of practice, and to suggest the adaptation of the principles on which the treatment is founded to any more uncommon case that may present itself.

The Hunterian Oration.—This biennial discourse will be delivered in the theatre of the College of Surgeons on Shrove Tuesday, the 13th inst., by Sir James Paget, Bart. It is understood that their Royal Highnesses the Prince of Wales and Duke of Cambridge, with other illustrious and distinguished visitors, will be present at the Oration, and likewise at the Festival, which will take place the same evening in the library of the College.

A gratifying mark of appreciation was conferred upon Mr. J. Jardine Murray at the forty-fourth annual meeting of the Governors of the Brighton and Sussex Eye Infirmary, held last week at Brighton. Mr. Murray had tendered his resignation as Acting Honorary Surgeon to the institution after a period of fifteen years' service in that capacity, and it was resolved, and carried with applause, that, in recognition of the valuable and unremitting zeal with which he had devoted himself to the interests of the charity during the whole time he had been connected with it, Mr. Murray be appointed Honorary Consulting Surgeon to the institution.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

PHILADELPHIA, January 5.

THE AMERICAN PUBLIC HEALTH ASSOCIATION—TYPHOID FEVER—CROTON *v.* SCHUYLKILL WATER—HEALTHINESS OF PHILADELPHIA DURING THE CENTENNIAL EXPOSITION—OFFICIAL REPORT BY THE MEDICAL DIRECTOR—DR. MARION SIMS' ADDRESS ON SYPHILIS — INCREASING POPULARITY WITH MEDICAL MEN OF THE METRIC SYSTEM—INTERNATIONAL MEDICAL LANGUAGE AND ART.

THE New Year opens calmly upon our medical world without any of the foretaste of palatable offerings to the medical literature and progress that characterised the inception of 1876. The memory of much that was wisely done to cement professionally fraternal feelings still lingers, and the valuable labours of the great Congress will long occupy a pleasant place in the thoughts of hundreds of co-workers in the advancement of medical science. The year was a remarkable one for conventions, but it is doubtful whether any one of these bodies that assembled at Philadelphia, with the single exception of the International Medical Congress, accomplished as much good and enduring work as it would have done in some other city far removed from the magnetic Centennial attraction of Philadelphia. Certainly, the American Public Health Association, which met at Boston in October, was wholly beyond such distracting influence, and consequently made a memorable session for the benefit of the noble cause in which it is engaged. Of all the national associations of a medical or partially medical character that annually assemble in this country, this body is assuredly the most unselfish and probably the most untiring. There is a fascination to the sanitarian in the study of hygienic laws that pervades these annual gatherings, and he never seems to tire of even the prosiest discourses, while visions rise up before his enthusiastic soul of the prospective benefits to be derived by the world at large, should the recommendations suggested be generally adopted. The subjects discussed always cover an extensive field; this year they were grouped under the heads of legislation and the application of law for public health purposes; dangerous employments and harmful processes; topographical and sanitary surveys, and other systematic works for public health purposes.

Typhoid fever has been more generally prevalent than usual in the large cities of the United States for a few months past, but the mortality lists are now beginning to exhibit a marked reduction in the numerical record from this cause. The deaths in Philadelphia during the week of greatest prevalence amounted to thirty-six from this disease alone, but this statement applies to a period several weeks later than the closing of the Centennial Exposition. I mention this because an effort was made by our New York neighbours to throw the whole blame of the increased mortality on that great enterprise, and its agency as a crowd-poisoner. It was rather amusing, but for the downright earnestness with which the medical and other journals of that city entered into the controversy, to note the disputations between New York and Philadelphia journalists, medical and the laity, as to the superiority of Croton and Schuylkill water, the effect of egesta, etc., while but little was said of the ingesta of all and every dubious kind that country visitors to the Exposition imprudently indulged in. The greater wonder is that so few of the vast multitudes suffered from improper assimilation of food, varying from good, through a descending scale of mediocrity, to positively bad, or that so many survived the trials to which their stomachs were subjected, to relate their experiences on their return to their homes. While we, who lived in good health in Philadelphia, continued to enjoy our Schuylkill water as of old, it was rather amusing to read so often in print the suggestion to visitors to boil the drinking-water before partaking of it, and to hear that they sometimes came with portable culinary arrangements for the purpose. I actually heard of one over-sensitive gentleman who boiled the always uncertain Croton water of New York, and brought it with him ready bottled and corked, probably for a week's journey, that he might have the pure unadulterated article constantly with him. He was, doubtless, a lineal descendent of the Irish traveller in the days of slow coaching, tedious sailing, and defective facilities by land and water, who never left his native isle for a lengthy visit to London without taking with him a supply of eggs, that he might be sure he would never be imposed on by any want of freshness in the English article. In either case, whether it be eggs or Croton water, faith is everything.

All this agitation of the sanitary aspects of the question had the effect of calling forth an official document from Dr. William Pepper, Medical Director of the Exposition, some abstracts from which may be of general interest. It appeared at too late an hour to be of much service in encouraging the doubtful as to the propriety and possibility of visiting the Exposition without risk to health; but it goes on record as a satisfactory statement of the actual facts of the case at the time it was published. As for seven weeks after its date the Exposition remained open, and the crowds that attended were greater than ever, a supplementary report of the comparative health of Philadelphia as influenced by the aggregation of masses of people would be of even greater interest. Doubtless, when the official report of the Medical Director to the Commission appears, the whole ground will be found to be covered. From May 10 (the day of opening) to September 23 the mean daily temperature of the city was 71·3° Fahr., being about the same as for ten years previously, the average of which was 71·82° Fahr. The following table, from official sources, is given to exhibit the relative mortality of Philadelphia during the twenty weeks mentioned, and of some other large American and European cities, the period selected for comparison corresponding as closely as possible:—

Cities.	Estimated population.	No. of weeks included, and date in 1876.	Average mortality per week from typhoid fever and diarrhœal affections.	Average mortality per week from zymotic diseases.	Average mortality per week from all causes.	Annual death-rate per 100 during week from typhoid fever and diarrhœal affection.	Annual death-rate per 1000 during week from zymotic diseases.	Annual death-rate per 1000 during week from all causes.
London . . .	3,254,260	26 weeks, including the quarters ending June 19 and Sept. 26, 1875 . .	105·5	291	1467·4	1·66	4·62	23·40
Philadelphia . .	900,000	20 weeks, from week ending May 13 to week ending Sept. 23, 1876 . . .	83·8	112	406·5	4·84	6·47	23·48
Chicago . . .	420,000	17 weeks, from week ending May 13 to the week ending Sept. 9 . . .	52	80	196	6·44	9·9	24·27
Boston	342,000	18 weeks, from week ending May 13 to week ending Sept. 9, 1876 . . .	36·7	57·4	161	5·56	8·73	24·48
Baltimore . . .	360,000	19 weeks, from week ending May 13 to week ending Sept. 16, 1876 . .	48·9	58·1	172·36	6·91	8·37	24·80
Paris	1,851,792	26 weeks, including the quarters ending June 25 and Sept. 24, 1875 . .	64	..	896	1·76	..	25·16
Brooklyn . . .	506,233	19 weeks, from week ending May 13 to week ending Sept 23, 1876 . . .	75·7	115	262	7·74	11·81	26·91
New York . .	1,064,236	18 weeks, from week ending May 13 to week ending September 16, 1876 . .	174·9	262	629·7	8·52	12·79	30·73
Berlin	950,000	26 weeks, including the quarters ending June 30 and Sept. 30, 1873 . .	201	..	626	10·92	..	34·32

Dr. Pepper observes, as a deduction from these figures, that, with the exception of London, whose rate of mortality is nearly identical, Philadelphia presents a considerably lower rate than any other of the great cities; while, in comparison with its nearest neighbours—New York and Brooklyn—its superiority is both striking and suggestive. In calculating these rates, the population of this city was taken at 900,000; but in consequence of the large influx of visitors this estimate was probably below the mean daily population. It must be remembered that, as usual in the summer months, thousands of the more favoured classes were absent from the city, and the lower classes, with their greater tendency to mortality, were largely reinforced; and besides, a comparatively unusual amount of sickness was to be expected from the fatigue, indiscretion, excitement, etc., of the thousands and hundreds of thousands of casual visitors. To fortify the report still further, the purity of the Schuylkill water was certified by a careful analyst to be fully up to the standard of the past four years.

The portion of the address of Dr. J. Marion Sims, President of the American Medical Association, relating to State medicine and contagious diseases, has been recently issued in pamphlet form for general diffusion. Syphilis is the "subject of his story," and he strenuously urges the propriety of establishing a system of sanitary inspection and control that will enable us to prevent the importation of that disease from abroad, or to take charge of the subjects of syphilis at home, and prevent them from spreading it through the community. He proposes to give to the already existing boards of health, in the various cities, the same power over syphilis that they now possess over cholera, small-pox, and yellow fever. They should have the power given to them of searching out the abode of syphilis, as they now ferret out small-pox cases, and of sending its victims to hospitals for treatment. In other words, he would simply include this disease in the great family of contagious or communicable diseases, and make it subject to the same laws and regulations that we already possess for their management. On all steamers or sailing-vessels, whether foreign or coastwise, entering port, the surgeon of the vessel should be required to make affidavit that he had examined personally every seaman and every male steerage passenger, on the day preceding their arrival in port, and that there was no case of cholera, small-pox, yellow fever, syphilis, scarlatina, or other infectious disease aboard. If there should be syphilis, then the subjects of it should be taken in charge by the board of health, and sent to hospital for treatment, to be retained there till cured, or to be returned to the vessel from which they were taken, whenever said vessel should be ready to sail from port again. If said vessel had no surgeon aboard, then it should devolve upon the quarantine officer to examine every sailor and every steerage passenger before landing, and to send any and every case of syphilis to hospital for treatment. On all vessels, foreign and coastwise, the quarantine officer should possess the same power of personal inspection and detention.

Everything indicates a tendency in this country to a thoughtful consideration and discussion of the propriety of adopting the French metric system. We see it dilated upon in our medical journals and in our medical societies, and here and there prominent individuals in the profession are conspicuous in its advocacy. The *New York Medical Record* has recently called renewed attention to the subject in a series of editorials, showing how the change can be made from the old to the new system in prescriptions, and grammes, centigrammes, and milligrammes are daily referred to, nakedly as such, in almost every medical periodical, as if they were already so familiar to the readers as not to need quotation of their actual values. The line of decimals seems at first an obstacle to simplicity, and a puzzling arithmetical problem to vanquish; but such objections disappear when the system itself is intelligibly explained. Hence the propositions for international uniformity of weights and measures gain greater favour, and the views of the medical public are ripening for some such consummation. It is probable that each year will witness decided progress in this direction, and that the nails which are being persistently driven by some of our medical men in this country will in time aid to build up a permanent structure. Among other items of an international character discussed, it is proposed to recognise in principle the legitimacy and necessity of uniformity in the practice, observations, records, and medical language of civilised nations; to prepare a plan of uniform hygienic and sanitary measures applicable to the prevention or disappearance of contagious and epidemic diseases; to constitute an International Council, charged with the elaboration of the means of establishing a uniformity of nomenclature, officinal formulæ, methods, instruments, scales, measures, and tables of registration for pathological cases and physiological experimentations, with power to call in men eminent in the science and the arts accessory to physic, and the most capable of giving to the labours of the Council the most simple and practical direction. Dr. E. Seguin, of New York, has been the foremost in this patient and hopeful labour.

It is a matter of regret that no complete permanent record exists of the medical features of the great Exposition. Some of the medical journals gave occasional space to correspondents, who furnished interesting, gossipy, and readable sketches to fit the space thus assigned to them, but they were only sketches after all, touching upon the salient aspects of the exhibits, but omitting mention of modest or less prominent displays well deserving of more marked recognition. The thousands of physicians who visited the Exposition would gladly have purchased a complete account of the medical portion of the Exhibition, and the profession must always regret that when the Exposition closed its doors there was nothing but the transient periodical literature of the day in which the curiosities and achievements of medicine, surgery, and pharmacy were imperfectly chronicled.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 12.

Sir W. JENNER, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

CASES ILLUSTRATING THE TREATMENT OF RHEUMATIC FEVER AND SOME OTHER FEBRILE DISEASES BY SALICIN AND ITS CONGENERS.

Dr. HERMANN WEBER, after alluding to the rapid establishment of the reputation of these remedies in the treatment of rheumatic fever, to the remarkable and uniform success of salicin in the hands of Dr. Maclagan and many of his followers, and to a similar success of salicylic acid in the practice of Stricker, Broadbent, and others, and also to some failures of these remedies in the hands of several observers, gave the result of his experience as well in rheumatic fever as in some other febrile affections. 1. He reported fifteen cases of *rheumatic fever*, treated eight by salicin, four by salicylic acid, and three by salicylate of soda. As he had not observed any essential difference in the effects of the three remedies, he analysed the results of the fifteen cases together. In eight of them, mostly mild cases, the disease was checked within two to four days, without any unfavourable accidental effects of importance, by doses of fifteen to twenty grains, at first given every hour, afterwards every two or three hours; in one case the attack was rapidly overcome, but all the phenomena of serious collapse, accompanied with delirium, attended the complete defervescence, although only a comparatively moderate dose had been given—viz., 255 grains of salicin in thirty-four hours; in one, of subacute type, three relapses occurred, in which, though each single outbreak was rapidly subdued by the remedy, the duration of the disease extended over five weeks; in three others the first attack was checked by the remedy, but the relapses which occurred had to be treated without salicin or its congeners on account of the vomiting produced by them; in one case the remedy caused vomiting almost from the first, before it had exercised any influence on the disease, and another plan of treatment had to be adopted; and in one case, finally, the disease rapidly increased in severity and became complicated with pericarditis, in spite of large doses of the remedy given in short intervals during five days. 2. Of *gonorrhœal rheumatism* there were four cases, attended with slight pyrexia (99° to 101° Fahr.), so treated. One patient was sick after every dose of either salicin, or salicylic acid, or salicylate of soda; one took for two days fifteen grains of salicin every two hours, then for three days twenty grains of salicylate of soda every two hours, without obtaining more benefit than rest alone produces in most cases; the remedy had then to be discontinued on account of nausea and giddiness; in a third case, the pain and swelling in the joints and the

pyrexia were much relieved after two days of this treatment, while the swelling of the joints and the state of the urethra were not materially influenced; in the fourth case, after three days' use of salicylate of soda, twenty grains every two hours, the pyrexia, pain, and swelling were much reduced, the state of the urethra remaining almost unchanged. 3. Two cases of *acute gout—i.e.*, gouty inflammation of the knees, feet, and hands, accompanied by pyrexia (99·5° to 101·5° Fahr.)—were not materially benefited by either salicin or salicylate of soda. 4. *Typhoid fever:* four cases. In three of them, of average severity, in young adults of good constitution, salicylate of soda, in doses of forty grains three or four times a day, or sixty grains twice a day, exercised a distinctly antipyretic influence, causing diminution of temperature from 1° to 2·5° Fahr., together with a slight reduction in the pulse-rate; and the same was the case when enemata containing 120 grains were given. When sickness and prostration in two, and intolerable nausea in the third case rendered the discontinuation of the remedy necessary, the pyrexia again increased. The duration of the whole disease was probably not materially influenced, but the drowsiness, the tendency to diarrhœa, and the dryness of the tongue were diminished while the patients were under the influence of the remedy, and nourishment was taken more readily. In the fourth and fatal case the symptoms were excessively grave from the beginning (stupor and vomiting), and salicylate of soda was given only on a few days, with the effect of diminishing the temperature, but neither the pulse-rate nor the grave nervous symptoms. 5. In two cases of *ague*, one of the tertian and one of the quotidian type, neither salicin in thirty-grain doses three times a day nor salicylate of soda in sixty-grain doses three times a day had any curative effect. 6. In two cases of *hectic fever* in consumptive patients, two thirty-grain doses of salicin given in the forenoon had several times the effect of diminishing the intensity of the evening pyrexia; but in one of the cases the remedy had to be discontinued on account of the prostration produced by it; in the other it seemed to lose its effect. 7. In a case of *chronic pneumonia* of the lower part of the right lung, a single ninety-grain dose of salicylate of soda administered on several mornings reduced the evening pyrexia very considerably. 8. In a case of acute *cynanche tonsillaris* (quinsy), thirty-grain doses of salicylate of soda were given every three hours from the evening of the second day, followed by defervescence towards the evening of the third; but as this complaint occasionally terminates on the third day without medicine, no inference can be drawn from a single case. 9. *Scarlet fever* in a boy, aged twelve, was treated from the first day of its manifestation (by sore throat and pyrexia) with twenty-grain doses of salicylate of soda every two hours; on the second day the pyrexia was diminished, and on the fifth day there was complete apyrexia, followed by a satisfactory recovery. 10. In a case of *polyarthritis scarlatinosa* (scarlet-fever rheumatism) the joint affection manifested itself on the seventh day from the beginning of scarlet-fever symptoms, and was entirely checked within less than three days by twenty-grain doses of salicylate of soda every two hours. But here, again, the experience of isolated cases does not justify sanguine inferences. In comparing his own experience with that of others, Dr. H. Weber arrived at the following inferences. 1. That salicin and its congeners are powerful antipyretics, equal to quinine, with the exception of the effects of the latter on ague, against which they are comparatively powerless. 2. That they are of more general value in the treatment of rheumatic fever than any remedies hitherto tried, although they are not applicable in all cases, and thus not always able to prevent complications. 3. That their antipyretic influence may be usefully employed in other febrile diseases, such as typhoid fever, in combination with other modes of treatment, such as alcohol and bathing. 4. That their use is occasionally attended with accidental symptoms, some of these being unimportant, as noise in the ears, various degrees of deafness, giddiness, nausea, abundant perspiration, and possibly a cutaneous eruption; while others are graver, such as vomiting after every dose, delirium, and collapse, pointing to the necessity for caution and watchfulness, especially in states of weakness of the heart and exhaustion. 5. That there is no essential difference in the action of the three remedies mentioned; but that salicylate of soda, being more soluble and more easily absorbed, exercises a more rapid effect, but requires to be given in somewhat larger doses than either salicin or salicylic acid; that, amongst the two latter, salicin possesses in so far the preference, as the taste is less disagreeable, and as it is more soluble than salicylic acid, which, in its undissolved condition, seems to be able to give rise to local irritation of the mucous membrane of the fauces and stomach.

A Case of Acute Rheumatism treated by Salicylate of Soda: Intercurrent Scarlatina and Peculiar Skin Eruption.

Dr. Cavafy read notes of this case. A footman, aged thirty-three, was admitted into St. George's Hospital on June 1 with rheumatism of four days' duration. He was anæmic and nearly all his joints were painful. The knees and right wrist were red and swollen. Heart normal. The temperature reached 103·8° on the evening of June 2, on which day he was given half a drachm of salicylate of soda every two hours, beginning at 6 p.m. This was reduced to every four hours next day, as he complained of giddiness. Pain was much relieved, and the temperature fell to 101°. On the 5th he was quite free from pain, and the temperature was normal. He continued well till the 7th, when he had shivering, sickness, and headache, with slight sore throat. The throat was worse next day, the soft palate, uvula, and tonsils being of a brilliant red. On this day also he had a bright scarlet rash on the neck and chest. He complained likewise of great itching of the arms and legs, which were seen to be covered with raised red patches varying in size and shape. He was now given perchloride of iron. The erythematous patches became covered with a copious crop of vesicles resembling herpes, which soon dried up. The rheumatic pains reappeared on the 9th, and on the 14th were as severe as on admission, and the temperature rose to 102·6°. The sore throat, rash, and itching having now subsided, he was again ordered salicylate of soda as before. This again lowered the temperature and removed the pain; but on the 16th the erythematous eruption reappeared, with, great itching; the patches again become covered with vesicles, but much more scantily than before. Notwithstanding this and also some nausea, the salicylate was persisted in, and on June 19 the eruption had almost disappeared, and there was general desquamation, more especially of the hands. The urine was free from albumen. As he was again free from rheumatism he now took gentian and magnesia instead of the salicylate; but the temperature gradually rose again, and on the 23rd he had a sharp relapse. The salicylate was resumed, and again the temperature fell and the pains left him in three days. On this occasion he again complained of itching of the skin, but no eruption whatever appeared. He continued well till July 13, when another relapse was treated in the same way, without any skin eruption. He was discharged well on August 1, the heart being normal. The case illustrated the antipyretic and anti-rheumatic action of salicylic acid and its salts, but was hardly favourable, as relapses occurred so frequently. It was a question whether these were due to the intercurrence of scarlatina; but the fever had probably no share in their production, as rheumatism was the initial illness, and relapses of equal severity sometimes occurred in ordinary rheumatism. The curious herpetic eruption was plainly caused by the salicylate of soda. This was certainly not a frequent toxic effect of its internal administration, but seemed to be not uncommon after external application of the acid, as shown by the cases communicated to the Society last year by Mr. Callender. A gradual tolerance of the drug seemed to have been established in the case under consideration, as the second eruption was not so severe as the first, and the third and fourth administrations were not followed by any eruption at all.

Dr. Julius Pollock had used the salicylate of soda in about twelve cases, with an almost uniformly good result. In one case it proved fatal; the drug was discontinued, and the use of ice begun, but the man died. In all the other cases the patients had derived great benefit from the salicylate. The temperature generally fell to almost normal in from two to four days. Large doses were not requisite. Sickness had been caused by as little as fifteen grains given every hour. His cases had been principally of the subacute variety of the disease. In one man, who had pericarditis, the salicylate of soda was used, and the temperature and pulse fell, and he had no relapse. Salicin had not answered the hopes first formed of it. Salicylic acid had not in his hands had a good trial, because salicylate of soda had cropped up, and he had used that remedy. He believed salicylate of soda would eventually take a high place in the treatment of rheumatism.

Dr. Althaus could not join in the same terms of commendation of salicin and its congeners. In some cases much harm had been produced by these drugs. He had seen a skin

eruption come on in a case so treated, which appeared first as a herpetic rash on all parts of the body except the face. It afterwards became pemphigous, and contained serum. Iodide of potassium was then given, and the eruption ceased. The patient also had peculiar intestinal symptoms, and the mouth and fauces were covered with aphthæ, preventing proper feeding; and there was hæmorrhage from the bowels. These symptoms Dr. Althaus had attributed to the drug, and he had for some time been very careful in its use.

Dr. WHIPHAM said that cases of rheumatic fever, formerly sent to the St. George's Convalescent Hospital at Wimbledon, had a relapse, especially if sent in the winter months; now, cases which had been first treated with salicin and its allies, and which were sent there, had no relapse. He himself had seen no difference in the result whether salicin, salicylic acid, or salicylate of soda were used. The temperature in his cases had almost always come down at once. In a boy who had a pericardial rub on admission, the rub also soon ceased. The boy, however, had noises in the head when salicylate of potash was used; but the salt was found to have a smell of carbolic acid, and the noises might have been due to that contamination.

A GENTLEMAN present said he had recently used salicin in doses of ten grains every two hours in the case of a seventh attack of acute rheumatism in his own child; on that occasion the child ran through the attack much more rapidly than on former occasions. Salicylic acid he had been obliged to discontinue in two or three other cases, because of the irritation it caused in the throat and bowels: he then returned to salicin, and found that the patients received all the advantages of the acid without its drawbacks. He had seen no secondary eruption or other symptom due to salicin. In one case of friction-sound of the heart, the sound ceased when the remedy was used.

Dr. SUTRO remarked that in cases of rheumatism with great debility the salicin subdued the fever and raised the strength. In one case where the temperature was very high, the salicylate of soda appeared to reduce it much more quickly than did salicin itself. Was the good effect produced by the salicylate of soda due to the salicylic acid or to the soda in that compound? Soda itself was known to be a good anti-rheumatic remedy.

Dr. BROADBENT had treated many cases of both chronic and acute rheumatism with salicylic acid and salicylate of soda, and his conclusions were similar to those detailed by Dr. Weber. He gave six doses of twenty grains of salicylic acid or salicylate of soda for six consecutive hours on the first day, and repeated them on the second day. The almost invariable result had been that the patient had greatly improved. If the remedy were then quite discontinued, a relapse often occurred; but, if twenty grains were then administered three times a day for a time, there was no relapse. If there were pericarditis before the treatment was begun, no benefit followed the use of the salicylic acid. In one case hyperpyrexia was set up, and the patient only recovered by the use of the cold bath. In one case he had to discontinue the salicylic acid treatment before the first six doses had been given, because of the supervention of delirium; but the four doses already then taken had relieved the patient, and the modified dose, begun as usual on the third day, quite cured the patient. In another case, it being the fourth attack with the patient, she went into acute mania. In subacute and chronic forms of the malady the patients often had relapses.

Dr. DUFFIN said that in none of the cases yet related had the rheumatism succeeded scarlatina. In one of his patients, a little girl, on the eighth day of scarlatina, rheumatism came on, and on the second day of the rheumatism her knees, hips, shoulders, and other joints were affected. Her temperature was 103°; and ten grains of salicin were then given every hour. The child bore the drug well; at the end of fourteen doses she was relieved, and after eighteen doses was comparatively well. The fall of temperature during that time was only about half a degree. On the third day the drug was given every second hour, and the joint trouble kept off, although the temperature did not fall below 100·5° until the sixteenth day. The salicin had an immediate effect on the joint affection, but not on the temperature.

Mr. GEORGE BROWN said everyone was casting about for a new treatment of rheumatism. He himself had never, however, seen any case which had caused any anxiety, although he had seen some scores of cases. All had eventually recovered. Occasionally heart-trouble cropped up under the use of any drug. Alkalies were not generally given in sufficiently large doses, and until specific effects had been produced. He gave details of cases treated with salicylic acid, which had done ordinarily well.

Sir WILLIAM JENNER had seen, with Mr. Barker and Dr. Martin, a case of severe burn treated with lint dipped in solution of salicylic acid, in which there ensued a general copious eruption, which it was at first thought might be scarlatina. It was difficult to say whether it was so or not. Dr. Martin wrote then to Mr. Lister and others, to ask if such eruptions were caused by the acid, but could not learn if such an occurrence had been seen. The cases now related would show that the use of salicylic acid might produce eruptions. Formerly, in rheumatism he had given the usual drugs, in deference to the judgment of others, not because he anticipated good from them. He had hoped daily that he might encounter a class of cases in which the conventional drugs might be of benefit. During the last three months, however, his scepticism of the value of remedies in rheumatism had considerably diminished. He had seen very little improvement from the use of salicin itself. But by salicylic acid he thought great benefit had been produced—benefit which had not ensued from any drugs previously employed by himself. He thought a case for salicylic acid and its compounds, the salicylates of potash and soda, had been made out, and that they were deserving of patient use.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Member on January 25:—

Crocker, Henry Radcliffe, M.D. Lond., University College Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at meetings of the Court of Examiners on the 25th and 26th inst., viz.:—

Arnott, Sandford, St. Vincent, Jamaica, student of King's College Hospital.
Biale, John Seton, Phillimore-place, of St. George's Hospital.
Blamey, James, L.S.A., Penryn, Cornwall, of University College Hospital.
Brown, John Alexander, Peckham, of King's College Hospital.
Bunny, Joseph Brice, Newbury, Berks, of Guy's Hospital.
Byam, Samuel Henry, L.R.C.P. Lond., Exmouth, Devon, of St. George's Hospital.
De Caux, Frederick, L.S.A., Norwich, of King's College Hospital.
Dening, Edwin, Taunton, of University College Hospital.
Freer, Edward, Birmingham, of the Birmingham School.
Groves, Henry Edward, Regent's-park-rd., of University College Hospital.
Haines, William John, Hendon, of St. Bartholomew's Hospital.
Henderson, George Courtenay, Kingston, Jamaica, of University College Hospital.
Hunt, G. Angus, L.R.C.P. Edin., Rochester, Derbyshire, of Guy's Hospital.
Jeans, Francis Austin, Pinner, Middlesex, of University College Hospital.
Kempe, Arthur Wightman, Brent, Devon, of University College Hospital.
Lake, William Wellington, L.S.A., Ilford, Essex, of St. Thomas's Hospital.
Langton, Herbert, Brighton, of St. Bartholomew's Hospital.
Lees, Clement, Birmingham, of the Birmingham School.
Liddell, Henry John Shepheard, Ivybridge, Devon, of Guy's Hospital.
Lloyd, David, L.S.A., Newcastle Emlyn, of University College Hospital.
Maclean, Fitzroy Beresford, Kew, of Guy's Hospital.
Marsh, William Gustavus Herman Blake, Bristol, of the Bristol School.
Morris, Clarke Kelly, Spalding, of St. Thomas's Hospital.
Perry, Charles Edward, Henley-on-Thames, of Guy's Hospital.
Roberts, Henry William, L.S.A., South-square, W.C., of Guy's Hospital.
Robertson, George Scott, L.S.A., Dover-st., of the Westminster Hospital.
Ross, John Hunter, Bloomsbury-square, of St. George's Hospital.
Semple, Edward, Totnes, Devon, of the Middlesex Hospital.
Smith, William Henry, L.S.A., Sibsey, Lincolnshire, of St. Mary's Hospital.
Solomons, Philip Francis, Ceylon, of St. Thomas's Hospital.
Steedman, Percy Andrew, Cape of Good Hope, of St. Bartholomew's Hospital.
Toll, John Tresilian, Port Adelaide, of the Birmingham School.
Turner, Alfred Moxon, L.S.A., Gloucester, of Guy's Hospital.
Walker, Basil Woodd, Yarmouth, of the London Hospital.
Watson, Charles John, Norwich, of University College Hospital.
Welchman, Walter Henry Lawrence, Falmouth-road, of Guy's Hospital.

Of the 135 candidates, eighty-one received their diplomas; nineteen were approved in Surgery, and when qualified in Medicine will be admitted Members of the College; and thirty-four having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, January 25:—

Bailey, William Edward, Stockport.
Poynder, John Leopold, Southsea.
Pritchard, Ernest James, Shilter, near Coventry.
Smith, Ernest Sutten, Stanhope-street, W.C.

The following gentlemen also on the same day passed their primary professional examinations:—

Dale, Henry Ridley, University College.
Sayer, Tom, University College.
Thomson, Herbert Warneford, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Price, Henry Elthington, B.Sc. Lond., M.R.C.S. Eng.—House-Surgeon to the London Hospital.

Stewart, W. R. H., M.R.C.S., L.R.C.P., L.S.A.—Emergency Surgeon to the Hospital for Diseases of the Throat, Golden-square.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Surgeon George James Gray has been placed on the Retired List from the 23rd inst. The undermentioned Staff-Surgeons have been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of December 7, 1876:—James Flanagan, William James Baird, M.D., Edward Townsend Mortimer, and Adam Brunton Messer, M.D.

War Office.—Medical Department.—Surgeon-Major John Goodwin retires upon temporary half-pay; Assistant-Surgeon George Anderson Wilkinson half-pay 76th Foot, has been permitted to commute his retired allowance.

BIRTHS.

Adams.—On January 25, at Barnes, Surrey, the wife of James Adams, M.D., of a son.

Churchill.—On January 26, at 6, Sumner-place, South Kensington, the wife of Frederick Churchill, M.D., F.R.C.S., of a daughter.

Fox.—On January 30, at The Grove, Great Baddow, Essex, the wife of Cornelius Fox, M.D., Health Officer of East, Central, and South Essex, of a daughter.

Miller.—On January 24, at Brafield, Church-road, Upper Norwood, the wife of R. M. Miller, B.A., M.D. Lond., of a son.

Pittock.—On January 23, at 23, Cecil-square, Margate, the wife of G. M. Pittock, M.D., of a daughter.

Wright.—On January 23, at Spring Mount, Northwich, Cheshire, the wife of Strethill H. Wright, M.D., M.R.C.P.E., of a daughter.

MARRIAGES.

Ballenden—Elwell.—On January 25, at the parish church, Sedgley, Staffordshire, John, fourth son of J. M. Ballenden, M.D., of Bleak House, Sedgley, to Rosa Edith, only child of the late John Elwell, Esq., of the Straits House, Sedgley, Staffordshire.

Blatherwick—Rigby.—On January 16, at Colombo, Ceylon, Frederick Francis, eldest son of Chas. Blatherwick, M.D., of Row, Dumbartonshire, to Isabella Catherine, eldest daughter of the late William Rigby, Esq.

Elliot—Mildred.—On January 30, at Christ Church, Lancaster-gate, John Elliot, M.R.C.S., of Bodenham, Herefordshire, son of the late William Elliot, M.D., of Stratford, Essex, to Harriet, younger daughter of the late Henry Mildred, Esq., of Chigwell, Essex.

Fisher—Miles.—On January 27, at Leicester, W. P. Fisher, M.R.C.S.L., The Elms, Burbage, to Elizabeth, niece of the late William Miles, Esq., J.P., Leicester.

Hayman—Ford.—On January 25, at St. James's Church, Paddington, Charles Norton Hayman, M.B., eldest son of the late Charles C. Hayman, M.D., of Eastbourne, Sussex, to Flora Elizabeth Justice, eldest daughter of the late William Augustus Ford, of 6, Bathurst-street, Sussex-square.

Klein—Mawley.—On January 25, at St. Gabriel's, Warwick-square, Edward Emanuel Klein, M.D., F.R.S., to Sophia Amelia, widow of George Mawley, Esq.

Meredith—Meteyard.—On January 27, at Clunbury, Henry Frederick Meredith, of Kington, Herefordshire, to Lucy Anne, only surviving child of Charles Joseph Meteyard, M.D., of Clunbury, Salop.

Watson—Riach.—On January 23, at Morningside parish church, Edinbugh, John Adam Watson, L.R.C.P.E., L.R.C.S.E., Chudleigh, Devon, to Helen Margaret Ogilvie, eldest daughter of the late John Riach, Esq., of the Oriental Bank, Bombay and London.

DEATHS.

Baillie, Neil Benjamin, M.R.C.S. Eng., Surgeon-Major Bengal Army, at 25, Hamilton-terrace, N.W., on January 28, aged 42.

Landor, Henry, M.D., of London, Canada, on January 6.

Power, John Livingston, L.R.C.P. Edin., M.R.C.S. Eng., Surgeon-Major 4th Regiment, eldest son of the late Maurice Power, of Ringacoultig, Queenstown, Ireland, at Mannheim, Baden, on January 25.

Smith, Edith Mary, eldest daughter of F. W. Smith, L.R.C.P., at 40, Newington-causeway, on January 24, aged 3 years and 5 months.

Stace, Joseph, M.R.C.S. Eng., late H.E.I.C.S., at Anglesey Place, Southampton, on January 23, aged 92.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Coventry and Warwickshire Hospital.—House-Surgeon. Candidates must be possessed of both medical and surgical qualifications. Applications, under cover, to the Secretary on or before February 24.

Huntingdon County Hospital.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials and references, to be sent to the Chairman of the Committee, County Hospital, Huntingdon, on or before February 3.

Morpeth Dispensary.—House-Surgeon. Candidates must be qualified medical practitioners. Applications and testimonials to Mr. D. F. Wilson, Secretary, Morpeth, not later than February 5.

St. Marylebone General Dispensary, 77, Welbeck-street, Cavendish-square.—Obstetric Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London, or Doctors of Medicine of one of the universities of the United Kingdom. Applications, with testimonials, to the Secretary, on or before February 5, and candidates must attend personally at the Dispensary on the 7th of the same month at 5 o'clock p.m.

Wantage Union.—Medical Officer. The appointment will be made subject to the approval and regulations of the Local Government Board. Applications and testimonials to Edward Ormond, Clerk, on or before February 5.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Dover Union.—Mr. Richard S. Davey has resigned the Second Division of the St. James's District; area 6328; population 2300; salary £40 per annum.

Gower Union.—Mr. C. G. Young has resigned the Eastern District; area 7581; population 4032; salary £20 per annum.

APPOINTMENTS.

Alderbury Union.—Frederick C. Bennett, M.R.C.S. Eng., L.S.A., to the Workhouse and Fifth District.

Drayton Union.—Edward T. Thompson, L.R.C.S. Ire., L.K.& Q.C.P. Ire., to the Fifth District.

East Retford Union.—George T. Savile, M.R.C.S. Eng., L.S.A., to the Leverton District.

Tonbridge Union.—Marshall Monckton, L.F.P.& S. Glasg., L.S.A., to the First District.

The annual meeting of the subscribers to the Savernake Cottage Hospital was held at the Town Hall, Marlborough, on Saturday last, under the presidency of the Marquis of Ailesbury. The Rev. J. O. Stephens, the honorary secretary, stated that during the past ten years £13,400 had been raised in the district for the Hospital. During the same time 1238 in-patients and 1000 out-patients had been treated. The income of the Hospital last year amounted to over £800.

A very felicitous presentation was recently made to Dr. Strong, Honorary Surgeon to the Royal Masonic Benevolent Institution at Croydon. At the annual entertainment given to the inmates of the Asylum, Dr. Strong was presented with a gold watch, bearing a suitable inscription, in recognition of his services to the Institution during a period extending over thirteen years; and upon the same occasion a handsome gold locket was presented to his wife.

Endowment of a Demonstratorship of Physiology in the University of Glasgow.—We have much pleasure in announcing that Dr. Henry Muirhead, of Bushy-hill, Cambuslang, has generously offered to the University of Glasgow the sum of £2100 as an endowment of a Demonstrator of Physiology in connexion with the Chair of Institutes of Medicine. The object of the endowment is the promotion of medical science by the training of young men of suitable capacity to become teachers and investigators of physiology; and as this training is best attained by actual work in the laboratory, and by practical experience in the art of teaching, the demonstrator will be regarded as a teaching assistant to the professor, while he will also be encouraged to pursue independent original investigation, and will be aided by the use of all the laboratory appliances.

Expulsion of the Mucous Membrane of the Stomach.—M. Laboulbène exhibited at the Hospital Medical Society a specimen consisting of the mucous membrane of the stomach which had been expelled by vomiting, in a case of poisoning by sulphuric acid. He had already shown the specimen at the Académie de Médecine, where Prof. Gubler doubted as to its really being the mucous membrane, believing it to be a false membrane or exudation. Since then M. Laboulbène has made a complete histological examination, and has demonstrated in the membrane the presence of vessels, elastic fibres, and connective tissue, the whole being loaded with a pigment produced by the hæmatine of the blood, and a prodigious quantity of spores. The pepsin had doubtless been destroyed by the caustic. There can be, therefore, no longer any doubt that the specimen really was the mucous membrane of the stomach.—*Gaz. Hebd.*, January 26.

A Living Canula in Transfusion.—Drs. Istomin and Welikij, of St. Petersburg, observe that a great obstacle to the success of transfusion is the coagulation of the blood transfused, and the formation of thrombi. They have therefore instituted experiments to ascertain how far this may be obviated by employing the vessel of a living animal as a

THE INAUGURAL ADDRESS

DELIVERED BEFORE

THE OBSTETRICAL SOCIETY OF LONDON,

On February 7, 1877,

By CHARLES WEST, M.D.,

President of the Society.

Gentlemen,—My first duty on taking this chair, in which your kindness has placed me, is to return you my most sincere thanks for this most unexpected—I must say, most unmerited—honour.

To be chosen to preside over a society such as this may well be looked forward to as the reward of years of devotion to its interests, and of labour to promote its objects. But I had no such claims to urge; and when, some years since, you conferred on me the distinction of making me one of your Honorary Fellows, you had more than overpaid the value of any work done by me in those departments of our art which this Society especially cultivates.

The terms in which your late President has spoken of me, kind and generous as they were, have but added to the difficulties which I feel in entering on my new duties. I dread lest I should fail to come up to the standard by which your too partial judgment has measured me, and from my schoolboy days the words are ringing in my ears, spoken concerning one of old, who "major privato visus, dum privatus fuit, et omni consensu capax imperii, nisi imperasset."

Hoping to avoid this censure, and striving how best to do it, I have cast about in my own mind to discover what special reason may have influenced your choice, and how I may best prove worthy of it. I imagine that I have found your reason in this: that accident having placed me for some years just outside the path in which your members tread, I may, perhaps, be of use by helping to prevent a special society becoming too special, and by endeavouring to tie more firmly the threefold cord by which medicine, surgery, and obstetrics should be bound together, so as to perfect, as far as may be, that art of healing to which, in its widest sense, we have all devoted ourselves.

With this idea I have carefully gone through the seventeen volumes of your *Transactions*. I trust that you will not consider it an impertinence if I say how much I have been struck with the number and value of the communications which they contain on subjects strictly connected with obstetrics. The induction of premature labour, the indications for the use of instruments, the evils of procrastination, the substitution of the cephalotribe in some instances for the ordinary craniotomy instruments, the management of the various forms of uterine hæmorrhage, are but a few of the important topics to the elucidation of which large experience, careful observation, and much critical acuteness have co-operated.

Nor have the diseases either of pregnancy or of the puerperal state been passed unnoticed; and I cannot refrain from a reference to the valuable essay of one of your former presidents on "Puerperal Diseases," or to the debate on Puerperal Fever, which, under the able control of my predecessor in this chair, showed where our knowledge wanted in precision, and cleared the way for future progress.

I observe that my friend Dr. Murchison, on taking the chair of the Pathological Society, offered some suggestions with reference to its future work. May I, without offence, venture to do the same? This Society was instituted "for the promotion of knowledge in all that relates to obstetrics and to the diseases of women and children." The first part of this programme has been excellently well fulfilled. We might, perhaps, with advantage give more time to the second and third. I find that of sixty-three papers (I do not speak of short contributions, often, indeed, of much value), forty-one are devoted to obstetrics strictly speaking, or to the disorders of the pregnant or puerperal state, fourteen to the diseases of the non-parturient woman, and eight only to those of children.

Of the papers devoted to the diseases of women, all, I think, without exception, concern the local diseases of the sexual organs; and, most important though they are, I think our view should embrace a wider horizon. And I confess that I almost begrudge the College of Physicians Dr. Braxton Hicks's promised Croonian Lectures "On the Difference between the Sexes in relation to the Aspect and Treatment of Diseases."

Their title seems to me to indicate the exact position which the members of this Society should endeavour to secure for it,—not that of mere specialists who have cantoned out for themselves a little province in the scientific world, beyond which they do not care to travel, fancying themselves in an intellectual Goshen, and that they always have light in their dwellings while all is dark around; but rather that of sound physicians and able surgeons, who for the public good have superadded to their general knowledge a particular acquaintance with certain departments of our art.

And here, gentlemen, I purposed ending what I have to say, thinking that I should be better able to counsel when I had had more experience as your President, and doubting how far one who for many years has given up the practice of obstetrics could safely venture on criticism.

But some of my friends tell me that you desire to hear me say frankly what strikes me as an outsider (if I may so call myself); and they assure me—of what, indeed, I need no assurance to be convinced of—that you will receive what I say with all kindness and indulgence.

First, then, it seems to me worth considering whether, in the interests of the public, and of the poor in particular, this Society should not attempt more than it has hitherto attempted to insure the better education of women practising as midwives. I am aware that occasional examinations are held by a committee of this Society, composed of men whose reputation would gain nothing by my praise; but I also know that the number of candidates is very small, and the practical result of the action of the Examining Board is inappreciable. I think if we have (as has been the case during the past few years) only some five or six candidates to examine annually, we should either renounce a futile endeavour, or else take steps to bring that endeavour to a real fulfilment.

If the latter course should be determined on, I would submit for the consideration of the Council and of the Society at large, whether we should not request the members of the Examining Board for Midwives to obtain from France, Germany, and elsewhere on the Continent, the regulations by which the Governments of those countries provide for the proper education of midwives, and an account of the examinations by which their qualifications are tested; and that we should then draw up a well-considered scheme adapted to the peculiar requirements of this country. In doing this we should, I doubt not, be greatly helped by addressing a circular to the Fellows of this Society through the country, some of whom living in rural, others in urban districts, would be able to inform us as to the special want in their neighbourhood, and as to the best means by which, without putting the poor women to needless expense, their proper education could be insured, and their fitness tested. If we think the object worth striving for, it is clear that we can obtain the concurrence of the authorities only by submitting to them a carefully digested plan, and that we neither can nor ought to expect to gain anything by asking them to do a something, we know not rightly what.

Next as to the promotion of the special objects of the Society. I do not know to what extent the investigation of the Committee on Transfusion will be put a stop to by the law relating to vivisection, which may interfere with the experiments they were anxious to have carried out. I doubt not, however, that their past labours have added much to our knowledge, and that, coupled with the exhaustive work on the subject by M. Oré, they have placed us, with reference to this great remedial measure, "Sacra Ancora Vitæ," when life would otherwise make shipwreck, in a very different position from that in which we were before.

I have just learnt with much pleasure that, in addition to a contribution from our much-respected colleague Mr. Spencer Wells, the important question of the comparative advantages of the rare and the frequent use of the forceps in obstetric practice will be brought before the Society at an early meeting. The question is one, however, which statistics alone will never settle; for what conclusion can we draw from facts such as that Dr. Collins, of Dublin, applied the forceps once in 600 labours, and the late Professor Stein, of Marburg, once in five and a half? Dr. Braxton Hicks and the late lamented Dr. Phillips have shown in their valuable papers in vol. xiii. of your *Transactions* the unavoidable sources of error attaching to the statistics of instrumental labours, and which vitiate their results far more than the statistics of the capital operations of surgery are vitiated by any similar causes.

We shall be glad of any new light thrown upon the subject, but I doubt whether we shall advance in certainty much beyond the point to which the wise and weighty words of your late

President would lead us. I have as little doubt as he that the aggregate of mischief done in obstetric practice by idle waiting "to see what will come of it" is far greater than that wrought by the premature, or even needless, use of instruments. At the same time, there is one point on which I think it impossible to insist too strongly. Instruments are to be used and operations resorted to exclusively for the sake of the patient and her child,—never for the sake of the doctor. And yet I have in years gone by heard men say—"*I* could not wait any longer; I had this to do, or that, and so I put on the forceps, and got the case over." I envy little his feelings, if, as must sometimes happen, even with small fault of his, the patient should do badly, and his forceps case should leave a home desolate and children motherless.

The interesting question of the production of albuminuria by puerperal convulsions, as well as of puerperal convulsions by albuminous urine, is well worth a more minute examination. I have no doubt of the fact, and have seen it illustrated in the convulsions of children. But both that question and the whole subject of convulsions in the parturient and puerperal woman need further study, for we all must feel that the last word has not yet been said about either their pathology or their therapeutics.

As I have already ventured to observe, in the department of the diseases of women the local ailments of the sexual organs and their local treatment have received almost exclusive attention, if I except the valuable essay "On Chorea in Pregnancy" by Dr. Barnes.

Now, it may be perfectly true, as an old writer has said, "Propter uterum mulier est quod est"; but, to read the aphorism rightly, we must take the word in the wider sense as expressive of the peculiarities of the one sex as distinguished from the other—peculiarities which show themselves long before puberty has arrived, and which continue after the period of sexual vigour has long passed: hysteria, epilepsy, spinal hyperæsthesia, the whole tribe of disorders of the nervous system, are vastly more frequent at all ages in the woman than in the man.

A similar class of ailments prevails during dentition in both sexes; but as in the child they depend upon causes far more deeply seated than the local irritation of a tooth which vainly strives to pierce the gum, and which the gum-lancet would relieve, so the source of these and other disorders of the female system is far more complex than a mere displacement of the uterus or a change in its form, or an abrasion of the edges of its orifice. No one can doubt this who has seen, as we all have, the woman following some form of hard bodily labour with a procident uterus, or seeking to marry with advanced ulcerated carcinoma, or deluding herself with hopes of pregnancy with a large uterine fibroid or well-marked ovarian dropsy.

> "Es ist ihr ewig Weh und Ach,
> So tausendfach,
> Aus einem Punkte zu curiren"

was indeed the advice of Mephistopheles to the student; and its adoption would at least wonderfully simplify both our pathology and our therapeutics.

But I demur to this teaching, and to the practice to which it would lead. We are physicians first,—then specialists; and in any case it should be only when the general knowledge of medicine, acquired in the hospital or at the bedside of other patients, fails to solve the question of the nature or the treatment of an illness that we call in our special knowledge, and inquire whether in the local condition of the womb there is that which would explain the symptoms, and whether by local medication we can expect to bring about their cure.

And it is just because we are in danger of exaggerating the importance of that special knowledge, the value of that special skill, which other members of our profession either do not possess, or possess in a much smaller degree than we do, that I am so anxious, both for the growth of our own moral and mental stature, as well as for the progress of our art, that we should not so give ourselves up to mere detail, however interesting or important, as to lose sight of the broad principles of medicine and surgery.

This risk with some of us is very great. I have often felt that I would give almost anything for a six months' clinical clerkship and dressership in one of our general hospitals; or for the same time to spend in looking after what is called general practice,—which, if rightly used, is the most improving of all schools, since in it there is an increasing demand, not for one kind of knowledge, but for all.

Happily, within certain limits, this Society gives us the means of keeping the broad principles of medicine—the science and the art—constantly before us; for we can lose sight neither of the one nor of the other in the study of the diseases of children. I trust, therefore, that some, especially of our younger members (for with them the maintenance of the larger views is for their own sake the more important, while their mind has not yet crystallised into unchanging forms), will turn their attention, for our sakes and for theirs, to a field which this Society has hitherto so little cultivated, but which yields indirectly as well as directly so rich a harvest.

To sum up all, gentlemen, I am anxious that we should not work in the spirit of the ancient guilds, which fostered technical skill indeed, but within certain very narrow limits, beyond which they had no ambition, no sympathy. I am anxious that we should feel ourselves citizens of one large commonwealth; or perhaps, rather, soldiers in one vast army. We have all learnt our drill; we are all fit to take our place in the ranks; our aim is single, but one is the more skilful engineer, one the better trained artillerist.

You have chosen me to lead for a year or two your arm of the service. May I prove worthy of your choice.

ORIGINAL LECTURES.

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

LECTURES III. AND IV.

ANOMALIES OF REFRACTION: ASTIGMATISM—DISEASES OF ACCOMMODATION: MUSCULAR ASTHENOPIA, STRABISMUS.

(*Concluded from page* 86.)

MYOPIA (M).

In myopia, the antero-posterior axis of the eyeball being too long, the retina is placed too far from the dioptric system; and only those rays of light which are more or less divergent are brought to a focus in the layer of rods and cones—parallel or nearly parallel rays being focussed in front of it. Consequently, only near objects (the rays of light from which are divergent) are plainly seen; distant objects (the rays coming from which are nearly parallel) are either not seen at all, or only very indistinctly.

The patient complains of being near-sighted. If test-types be given him to read, he will hold them close to his eyes; and, if told to look at a distance, he will most probably screw up his eyelids so as to narrow the palpebral aperture, and will only be able to make out objects indistinctly, or not at all. Myopic patients often complain of spots floating before the eyes (muscæ volitantes).

I have already told you how to ascertain the existence of myopia; its degree, like that of hypermetropia, can be measured by trial with lenses, and by examination with the ophthalmoscope. Its treatment is not quite so simple as that of the preceding anomaly. Morbid changes are frequently discovered by the ophthalmoscope in the myopic eye. These I shall notice briefly.

The measurement of the degree of myopia by trial with lenses should be conducted as follows:—We place the patient complaining of near sight at a distance of twenty feet from the card on which are pasted the letters from XX. to CC.; ask him to try to read them with each eye separately. If he be suffering from at all a high degree of myopia, he will not be able to distinguish any of the letters; if, however, any of them can be made out, concave glasses may be immediately tried; but if none can be read, we place the book of small types in the patient's hand, and note carefully the distance at which he reads type 1½ or 2. We shall generally find that the concave lens, the negative focal length of which corresponds to the number of inches at which the eye reads distinctly, or a lens a little stronger or weaker than this, will neutralise the myopia. For instance, if in reading the patient holds the types at five inches, it will be found that a concave lens of five inches negative focus will be about the one which will improve distant vision most. Having ascertained the distance at which small type can be read, we direct the patient to look again towards the board (on which are letters from XX.

to CC.), and hold concave lenses, beginning with that the focal length of which corresponds to the number of inches at which small type is read, in front of the eye under examination until we have ascertained the *weakest* with which letters of XX. can be read at twenty feet; the degree of myopia may then be expressed as a fraction by placing the negative focal length of this concave lens for the denominator and 1 for the numerator. For instance, if it is found that a concave lens of ten inches focus is the weakest with which letters of XX. can be read at twenty feet, the degree of myopia may be expressed as $\frac{1}{10}$; if, however, letters of XX. cannot be read at twenty feet, but only XL., L., C., or even CC., the degree of myopia may still be expressed by the negative focus of the *weakest* concave lens with which *the greatest possible acuteness of vision* is maintained.

In many cases of myopia, especially those of high degree (above $\frac{1}{6}$), we find that the acuteness of vision has very much diminished; the failure of sight is due in most cases to some of the morbid changes to be presently described.

Measurements of Degree of Myopia by the Ophthalmoscope.

In order to ascertain the degree of myopia by the ophthalmoscope, Oldham's instrument (as in hypermetropia) should be used; but as the retina is situated behind the focus of the *dioptric system*, an image of it is necessarily formed at some point (conjugate focus) in front of this system and outside the eye.

Consequently, the rays of light emerging from the myopic eye are not parallel as in emmetropia, or divergent as in hypermetropia, but are converging to a point situated further from or nearer to the eye, according to the degree of myopia.

Now, the emmetropic eye cannot accommodate itself for convergent rays of light; consequently, if the observed eye be looked at from a distance less than that of the point to which the emergent rays converge, no image will be formed upon the observer's retina. But if the eye be examined from a point situated at a distance somewhat greater than that to which the emergent rays are directed, an inverted aërial image is plainly seen, which is lost as the observer approaches near the point at which the image is formed.

An approximate estimate of the degree of myopia may be made by noticing the distance from the observed eye at which this disappearance of the inverted image takes place, as the observer can approach to within about five inches of it, and still see it clearly; for instance, if it be found that the inverted image disappears at a distance of ten inches, we may conjecture that it is in reality situated at about five inches from the observed eye, and that a myopia of $\frac{1}{5}$ exists.

We find the more accurate plan of measurement, however, is—having ascertained the existence of an inverted aërial image, and therefore of myopia—to take no notice of its distance from the eye, but commence the examination at once, a distance of only two inches separating our own cornea from that of the observed eye, thus: We revolve the disc containing the concave lenses fixed behind the sight-hole of the ophthalmoscope, until we have found the *weakest lens* which so opens out the convergent pencil of rays as to allow of a distinct erect image of the parts occupying the fundus of the examined eye being formed on our own retina. The negative focal length of this lens will represent the degree of myopia.

Morbid Changes met with in Myopia.

Posterior Staphyloma.—The morbid changes met with in the myopic eye are found principally in its vascular tunic, the ophthalmoscopic appearances are most marked, and are due to choroidal atrophy. The most commonly observed change is the occurrence of a white and more or less crescentic figure bordering the optic disc at its outer margin. The boundary of the white figure, away from the disc, may have almost any form of outline: in some cases it is clean cut and well defined; in others it is indistinct, and appears to shade gradually into the adjoining healthy structures. Again, the figure may be seen as an irregular white patch, extending farther in some directions than in others; its size varies considerably. In slight cases only a small white rim may be seen bordering the outer margin of the disc; in others, a very considerable atrophic patch will be found; and in some instances the white figure has a somewhat circular form, surrounding the whole disc with a white band, the breadth of which is usually greatest next to the outer side. The change described is known as *posterior staphyloma:* it is brought about by a yielding of the ocular tunics to intra-ocular pressure. The yielding is probably always preceded by inflammatory softening, and as it progresses the choroid becomes separated from the margin of the disc, and disintegration and atrophy follow. The white glistening appearance of the figure is due to the light from the ophthalmoscope being reflected by the brilliant white sclerotic, which is left uncovered by destruction of the choroid.

A staphyloma of greater or less extent probably exists in all myopic eyes, though in slight degrees of the anomaly but little change is noticed.

The depth and extent of the staphyloma bear a distinct ratio to the degree of myopia; its presence must always be looked upon as an indication for careful treatment, as it is ever liable to progress, and with it the degree of myopia to increase.

In cases of posterior staphyloma the optic disc often seems altered in form, appearing vertically oval, and, as it were, fined off towards the white figure. This change in the disc is not real, but apparent, and is caused by its being situated on the sloping side of the staphyloma, so that its inner border lies nearer to the observer than its outer; its transverse diameter consequently appearing shortened.

The retinal vessels also undergo change in direction; they are seen to curve in passing over the white figure; they may also seem wholly displaced towards it, and do not, as in the normal condition, divide the disc, as it were, into two lateral halves, but turn entirely to that side of it which is next the staphyloma.

The disc is sometimes found to be whiter than it is naturally, or even entirely atrophic, and the retinal blood-supply may be much below par.

We must not forget that there is a source of fallacy in estimating the size of objects situated in the fundus of the myopic eye: when examined with the ophthalmoscope by the indirect method, the objects seen always appear much smaller than in emmetropic or hypermetropic eyes. This depends on certain conditions of refraction, and might lead the inexperienced observer to form an erroneous diagnosis with regard to the condition of the retinal blood-supply.

Besides the changes observed about the optic disc, the choroid is frequently much thinned throughout, the pigment layer being more or less destroyed, and the large bloodvessels forming its outer coat exposed to view.

Atrophic patches having well-defined or irregular borders, together with dark figures, consisting of heaps of pigment, are frequently met with, scattered about the fundus, with no particular arrangement. Atrophic changes in the region of the yellow spot—sometimes having a peculiar stellate form—occasionally occur.

Other morbid changes are—opacities in the vitreous humour, and displacements of the retina of varying extent. The highly myopic eye is also very liable to glaucomatous changes.

Treatment of Myopia.

Our object is to so open out pencils of parallel rays of light that they fall divergent upon the cornea, and so appear to come from a near object. Slight degrees of myopia do not give rise to much inconvenience, the patient being able to read or work at a fair distance; it is only when looking at a distant object that the defect of vision is noticed, and no treatment is *necessary*.

If much inconvenience is experienced from the limitation of distant vision, a pair of glasses may be ordered, and these should be *the weakest concave lenses* with which the greatest acuteness of vision can be maintained; they need only be used when looking at a distance. Higher degrees of myopia, where the farthest point of distinct vision is situated only at a few inches from the eye, always require attention from the tendency of the myopia to increase, and with it the choroidal changes mentioned above. The treatment consists in the selection of suitable spectacles, and the avoidance of all conditions likely to cause congestion of the eyeballs.

In the selection of glasses we must be guided by the circumstances of the case and the age of the patient. In young persons with good accommodation, and myopia not exceeding $\frac{1}{6}$, the degree of myopia should be carefully ascertained by trial with lenses, as already described, and glasses which accurately neutralise the anomaly of refraction ordered to be used for all purposes. Occasionally it will be found that the glasses make the eyes ache when used for a considerable time for near work; but this is only caused by the unaccustomed exercise of accommodation, and will usually pass off if the use of the glasses be persevered in, and near work only done for a short time at once,

until the eyes become used to the extra strain. Should the symptoms, however, continue, or increase after a fair trial, the glasses must be replaced by weaker ones, which should be worn for some weeks, after which those which fully correct the myopia may be again tried.

In myopia above $\frac{1}{8}$, or in persons with less degrees who have reached a considerable age without wearing glasses, an absolute correction cannot be borne, and can only do harm if tried. In these cases, having first carefully ascertained the degree of myopia, we must order glasses which neutralise about two-thirds of the anomaly of refraction. These should be used for all purposes for some weeks, at the end of which time stronger ones may be given; the strength being gradually increased until the whole, or nearly the whole, of the myopia has been corrected.

In many cases it will be found useful to order a pair of spectacles which enable the patient to do near work at a fair distance; and to give a double eye-glass, with lenses which accurately neutralise the myopia, to be used for looking at distant objects only.

In many cases of myopia the degree will be found to be greater in one eye than in the other. If there be no considerable difference, a different glass may be ordered for each; but if the defect in one eye be considerably in excess of that in the other, no good will result from different glasses, and we should give for both eyes those lenses which suit the less myopic one, their selection being governed by the rules already laid down.

The conditions which cause congestion of the eyeballs are—continuance of a stooping posture, and long employment on near work, with its accompanying strain of convergence and compression of the globes by the action of the internal recti muscles.

The former can be avoided by directing the patient to raise the book or paper, if reading or writing, to a suitable height, and by the use of properly selected glasses. The latter also by the use of glasses which enable the patient to see at a distance up to which convergence of the visual lines can be maintained without effort.

Not unfrequently in the course of myopia there arise what are known as *symptoms of irritation:* these consist in the occurrence of flashes of light, fiery sparks and circles, photophobia, a sense of fulness, and sometimes pain in the eyeballs.

Whenever symptoms of irritation occur, they must be looked upon as of considerable import, and requiring careful management; their occurrence usually means increase of the myopia.

If glasses are being worn, their use must be discontinued; all work should be abstained from; the patient, when indoors, should be kept in a subdued light; and when in the open air blue protectors should be worn. In extreme cases an entirely dark room must be prescribed, all excitement must be avoided, and alcoholic and hot drinks abstained from. Cold douches should be used to the eyes and forehead; and in many cases great benefit will be derived from the abstraction of blood from the temples, either by the application of natural leeches or of the artificial leech—the latter, however, being preferable. The treatment must be persevered in until the symptoms have entirely subsided, and great care must be subsequently taken to avoid a recurrence.

The existence of "muscæ volitantes," unless there be opacity of the media visible by the ophthalmoscope, need give rise to no uneasiness.

What I wish particularly to impress on you in prescribing glasses for myopia is—to be careful never to order them too strong; if you do, it would be better for your patient had he never consulted you, as they will certainly do harm.

Progress of Hippophagy in France.—In 1875 the horse-butcheries of Paris killed for public consumption 6865 horses, asses, and mules; and in 1876 the number rose to 9271, furnishing 1,685,470 kilogrammes of nett meat. At Lyons there has been a diminution, 1262 animals having been killed for food in 1875, and 1088 in 1876. There are now fifty-eight horse-butchers' shops in Paris, and only seven in Lyons. At its meeting on January 9, the Comité de la Viande de Cheval decreed a silver medal to M. Chambéry, who opened the first horse-butchery at Lyons in 1867, and a gold medal to M. Tétard, who has nine horse-butchers' shops in Paris. M. Decroix, the originator of this Committee, has placed at its disposal a sum of 1100 francs as an encouragement to the speculator who will establish the first horse-butchery in London.—*Union Méd.*

ORIGINAL COMMUNICATIONS.

ON REDUPLICATION OF THE CARDIAC SOUNDS.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Clinical Medicine; Senior Physician to King's College Hospital.

In a paper on the above subject which has appeared in three successive numbers of the *Medical Times and Gazette* (January 6, 13, and 20), Dr. Barr has done me the favour to criticise some statements made by me in a lecture published in the *Lancet* (May 13, 1876). I propose now to reply very briefly to Dr. Barr's criticisms. He first refers to me (at page 34) in the following terms:—"Dr. George Johnson seems to have very little faith in any assistance rendered by the respiratory process in carrying on the circulation of the blood, as evidenced by his recent communication on the so-called 'Dr. Patrick Black's Theory of Asphyxia'—a designation, by the way, which seems rather strange to those who are acquainted with the works of Dr. Andrew Buchanan of Glasgow, and of the late Dr. Carson of this town." This has reference to a paper of mine in the *British Medical Journal* (February 29, 1876), in which I criticised a recently published pamphlet of Dr. Black's. I beg to say briefly that I am quite aware that the respiratory movements have great influence on the amount and movement of blood in the large vessels, both arterial and venous, as well as in the heart's cavities; and although in criticising Dr. Black's pamphlet I spoke of the theory which he advocated as Dr. Black's theory of asphyxia, I am also aware that the theory which attributes the arrest of the pulmonary circulation to the suspension of the respiratory movements did not originate with Dr. Black, with Professor Buchanan, or with Dr. Carson, but it was originally propounded by Haller; and in the paper referred to I showed that the theory had been proved by Dr. John Reich and others to be entirely inconsistent with facts, and, in particular, with the fact that when an animal is made to breathe nitrogen alone, although the respiratory movements continue, yet, for the want of oxygen, the pulmonary circulation is as speedily arrested as if the movements of the chest had been suspended. Obviously, then, the suspension of the respiratory movements is not the main cause of the arrest of the pulmonary circulation in cases of so-called asphyxia.

I now pass on to Dr. Barr's criticism of my theory of reduplication of the first sound. He says "my description of the reduplicate sounds '*rat-a-tat*' inveighs against my theory," since it implies that the auricular contraction causes a louder sound than the ventricular contraction which follows it. I did not intend the rat-a-tat to be descriptive or representative of the relative intensity or duration of the first and second elements of the reduplicate sound, but since Dr. Barr has thus misunderstood it, I affirm that the second element is at least as loud as the first, and in future I shall represent the triple sound by "rat-tat-tat."

Dr. Barr thinks that if the first element of the reduplicate first sound were caused by the auricular systole it should be heard most distinctly at the apex, because the presystolic mitral murmur is best heard there. I reply that the conditions are entirely different. A presystolic or auricular-systolic mitral murmur reaches the apex, and is loudest there, partly through convection by the onward current of blood, but mainly by conduction through the tendinous cords and the fleshy columns connected with the constricted mitral orifice; but a sound resulting from contraction of a dilated and hypertrophied auricle, as I believe the first element of the reduplicate first sound to originate, would be best heard over the auricle, just as a presystolic friction-sound is best heard over the roughened auricle.

Dr. Barr thinks that dilatation of the auricle is not an early result of peripheral obstruction. I reply that in the heart of an animal exposed while dying of apnœa, *alias* asphyxia, I have seen it occur to an extreme degree in less than two minutes. Of course hypertrophy is a work of time, but I believe that distension of the auricle without hypertrophy will give rise to the phenomena of reduplication.

Dr. Barr's statement that reduplication is more common in the early than in the late stage of Bright's disease is contrary to my experience.

He "has not been so fortunate" as I have in finding

reduplication of the first sound in cases of emphysema. I do not know that I can consider myself "fortunate" in this matter, but certainly I have daily opportunities of observing and demonstrating the co-existence (and, as I believe, the interdependence) of emphysema with reduplication of the first sound.

Dr. Barr thinks that "a simultaneous equal or nearly equal impediment in the pulmonary and systemic vessels must be an event of rare occurrence." In reply I say that I have met with many cases in which advanced emphysema with hypertrophy and dilatation of the right cavities of the heart has co-existed with chronic Bright's disease and hypertrophy with more or less dilatation of the left cavities. It would, of course, be impossible to say that the systemic and the pulmonary impediment and the resulting compensating hypertrophy were exactly equal, but they must have been too nearly equal to admit of the distinct reduplication of the first sound being explained by asynchronism of the ventricles.

If systemic or pulmonary obstruction gives rise to reduplication of the first sound, by causing dilatation of the auricle, whether with or without hypertrophy, I see no inconsistency, as Dr. Barr does, in believing that reduplication of the first sound may result from "simple dilatation of the heart's cavities without valvular disease or evidence of arterial obstruction, either pulmonary or systemic."

Lastly, Dr. Barr thinks that I say the exact opposite of what I mean when I state that since in cases of emphysema and consequent pulmonary obstruction the first sound is double near the base but single at the left apex, the disappearance of the first element of the reduplicate sound at the apex is inconsistent with the theory of ventricular asynchronism, because by that theory we should be required to believe that the contraction of the left ventricle (which by the hypothesis is assumed to be the first to contract), over the apex of which the stethoscope is placed, must be supposed to be inaudible. I can assure Dr. Barr that I mean exactly what I say; and I maintain that the facts are consistent with my theory, but not so with his.

I trust that, in my endeavour to be brief in my reply to Dr. Barr, I may not be thought to have expressed myself obscurely or with unbecoming dogmatism.

ON GOA POWDER AS A REMEDY IN SKIN DISEASE.

By BALMANNO SQUIRE, M.B. Lond.,
Surgeon to the British Hospital for Diseases of the Skin.

A YEAR or two ago some papers were written on Goa powder, conveying information respecting that drug, and urging further investigation of its properties—a call which, so far as I know, has not been responded to. My interest has lately been engaged in it by the accident of a patient from Chiua showing me the effect of the powder on himself. The peculiar kind of inflammation of the skin produced by the powder convinced me that I had under my notice an active agent capable of producing an effect on the skin different from that of any other irritant that I knew of. Of the papers I refer to, one by Sir J. Fayrer(a) describes the disease known as "Indian ringworm," the mode of applying Goa powder (or Poh di Bahia) in the treatment of that eruption, and the effect of the powder on the skin and on the course of the eruption; and Dr. Fayrer concludes his short but pithy paper by commending the powder to the notice of dermatologists, and expressing a hope that its efficacy may be further tested in the treatment of skin disease.

In consequence of Dr. Fayrer's paper, another paper was written by Dr. J. F. Da Silva Lima,(b) of Bahia, Brazil, clearing up the geographical and botanical origin of the Goa powder (known in Bahia as the Araroba or Arariba powder), points respecting which Dr. Fayrer had been unable to procure satisfactory information.

Dr. Lima's paper was followed by one by Professor Attfield,(c) on Chrysarobine (or Araroba powder, or Goa powder, or Bahia powder), detailing a research which he had undertaken into the chemical composition and chemical properties of the Goa powder, and referring also to the other papers above quoted.

Dr. Attfield's paper was followed by another by Mr. E. M. Holmes,(d) discussing still further the botanical origin of the powder, adducing proof of the physical and chemical identity of Araroba powder and Goa powder, and advocating the therapeutical investigation of their chief constituent (chrysophanic acid), which had been separated by Professor Attfield. This paper was followed by a discussion, in which Messrs. Plowman, Moss, and Postans, and Professors Bentley and Attfield took part. The general result of the information conveyed by the sources above quoted is that there is a powder, known as Goa powder, or Bahia powder, or Araroba or Arariba powder, or Chrysarobine, which is largely used and much valued as a local remedy in cases of skin disease in many different parts of the world – namely, in India, in the Malay peninsula, in China, and in Brazil,—notwithstanding its very high price. For example, at Saigon, in Cochin China, Dr. Champeaux had to pay two francs a gramme for it. A quantity of it obtained from Bombay cost £3 12s. per pound, which would come to 4s. 6d. per ounce. It was quite recently sold in London at 10s. an ounce. In India, where it is known as Goa powder, it is supplied from Goa, which is a small Portuguese colony situated about half-way down the west coast of India. But how the powder got to Goa, and what was its composition, was until lately unknown. It was generally understood that a similar powder was sold in the Malay peninsula under the name of Poh di Bahia or Po Baia, but this did not suggest any clue. It now appears that its sole place of origin is the province of Bahia, in Brazil, and that until Brazil ceased to be a Portuguese colony the Bahia powder was, and still is, imported *viâ* Lisbon to Goa. Then as to its nature. It is a vegetable powder, aud is derived from some kind of leguminous tree, probably from the medulla or pith of the stem and branches of the tree, the tree most likely being a species of Cæsalpinia or of some nearly allied genus.

As to its chemical composition. It consists chiefly of chrysophauic acid. Asmuch as four-fifths of Goa powder (namely, 80 to 84 per cent.) is chrysophanic acid.

Chrysophanic acid (from the Greek, "gold-shining" or yellow-shining) obtained by sublimation from Goa powder occurs in delicate golden-yellow shining scales or short needles. Chrysophanic acid is found also, but in small quantity, in rhubarb, which contains 2·6 per cent. of the acid, as well as in several species of dock. Dock-root has long been used as an application in cutaneous diseases.

The other chief constituents of Goa powder are a glucoside and a bitter principle, which, together with a gummy matter, make up 7 per cent. of the powder. To the glucoside, or the bitter principle, or both, may belong a portion of any medicinal activity that Goa powder may perhaps have as an internal remedy.

The remaining constituents of Goa powder are—a resin-like matter, 2 per cent.; woody fibre, 5½ per cent.; and mineral matter (ash), ½ per cent.

Goa powder may be separated into its chief component elements in the following manner:—Hot water will dissolve out 7 per cent. of it, consisting of a glucoside, a bitter principle, and a gummy matter. Hot benzole will dissolve the greater part of what remains of the powder—namely, as much as 84 per cent. of the original quantity; this is chrysophanic acid. There is left then only 8 per cent. of the powder. Hot strong alcohol will dissolve out from this 8 per cent. of residue a quarter of its weight (*i.e.*, 2 per cent. of the original bulk). This is resin-like matter. The remaining 6 per cent. is woody fibre and ash.

Chrysophanic acid is less soluble in alcohol than it is in benzol; still less in ether; and is very slightly soluble in water. These solvents affect it more rapidly and powerfully when hot than when cold, and hot solutions deposit it on cooling. Chrysophanic acid is soluble in aqueous solutions of potash, with formation of a deep-red solution; acids re-precipitate it from such a solution.(e)

Now as to the mode of using the powder as a remedy in skin disease. Stir a few grains of it with common vinegar or lemon-juice to form a thin paste, and then smear the paste or apply it with a brush over the eruption. Repeat this application once a day for two or three days. In obstinate cases several repetitions of the application may be needed.

Another mode:—Mix twenty grains of the Goa powder and ten drops of acetic acid with an ounce of lard; apply this ointment twice a day for a short time.

(a) *Medical Times and Gazette*, October 24, 1874.
(b) *Ibid.* March 6, 1875.
(c) *Pharmaceutical Journal*, March 13, 1875.
(d) *Pharmaceutical Journal*, April 10, 1875.
(e) This account of the chemistry of Goa powder is extracted from Professor Attfield's essay, already quoted.

Or let the ointment contain forty grains of the Goa powder and ten drops of acetic acid.

A tincture of Goa powder is sold in Bombay. It is painted on the eruption with a brush.

Now as to the effect of the powder on the eruption and on the adjacent skin. It causes no pain at first, but in the course of a few hours there is a sensation of a dull heavy nature, as if the skin had been bruised—the eruption becoming white, while the surrounding skin is stained of a dark colour. The sense of uneasiness, however, soon passes away, and in a few days the dark discoloration of the skin begins to fade, and simultaneously the eruption fades also, and by the time the discoloration of the skin produced by the Goa powder has disappeared, that produced by the eruption has also passed away, and the patient is well. These favourable results will not always follow immediately.

This, then, is a summary of what I have learned from the papers I have quoted.

I next proceeded to acquire some information of my own. I find that Bahia powder can be purchased now in London for 1s. 6d. an ounce, or 20s. a pound; that under the name (generally) of Goa powder it can be readily obtained of most chemists. Chrysophanic acid, obtained from Goa powder, has also, since Dr. Attfield's investigation, become an article of commerce, its price being, of course, higher than that of Goa powder; it costs 10s. an ounce.

It will be obvious that a pound of Goa powder ointment (even at the price of 2s. an ounce for the Goa powder) can be made for 2s. 6d., each ounce of the ointment containing half a drachm of the powder. The remedy, therefore, if of any service, is not any longer too expensive for general use.

The gentleman on whom I first witnessed the effect of the powder happened to be affected with annular psoriasis. There was no present profession on his part that his disease was "ringworm" of any sort (although at one time he had thought so), and it certainly was nothing of the kind. His was a well-marked and typical case of common psoriasis. His eruption first came in 1866, and lasted till the winter of 1874. It then kept away for eighteen months, and reappeared last June, and has continued ever since. He is not aware of any particular circumstance which caused it to disappear in 1874. He was then riding (steeplechasing) a good deal, and "training down," and he had taken to using warm baths instead of cold, and he fancies that these changes in his habits had some influence. The disease consists of large (and for the most part *ringed*) patches, from the size of a crown to that of the palm of the hand, on his shoulders and other parts of his body; and in addition to these there are a few small patches on his scalp and on his ears, and a few equally small on his limbs. He is an old denizen of Hong-Kong, where he learnt the use of the Goa powder. He says he finds the application of the powder will take away a five-years' patch in a month. It stains his linen of a purple colour, which will not wash out, but it does not make any holes in the linen. He says you must avoid the eyes, but you may apply it safely on the forehead. The way of applying the powder, as learnt by him, is to wet the patch of eruption with cold water, then wet your finger, turn the bottle up, and allow the fine powder to stick on the finger, and then rub the powder on as a paste over the whole of the patch. It dries in five minutes. You may have to apply it four or five days or a week, daily, to get up any effect. At the end of about four days you begin to get a halo. It will go on till it (the halo) is a bright scarlet; and then, when it gets to a very bright scarlet, you begin to get smarting or rather tenderness only—that is to say, the pain is felt only when the place is touched. As the halo gets developed, the patch over which the powder has been spread gets whiter and whiter, and quite soft and silky, but not blistered in any way. Directly the halo begins to appear, the scales of the eruption begin to come off as you wash the patch in the morning with ordinary soap and water. He has never known a spot once healed with Goa powder to scale again. The halo takes a fortnight to fade. At the end of that time, however, a single application of Goa powder will, he finds, wake up the irritation to its full former condition. He showed me a spot which he had now under treatment in this way, and the conditions were fully as he has above described: the central white patch was a disc about an inch and a half in diameter, and the scarlet, or rather crimson, halo around it was quite four inches and a half in diameter. The halo was peculiarly dotted, and this with its dusky crimson colour gave it something of the appearance of a flat vascular nævus.

Desirous of testing the effect of Goa powder on the healthy skin, I made some experiments with it on a strong, robust, florid girl of twenty-three, who is under my care as a hospital in-patient for lupus; but as a preliminary measure I made a few preparations of the drug, so as at the same time to investigate the best mode of applying it.

I purchased at different shops some Goa powder, and Mr. Postans, learning my interest in the matter, kindly supplied me with some chrysophanic acid extracted from the powder.

I experimented with Goa powder made into a paste with water; with Goa powder made into a paste with vinegar; with a very strong ointment made by mixing half an ounce of Goa powder with an ounce and a half of lard; with a very strong tincture of Goa powder made by digesting half an ounce of Goa powder in an ounce of spirits of wine; with a hot solution of chrysophanic acid in benzol; and with a strong and very intimately mixed ointment of chrysophanic acid made by preparing a strong solution of chrysophanic acid and of lard in hot benzol, and stirring them together while cooling until the solution was set, and then spreading the ointment out on a slab so as to allow of the benzol evaporating from it.

I have also experimented with a somewhat weaker ointment made by dissolving chrysophanic acid in melted lard—a medium in which, as I find, it is pretty freely soluble. A very beautiful ointment can be prepared in this way, or equally by dissolving the acid in vaseline.

On November 1, I painted with a paste of Goa powder made with cold water a disc about an inch in diameter on the outer surface of the left arm. The paste dried in a few minutes, leaving the powder so loose that it could easily have been blown away. Covering it, therefore, with a piece of blotting-paper, I fastened it on with a larger piece of American rubber plaster.

On November 3 no effect whatever had been produced. Accordingly, on the outer surface of the right arm, a corresponding patch was smeared with an ointment composed of one part of Goa powder to two of lard, and similarly covered over with rubber plaster.

On November 8 the original place on the left arm was after an eight days' application of the water-paste quite unaffected in any way; whereas a five days' application of the ointment on the right arm had produced only a slight staining of the corresponding skin, of a brownish-red tinge. I forthwith painted over a disc two inches in diameter, on the inner surface of the left arm, three coats of the strong tincture of Goa (made with half an ounce of the powder to one ounce of spirit), and allowed it to dry at each application; while on the place on the outer surface of the left arm, where the aqueous paste had hitherto been applied, I painted a similar paste made by mixing the powder with vinegar.

On November 10 I find that the tincture has in two days' time produced no effect beyond that of very slightly staining the skin, just as it had at the moment of its application—namely, of a faint yellowish-brown colour, the colour of the tincture; whereas the place on which the ointment had rested from November 3 till November 8, and which on November 8 had become stained, had now begun to desquamate slightly. I now painted on the outer side of both arms (attacking in each the old area of operations) a strong hot solution of chrysophanic acid in benzol, producing on either arm a disc one inch and a half in diameter. As the hot solution cooled on the arm, a copious yellow efflorescence of chrysophanic acid was deposited on the patch. This was covered over with rubber sticking-plaster. In all of the above-mentioned examples the skin experimented on was perfectly healthy skin. However, this time I experimented also on diseased skin—namely, on a patch of partially ulcerated and more or less scab-covered lupus, measuring about one inch by two inches, and occupying the front of the patient's right wrist. After removing the scabs by means of soft soap and warm water, and then washing the surface well with ordinary soap and warm water, and gently drying it, I covered the sore place with a strip of linen spread with the strong Goa powder ointment (one in three), and bound it on the wrist with a bandage.

On November 13 I find on the two arms, where the hot benzol solution of chrysophanic acid was painted three days ago, that on removing the covering plaster it becomes obvious that whereas in many places the plaster has got incorporated with the yellow powder and so stuck to the skin, the skin is deeply stained with a brown-red tinge; but where there still

remains a distinct layer of the yellow powder separating the plaster from the skin so as to prevent it sticking there, no effect whatever has been produced. The alternation from the stained to the unstained parts is very abrupt; so that the stained parts form an irregular, sharply defined grotesque pattern. The discoloration does not at any part extend beyond the area of the surface to which the powder was applied. The patient has experienced no sensation of any kind in these places, nor are they in the least tender. As to the patch of partially ulcerated skin on the right wrist, where the ointment (one in three) has been applied for three days, the surface of the skin is stained a brown-red, corresponding to, but not in the least extending beyond, the area covered by the ointment; and the place is tender, which it had not before been, but it is not at all painful.

I now repeated my hot benzol solution of chrysophanic acid on both arms, and the strong Goa powder ointment on the raw wrist, covering them over as before, while I commenced a fresh place on the outer side of the left forearm, rubbing in a two-inch diameter disc with strong chrysophanic acid ointment made by evaporating a common solution of lard and chrysophanic acid in benzol. This ointment I rubbed in firmly for five minutes by the clock, and covered it over with rubber plaster.

November 16.—Now, at the place on right arm, the stained skin has begun to peel, disclosing new cuticle, which, though stained, is of a very much lighter colour. There is no tenderness even, and no sensation of smarting or of pain. The same is to be said for the patch on the left arm. On the outer left forearm there is a staining of the skin; nothing more. As to the ulcer on the front of the left wrist, it looks healthier, and a good deal cicatrised.

Now, from these data we may fairly assume that Goa powder, or equally chrysophanic acid, may be employed with considerable assiduity to the *healthy* skin (in certain individuals) without anything coming of it beyond a transient staining of the skin in the place where the remedy has been applied, and that similarly the drug may be used to an absolutely raw surface (under certain conditions) without any other effect resulting than a moderate and beneficial stimulation of that sore to healing. I direct particular attention to these facts, because some observers who have tried the powder in a case or two of ringworm have become greatly alarmed by its virulent effects, and regard it as a dangerous weapon,—and so, indeed, it is if it be used without discretion. It requires the same care in its use as other stimulants of the skin require.

The patient on whom the above detailed experiments were tried was a girl of "lymphatic temperament," and the sore one of an indolent and callous kind (a lupus ulcer).

However, I have recently recorded another case, in which the remedy was employed assiduously over the greater part of the body; in fact, over the whole of the body excepting only three regions—namely, the chest, the shoulders, and the face. The strength of the ointment thus used was of half an ounce of Goa powder to an ounce and a half of lard. The patient was a woman, aged thirty, extensively affected with psoriasis, and who had been continually subject to the disease since the age of eighteen. She rubbed in this ointment, morning and evening, for six days and six nights without intermission, and in that time had completely cured all but a very few of the patches of her disease, as yet without irritation of any kind; but on the seventh day a burning sensation and a vivid erythematous redness of the skin arose, which, although the remedy was promptly discontinued, did not subside for two or three days.

By the side of this case I have recorded that of a gentleman, also affected with psoriasis, on whom the application had a much more stimulating effect; but then the remedy (chrysophanic acid ointment, consisting of two drachms of the acid to one ounce of lard) was employed to *his face*. On this gentleman one or two applications of the remedy had a tangible effect in causing tenderness and erythema of the face, with puffiness of the eyelids; but the ointment was a pretty strong one. Psoriasis, however, resists the action of irritants generally in a somewhat exceptional degree.

It is in the case of children more particularly that I find Goa powder to require caution in its employment. In cases of ringworm of the scalp the use of this remedy has a somewhat remarkable effect. If the drug be applied to the scalp of a child, the application being limited strictly to the hairy scalp, a dusky erythematous inflammation of the upper half of the face, forming a sort of harlequin's mask, is apt to ensue after a few applications, and coincidently an œdematous puffiness of the eyelids arises. This phenomenon, which has been noticed by Mr. Gaskoin, and also by Mr. Postans as occurring in the case of his own child,(f) is not, as the latter supposes, a mere result of the powder having been applied (elsewhere) with water, and so escaping in the form of dust on to other regions; for I find that it happens equally when the application has been used in the form of ointment to the scalp only. In some cases I have noticed that in applying the ointment to the *hairy scalp only* the whole of the face, neck, and shoulders have become stained of a dark purple-grey—a colour which was speedily cast off by the copious desquamation excited by the dye.

The remedy appears to me to be valuable not only in cases of psoriasis—which in itself is a sufficiently common form of *non-parasitic disease* of the skin, but also in the equally common "lichen circumscriptus," or chronic lichen. In the latter disease, however, a weaker strength of the ointment should be used than is proper for psoriasis. I have no doubt that, employed in a weak form, an ointment of Goa powder or of chrysophanic acid would prove itself a valuable remedy in cases of pityriasis, and equally in cases of dry eczema, although I have not as yet made experiments with it in those two very common forms of non-parasitic skin disease. But I have said enough, I trust, to show that we have in this remedy a valuable means of treating certain non-parasitic diseases of the skin of common occurrence and of obstinate character, although it must be borne in mind that this, like all other serviceable weapons, must be handled adroitly in order to insure that it should do good, without also at the same time doing harm.

The manner in which I prescribe the remedy is, in most cases, as follows:—℞. Acid. chrysophanic gr. x., or gr. xx., or gr. xxx., adipis ℥j.; melt together for half an hour in an oil-bath, stirring occasionally. When cold, mix together with pestle and mortar, adding, if desired, a few drops of essential oil to scent the ointment. However, as I have already pointed out, a much stronger ointment than this is sometimes desirable.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

CASE OF PROBABLE SYPHILITIC DISEASE OF BRAIN AND OF THE VESSELS OF THE UPPER EXTREMITIES.

(Under the care of Dr. BRISTOWE.)

[For the notes of this case we are indebted to Dr. Twining, Medical Registrar.]

N. B., a vocalist, thirty-seven years of age, was admitted into St. Thomas's Hospital, under Dr. Bristowe's care, on August 11, 1876. He had been attending as an out-patient off and on for two years, with symptoms which were supposed to indicate cirrhosis of the liver. He had been suffering, also, from more or less constant headache and giddiness. There was a distinct history of syphilis. He had latterly been worried in business, but continued at work up to August 7. On the morning of that day his wife found him fumbling with his clothes while dressing, and at the same time noisy and excited. These symptoms continued for a time; but gradually paralysis of the right side of the face and of the arm, and loss of speech, supervened; and the latter of these by the evening became absolute. Had no fit. He walked into the ward on August 11, and apparently had no loss of power in his legs. He could move his right arm freely, but it was manifestly somewhat weaker than the left. His mouth was drawn to the left, and the wrinkles about the mouth on the right side were partly effaced. The right upper eyelid moved a little less readily than its fellow. The tongue was coated and protruded to the right. There was apparently slight loss of cutaneous sensibility on the right side. There was no squint or inequality of the pupils; but the sight of the left eye was somewhat impaired. There was some deafness on the right side. The patient appeared to be quite sensible, and to understand what was said to him; but he was apt to cry without apparent cause, and had absolute loss of the power of uttering articulate sounds. The heart and lungs were, so far as could

(f) Mr. Gaskoin, *Medical Times and Gazette*, November 14, 1874; Mr. Postans, *Pharmaceutical Journal*, April 10, 1875.

be ascertained, quite healthy; but there was a total absence of pulsation in the arteries of the arms, and the pulsation in the carotids was extremely feeble. The urine had a specific gravity of 1028, and was free from albumen. The temperature in the axilla was 99·1°. Mixed diet, with six ounces of wine.

August 15.—℞. Ammon. carb. gr. iv., pot. iod. gr. vii., ex aq. camph. t. d. Wine four ounces.

17th.—Still no pulse. Paralytic symptoms as before. No recovery of speech.

25th.—During the week has made some improvement; has said "Yes" and "No," and "Did you?" Has endeavoured to write, but succeeded only in making unmeaning up and down strokes. Has played at draughts with a fellow-patient. Sensibility has returned to his right side. Wine reduced to two ounces daily. Extra milk. On the 22nd fifteen minims of tincture of digitalis were added to each dose of his mixture.

September 5.—Ferri et quiniæ cit. gr. v., pot. iod. gr. v., ex aq. t.d. Omit the wine.

13th.—He has improved in some respects. Can say "Yes" and "No," and this morning said spontaneously "Good morning." He can write better than he did. Writes a word or two fairly legibly and correctly, but soon repeats himself or falls into unmeaning marks. There is still total absence of perceptible pulsation in the arms.

29th.—Can speak a few more words, but his utterance is indistinct and faulty. He is at a loss for words, and quite unable to join in conversation. He can repeat words to dictation; but his utterance of them, especially if they involve many letters or syllables, is indistinct and confused. If he tries to say the letters or the numerals, he says one or two in their proper order and then repeats himself, or skips one or two, and soon becomes confused. He cannot do addition sums. He would not, or could not, repeat the Lord's Prayer; but succeeded better with some of the comic songs which he was accustomed to sing. Sang "Tommy make room for your uncle" for us, fairly in tune, but in a feeble, drawling voice, and with a very indistinct and incorrect enunciation.

There was no further improvement in his condition up to the time at which he left the hospital, on November 7. He remained slightly but distinctly paralysed in the right arm and right side of the face, aphasic, inclined to laugh and cry without adequate cause, and totally without pulsation in the arteries of the upper extremities. Further repeated ophthalmoscopic examinations were made during his stay in the hospital; and these revealed the development and progress of white atrophy of the left optic disc; the right was healthy. It may be added that there was never any lividity, anæmia, anasarca, or apparent modification of temperature in the arms.

Clinical Remarks by Dr. Bristowe.—There can be little doubt, we think, that the above case was essentially one of syphilis, although it must be admitted that there was not complete proof. The circumstances which favour this view are—(1) the presence of a syphilitic history; (2) the occurrence of incomplete right hemiplegia, after a long continuance of headache and giddiness in a patient who was young, and therefore not very likely to have cerebral hæmorrhage, and who had not had rheumatism, and had no symptom of heart disease, and was consequently not a probable subject of embolism; (3) the gradual supervention of atrophy of the left optic disc; and (4) the affection of the vessels of the arms. As regards the last point, there is nothing whatever in the history of the case to show when or how the affection came on; and there was nothing while the patient was in the hospital, beyond the absence of pulsation, to indicate arterial affection. The association, however, of disease within the skull and the condition of the arteries of the arm suggests a common cause for both. It is not improbable, we think, that in both situations syphilitic disease of arteries, with consequent obstruction, has taken place, and that in the brain this has led to circumscribed softening.

ST. BARTHOLOMEW'S HOSPITAL.

PARALYSIS AFFECTING THE NERVES OF SPECIAL SENSE.

(Under the care of Dr. DUCKWORTH.)

[For the notes of this case we are indebted to R. Wharry, M.B., House-Physician.]

The following case presented many anomalous features. The affection was almost limited to the cranial nerves, and chiefly confined to those of special sense. To explain the symptoms we must find some lesion that could affect the olfactory, the optic, the auditory, the laryngeal branches of the pneumogastric, the gustatory, the glosso-pharyngeal nerves on both sides, the sixth nerve and the branch of the third nerve that goes to the lenticular ganglion on the left side, the hypoglossal and the branch of the third nerve that goes to the levator palpebræ on the right side. In addition to this, more extensive mischief must have existed and cleared up, to explain the history. Upon the whole, we must regard the case as one of syphilitic inflammation affecting the meninges at the base of the brain, possibly associated with gummata.

It will be remembered that, in the debate on syphilis at the Pathological Society twelve months ago, Dr. Moxon referred to a case of symmetrical gummata on the two vagi. A case also of brain-syphilis occurred some time ago in the post-mortem-room at University College Hospital, where symmetrical gummata were found on several of the cranial nerves inside the skull.

Edward K., aged forty-two, a plasterer, was admitted to St. Bartholomew's Hospital on August 9, 1876.

History.—He has been a soldier in the Royal Engineers. In November, 1873, while at Bermuda, he went to hospital with neuralgia in his head. The pain was bilateral, and affected the forehead and anterior part of the vertex. He also had lachrymation and intolerance of bright light affecting the left eye. He was in hospital six weeks, and recovered. Five weeks later he was readmitted with impaired vision and general debility. He improved in condition, went to Gibraltar, and again recovered. In July, 1874, facial palsy came on gradually on the left side, with twitching of the eyelid. He lost power and flesh in both arms (the left being the weaker); the lower limbs also became weak, and again he was troubled with his left eye, his vision becoming misty. He was removed to Netley Hospital in November, 1874, and then was totally unable to walk. He got better, and was discharged in May, 1875; at that time he could walk with sticks. Since then he can walk alone, and his vision has improved. He had primary syphilis in 1861. His family history is good.

State when Admitted.—He was very much emaciated. His muscles were considerably wasted. His superficial veins were unduly marked. His face was sallow. There was an impetiginous rash about the scalp, and some old scars. The conjunctivæ were injected. Right Eye: The pupil was of natural size, and reacted but little to light. The media were clear. The disc was normal. The choroid presented numerous pigmentations and patches of atrophy, such as occur in choroido-retinitis. Left Eye: The pupil was dilated, and perfectly fixed. The media were clear. The disc was well defined, except a small part of the apparent inner border. The general colour of the disc was healthy. The choroid was atrophied, bearing the signs of past choroido-retinitis. There was insufficiency of the external rectus of the left eye, not amounting to actual paralysis, giving rise to diplopia. Upon directing the eyes upwards, marked internal strabismus occurs in the left eye; and this also occurs when the eyes are directed downwards. In the ordinary horizontal movements of the eyes a squint is only occasionally present. With the right eye the patient could read Snellen's No. 30 test-type at twenty feet. The vision of the left eye is slightly less. Hearing: On the right side the patient can hear a watch at eight inches; on the left he can only hear it when in actual contact. Examination with an otoscope showed the membrana tympani to be bluish, clear, semi-transparent, with triangular reflection of light, and perfectly intact. Mouth: The patient cannot whistle, but this seems to be owing to dyspnœa. The tongue is protruded towards the right side, and a peculiar fibrillary tremulousness of the right half is always present when it is put out. The sense of taste is deficient, the patient complaining that he does not know one kind of food from another except by looking at it. The following tests were adopted:—

Anterior Portion of Tongue.

Test.	Right Side.	Left Side.
Salt	*nil.*	*nil.*
Sugar	*nil.*	*nil.*
Acetic acid	*nil.*	*nil.*
Ice	felt warm.	felt cold (slightly).
Hot spoon	felt cold.	felt warm.

Posterior Portion of Tongue.

Salt	*nil.*	very faint salt.
Sugar	?	very faint sugar.
Acetic acid	excessively faint.	very faint.

From these we gather that sense of taste was totally absent in those parts of the tongue not supplied by the glosso-pharyngeal nerves, and then only in that part supplied by the left nerve; for in testing the sense at the root of the tongue it was almost impossible to prevent substances placed on the right side from spreading a little, and being perceptible on the left side. It also would seem that common sensation on the right side of the tongue was perverted, and that the nervous supply to the muscular substance on that side was deficient. Sense of Smell: The alæ nasi were widely dilated.

Test.	Right Nostril.	Left Nostril.
Amyl nitrite	*nil.*	*nil.*
Ether	*nil.*	*nil?*
Acetic acid (fort.) . . .	felt like steam.	*nil.*

The Larynx: The patient could utter high-pitched and also low-pitched notes; but the high ones were cracked and sounded with difficulty. His general voice was husky and croaking. The fauces were fairly tolerant of the laryngoscopic mirror. The larynx generally was congested; the cords could be seen readily, and when he attempted to approximate them, they began to quiver, showing some deficiency in the power of the crico-arytænoidæi laterales and the arytænoidæi muscles. There was no ulceration.

The morning temperature on admission was 97·4°; the pulse 76, soft and regular; respirations 16. The thorax was bulged anteriorly, and expanded but little with inspiration; the interspaces were distinctly seen; the vocal vibrations normal. The percussion-note was higher pitched at left than at right apex; the respiratory murmur was feeble, and accompanied by rhonchus and sibilus. The heart's apex-beat was one inch external to the nipple; there was no cardiac murmur. The patient had a hoarse, croaking cough, with no expectoration. He slept well at night; his appetite was good, and his bowels regular. There was considerable loss of power in his limbs, without loss of sensation.

He complained chiefly of dyspnœa on the slightest exertion, producing a sensation of strangling. He referred all his pain to his throat. He had no aphasia, no agraphia. His memory was good, and his intellect clear. Common sensation was not affected.

August 11.—Ordered full diet, with one pint of milk. Potassii iodidi gr. x. ter die.

14th.—Ol. morr. ℥j. ter die.

21st.—General condition seems to have improved slightly. The dose of cod-liver oil was increased to two ounces.

27th.—He says that he has been subject to diplopia since December, 1874. There seems to be slight deficiency in the power of the muscles of the face. His general condition otherwise remains the same. He complains of attacks of constriction at the throat.

September 1.—During the night, while asleep, he had two attacks of constriction at the chest, giving rise to a sense of strangulation. He says that he never tastes the food he eats. There is no paralysis or loss of muscular sense in his lower extremities, but they are much emaciated. The iodide of potassium to be increased to fifteen grains.

4th.—Complains of having shivered yesterday afternoon. There is always an evening rise in his temperature. At 10 a.m., temperature 99·2°; at 10 p.m., temperature 101·2°. After watching him for a considerable time during sleep, the cause of his nocturnal attacks of dyspnœa was cleared up, as they appeared to depend upon accumulation of saliva in the pharynx, due in part to deficiency in the power of deglutition. Laryngoscopic examination showed the mucous membrane around the glottis to be congested and swollen. [Query: Had the iodide of potassium anything to do with his condition?]

6th.—Temperature 98·4°; pulse 84, very small and soft. There seems to be more marked drooping of the right eyelid. Vomited during the evening. Woke this morning sweating profusely. He experiences considerable difficulty in swallowing solid food. Ordered spoon diet with two ounces of brandy.

8th.—Temperature 96·8°; pulse 102. Vomited again yesterday afternoon. 10 p.m.: Complains of throbbing pain in the vertex of his head on the left side; complained of nausea during the evening. Temperature 99·5°; pulse 120.

9th.—10 a.m.: Temperature 97·6°; pulse 78. Complains of heaviness in his head and confused vision. 10 p.m.: Has pain over the left temple; has complained of nausea all evening, but has vomited but little. Temperature 101°.

14th.—10.30 a.m.: Temperature 96·4°; pulse 96. His dyspnœa varies considerably from time to time. 10 p.m.: Temperature 100·4°; pulse 96. Slight fibrillary tremor in the muscles generally. He complained of feeling cold, and shivering about the neck, chest, and arms; but in his lower extremities he experienced none of these sensations.

16th.—10.30 a.m.: Temperature 96·6°; pulse 88, very small. He was weighed, and found to be 7 st. 8 lbs. 8 oz. He stated that he had been weighed at Netley, in January, 1875, and was then 6 st. 8 lbs.

17th.—He left the hospital, his general condition almost the same as when he was admitted.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 10, 1877.

VACCINATION AND ERYSIPELAS.

There has recently been issued by the Local Government Board the report of an investigation conducted by Mr. John Netten Radcliffe, which would at all times demand attention, but which is of special importance at the present moment. We all know the labour bestowed by Mr. Radcliffe on any matter to which his attention is directed. We know, moreover, the scrupulous care and clearness with which his conclusions are drawn; and even when we differ from these conclusions, we know we may fully rely on his facts. How the inquiry came to be undertaken there is no plain evidence in the report to show; but the substance of it seems to convey the impression that the investigation was ordered in consequence of a report of one of the vaccination inspectors. If we are correct in our surmise, it goes far to prove the value and importance of such officials, and of the sound judgment which caused their appointment. Unfortunately, here our commendatory remarks must cease, for the history of the outbreak which led to the investigation is neither enticing, nor satisfactory food for reflection. Even when we come to look for the facts necessary for the formation of a sound judgment, we are constantly piqued to find, the words "about," "probably,"—for, as Mr. Radcliffe says, "the register of public vaccination has not been kept in a manner to be relied on, and Dr. Wright has no record of the

events about to be described. . . . His memory of the different occurrences is very imperfect." Thus, we are introduced to Dr. Thomas Bell Wright, of Walkeringham, and public vaccinator for the Misterton district of the Gainsborough Union in Lincolnshire.

Next follows a history, brief and instructive, but not satisfactory. "About" the end of September last year Dr. Wright vaccinated five children with lymph "probably" obtained from the National Vaccine Establishment in the shape of dry "points." This succeeded in one child only, by name Burdon. The vesicles formed were described as small and plump, and from these, as far as can be made out, fifteen children were vaccinated, the vaccine matter being taken off on points. And again, "there is reason to believe" that one other child was vaccinated direct from Burdon's arm, and by means of a charged lancet, also charged from Burdon, yet another. The points used were old points, which had been cleansed by steeping in hot water and afterwards rubbing with a dry cloth. Taking it for granted—as so much, unfortunately, in this inquiry seems of necessity to have been taken—that the children were vaccinated from Burdon, the vaccination appears to have succeeded to a greater or less degree in twelve instances; in one the result was spurious, in one abortive, and in two unsuccessful. But now comes the astounding fact that in eleven of the successful cases, and in the spurious case, erysipelas, sometimes fatal, followed the vaccination. The date of the appearance of this dangerous and fatal malady varied from the sixth day after vaccination to the twenty-ninth, and in certain of the cases the connexion between the two might readily have been overlooked had it not been for the fatal connecting link of vaccination from one common source.

The first case mentioned in the report is that of a child named Henderson, aged five months. This was the child vaccinated directly from Burdon's arm after a good deal of lymph had been extracted on points from the vaccine vesicles. The vaccination succeeded, but as the pocks were dying away the arm became tender, erysipelas showed itself, and the child died in six days.

The second child was vaccinated, as far as can be made out, by means of the charged lancet already spoken of. Here, too, the vaccination succeeded, and lymph to be used elsewhere was withdrawn from the arm—how much, Dr. Wright was unable to say. The night after the opening of the vesicles the child became ill; severe general symptoms set in; and, nine days after, the child died. In the third case the child was two months and a half old. She was vaccinated, as far as can be made out, with lymph from the child Burdon. The day after the vaccination, redness appeared about the spots, and this gradually increased. The pocks did not appear normal; and when accidentally the tops were rubbed off, a reddish-coloured fluid is said to have been discharged from the sores. The whole body became by degrees affected, and death ensued twenty-five days after vaccination. In the fourth case there were some constitutional symptoms; but after vaccination the child was not seen for three weeks, and subsequently recovered. In the fifth case, pus formed when the scabs came off, and the child was so ill that there was little hope of its life. In the sixth case the vaccination was ineffectual. In the seventh, vaccination was successful; on the eighteenth day after, the child became ill; the arm was red and tender; and death took place in twenty-four hours. This child had, however, been somewhat exposed two days before being thus taken ill. Its brother seems to have had a small sore inoculated with the discharge from the vaccine-pocks; illness followed, the thumb affected suppurated, but no further mischance resulted. Thus we might go on if it served any useful purpose, but that can hardly be the case; and the full details are readily attainable in the report. In all, as we have said, sixteen children were vaccinated; in eleven, erysipelas or one of its congeners followed; and in six cases the end was death.

Twelve children were vaccinated by Dr. Wright with lymph presumably other than that obtained from Burdon, and one child when vaccination had failed was revaccinated. Of these, eleven might be called more or less successful as far as vaccination was concerned; but in five erysipelas or onlargement of the axillary glands, with or without abscess, followed.

Such a series of cases cannot fail to strike the most casual observer. First, there is vaccination of an infant with Government lymph. Everything went on well; the child never was ill. But the lymph taken from this child seems to have been, either by virtue of something in itself or in something communicated to it, to have acquired most pestiferous characters. Mr. Radcliffe, as a careful investigator, is duly observant of any insanitary conditions attaching to the abodes of the infants affected. These seem to have been in many instances bad enough; but still it was only the newly vaccinated children which were thus affected with erysipelatous disease. For though there was erysipelas in the neighbourhood in at least two cases, there is no evidence of direct contagion until the medium of Dr. Wright is invoked. One of these cases he attended, but not the other. At all events, we fear that there can be but little doubt that he was, directly or indirectly, the means of propagating the mischief, and in carrying it from child to child when once the malady was set agoing. In this belief we cannot but be confirmed by the following extract taken from the report itself:—

"The way in which the public vaccination had been carried on was altogether at variance with the instructions of the public vaccinator. The very important instruction to vaccinate, as far as possible, with liquid lymph direct from arm to arm was systematically disregarded. With respect to the mode of operating, neither Dr. Beard nor myself had the opportunity of witnessing Dr. Wright perform vaccination, but we were enabled to satisfy ourselves that in several of the details connected therewith he was reprehensibly careless. The lancets he was accustomed to use, when seen by Dr. Beard at the beginning of the inquiry, were rusty, and when they were seen by me at a later date, though they had been partially cleaned and apparently sharpened on some coarse-grained material, I found them dirty, both blades and handles, and in a state unfit for the performance of vaccination. Some 'points' which he produced for examination can only be described as filthy. Again, it appeared that Dr. Wright had the habit of carrying, mixed in the same packet, vaccine 'points' which he had recently used, and unused charged vaccine 'points.' In a packet of this sort Dr. Beard and I found two used 'points' smeared with blood at the tips, mixed with a number of unused charged 'points.' Such carelessness in regard to the performance of a delicate operation is a constant source of danger, and when it exists, if the vaccinator in the course of his medical and surgical practice should have been exposed to the infection of erysipelas, it is obvious that there might be opportunity for his infecting his lancets or 'points,' or the lymph with which one or both might be charged, in his manipulation of them. In the present case, although no suspicion of infection could attach to the lymph itself, as taken from the child Burdon (now, as throughout the whole course of vaccination, in excellent health), it was an important question whether the lymph obtained from that child might not have become infected while it was being removed from the pocks, in the process of charging the 'points,' or of its removal on the lancet. There was, of course, the further question whether, in the hands of a vaccinator habitually not careful, the lymph, which in most cases was not used till several days after it was taken, might not, by being carried about in his pocket during the interval, or by being otherwise improperly kept, have become spoilt."

Such a history is both lamentable and disgraceful. Dr.

Wright cannot be acquitted of the grossest negligence; and, were it only as a warning to others, the case should not be allowed to end here. The dangers surrounding the practice of vaccination are already sufficiently great; the difficulties attached to the whole subject are already sufficiently troublesome. Sheer carelessness should not be permitted to aggravate public feeling on the matter with impunity.

VISCERAL SYPHILIS AT THE PATHOLOGICAL SOCIETY.—No. II.

The discussion on visceral syphilis was resumed on Tuesday, the 6th, before a very full meeting. Before the commencement of the discussion an exhibition of preparations showing the microscopic appearances found in visceral syphilis took place; this included specimens of arterial disease, and also of so-called syphilitic disease of the lungs. There were some features common to almost all the specimens—namely, vascularity and high organisation of the new growths,—features on which considerable stress was laid both by Dr. Greenfield and Dr. Goodhart. In this we have marked contrast with the appearances found in tubercular deposits.

Dr. Buzzard showed some cerebral arteries; in these there was new growth external to the muscular coat, consisting of a fibro-nucleated tissue. The muscular coat itself was granular; while internal to the latter there was a new growth similar to the first described, but more fibrous. This was owing, probably, to its older formation. The changes coincided for the most part with those which Dr. Greenfield described at the last meeting.

Dr. Davidson, of Liverpool, showed sections of a hard chancre, and also of a cerebral artery, but not from the same subject. The new growths in these two cases were identical in their microscopical characters, thus disposing of the belief that tertiary syphilis is but a sequela of secondary. Dr. Davidson's specimens were among the most suggestive and important of any that had been exhibited, and his object in bringing them forward was to endeavour to show that the new growth was identical with an organising thrombus; the thrombus having been formed by the narrowing of the vessel by the growth in its outer coat. This was an entirely new view of the nature of these new growths, which otherwise corresponded to those shown by Dr. Barlow, Dr. Greenfield, and others; and the latter gentleman, in reply to the President, explained his own belief that these specimens of Dr. Davidson could bear another explanation than that given by him. Dr. Greenfield believed that the changes in the artery had been set up by the presence and irritation of a thrombus, and did resemble, no doubt, those which we now know as Heubner's changes; but whereas in syphilis the change began outside the lumen of the vessel, and gradually grew into it, those of thrombosis began *in* the channel of the vessel, and gave rise to changes *without* it—that is, in the vascular walls. This is, of course, an important question, and one which cannot be settled by the study of a single case, still less by the examination of a single specimen. If would seem to us possible, by comparing the amount of change outside the vessel with that which is found within the thrombus, to arrive at some definite conclusions; and if the microscope fails to help us, we must then follow Mr. Hutchinson's advice, and call in clinical observation to our help. From what we saw of Dr. Davidson's specimens, we are not inclined to accept his views. It must be obvious that the growth in the outer coat would have to be considerable in order to close the calibre of the vessel; while a very small amount in the intima, comparatively speaking, would suffice to interfere with the circulation—thus the organisation in the new growth of the outer coat and in the thrombus would vary considerably, whereas in Heubner's case the internal portion of the new growth was more highly organised than that in the tunica adventitia.

Mr. Hutchinson contributed some very interesting cases of syphilis of the choroid. He spoke from a clinical rather than from a microscopical point of view, but managed to show an intimate knowledgo of all the researches that had been made during the past few years. He offered some valuable suggestions for a wider and more extended field of observation, more especially as to the condition of the veins and lymphatics in syphilic patients. He believed that such persons were more liable to inflammatory complications in veins and varices than others, and he detailed cases bearing out this view. He recommended, too, the abolition of the word "cerebral" syphilis for more precise and accurate terms; for with our knowledge of the distribution of the cerebral vessels, and of local function of certain parts of the brain, we ought to be able to localise arterial disease. Regarding the sympathetic ganglia, the vaso-motor centres, we as yet know nothing whatever. He himself had, however, had cases in which he had been able to localise disease in the lenticular ganglion. The symptoms were absolute paralysis of the iris and of accommodation. If these symptoms were present without any implication of other functions, it was fair to assume that this ganglion (which supplies the ciliary muscles, the radiating and the circular fibres of the iris) was diseased. He had seen such cases in practice, and the patients had all had syphilis. Mr. Hutchinson alluded to the presence of gummata on the choroid—they occur early in acquired syphilis, but late in congenital; while with keratitis it is just the opposite.

Dr. Goodhart showed specimens of syphilitic phthisis. Microscopical examination showed a large amount of interstitial change, a fibro-nuclear growth in the alveolar walls, and around the smallest bronchi; but the arteries were not affected, except by the general thickening of their external coat. The extreme vascularity of the new growth was a feature of great importance, and accounted, he thought, for the hæmoptysis which occurs in these cases. The meeting then adjourned.

THE OBSTETRICAL SOCIETY.

The admirable address delivered to the Obstetrical Society, on Wednesday last, by their new President, Dr. West, contains counsel and warning that may with great advantage be taken to heart by numbers of the profession besides the Fellows of the Obstetrical Society. After paying a well-merited compliment to the value and excellence of the contents of the seventeen volumes of the *Transactions* of the Society, Dr. West points out that the great majority of the papers are devoted to obstetrics strictly speaking, or to the disorders of the pregnant or puerperal state, some to the diseases of the non-parturient woman, and only a very few to the diseases of children; and, further, that of the papers devoted to the diseases of women, all concern the local diseases of the sexual organs. Now, though the work done has been well done, Dr. West suggests that the view of the Society ought to embrace a wider horizon, and that its members should be careful to avoid taking the position of mere specialists, but should aim rather at that of "sound physicians and able surgeons, who for the public good have superadded to their general knowledge a particular acquaintance with certain departments of our art." Some useful suggestions are offered with reference to the future work of the Society—as the consideration of the comparative advantages of the rare and the frequent use of the forceps in obstetric practice; the question of the production of albuminuria by puerperal convulsions, as well as of puerperal convulsions by albuminous urine; and the powers and use of transfusion of blood as a remedial measure. But the most valuable part of the address is, we think, the weighty warning against the evils of specialism. The risk of becoming specialists, and specialists of the narrowest and most mischievous type, is perhaps

particularly great with men who devote themselves to obstetric practice; and this is so generally recognised that it will not seem extraordinary to find that Dr. West reminds his hearers that the source of hysteria, epilepsy, spinal hyperæsthesia, and other disorders of the female system, "is far more complex than a mere displacement of the uterus, or a change in its form, or an abrasion of the edges of its orifice." Dr. West has never himself incurred the least imputation of being only a specialist, yet he says, "I have often felt that I would give almost anything for a six months' clinical clerkship and dressership in one of our general hospitals; or for the same time to spend in looking after what is called general practice,—which, if rightly used, is the most improving of all schools, since in it there is an increasing demand, not for one kind of knowledge, but for all." The danger of exaggerating the importance of any special knowledge, or special skill, that a man possesses in a greater degree than most other members of the profession, is great, and may become, no doubt, very mischievous; and therefore Dr. West, addressing the Fellows of the Obstetrical Society, spoke well and wisely when he said—"I am anxious, both for the growth of our own moral and mental stature, as well as for the progress of our art, that we should not so give ourselves up to mere detail, however interesting or important, as to lose sight of the broad principles of medicine and surgery." But the warnings and the advice he gives apply very widely; and many a practitioner even who would not allow that he is a specialist, may learn a valuable lesson from Dr. West's experience and wisdom, and his thoughtful and suggestive address.

THE WEEK.

TOPICS OF THE DAY.

A NOVEL and important point under the Vaccination Acts was recently raised in an appeal case, which was heard in the Exchequer Division of the Supreme Court of Judicature. An information was laid by the appellant, as public vaccinator, before the magistrates at Huddersfield, on June 2, 1876, against the respondent, for that the respondent had a child which had not been successfully vaccinated. Upon the hearing it was proved, and admitted by the respondent, that his child had already had small-pox, and the magistrates discharged the summons, holding that the Vaccination Acts did not require that a certificate of the child having had small-pox should be transmitted. The appellant then further contended that, though the respondent had not been found guilty of the offence of not taking, or causing to be taken, his child to be vaccinated, yet he had been guilty of an offence in not transmitting a certificate of the fact according to Form (C) in the schedule. Thereupon this case was stated, and the question for the Court was whether the justices were right in deciding that the Vaccination Acts did not impose any penalty on persons who fail to transmit to the vaccination officer a certificate of a child having had small-pox. The case was fully argued by counsel; Mr. Poland, for the respondent, arguing that his client could not be convicted for not sending a certificate which he did not possess—viz., that his child was insusceptible. He possessed one which certified that the child had had the disease; but the Acts did not require this to be sent. Baron Cleasby, in giving judgment, said he concluded reluctantly in favour of the respondent, but there was undoubtedly an imperfection in the legislation. Section 7, and the meaning of the words, only deals with insusceptibility. A certificate of that is to be delivered by the parent of the child to the officer, and failure to comply entails a penalty. This case was peculiar in respect that the former Act treated insusceptibility and the fact of having had the disease on the same footing; but persons of skill might have difficulty in signing such a certificate, and saying that because a child had had it once, therefore it would never have the disease again. You cannot punish a man because having had one thing he did not transmit another; therefore the magistrate's decision was right. Baron Pollock agreed in this view, and the appeal was accordingly dismissed.

Miss Grace Sandford has put forward an appeal on behalf of the National Hospital for Incurables, Cowley St. John, near Oxford. The Hospital possesses two handsome wards, each capable of accommodating five patients, and already partly furnished. The peculiarity of the institution is, that it is intended for the middle-classes of society, and not for the poor, each inmate being bound to contribute £50 per annum towards his maintenance. Patients are also to be admitted without any canvass by votes, a Medical Board selecting the most deserving from those who apply, weighing the cases entirely upon their merits. The site of the Hospital has been given by one of the trustees, and Miss Sandford has raised over £4000 for its establishment by her own efforts. It is further stated that, as 1 in every 1000 of our population is an incurable, these hospitals should be encouraged in every three or four counties throughout the kingdom.

The report, which we recently noticed, made by Mr. R. Rawlinson and Mr. C. S. Read on the modes of treating town sewage, comments upon the fact that the late Dr. Parkes made exhaustive experiments with disinfectants, and found that the chemicals for the disinfection of one gallon of excreta would cost about threepence, so that the disinfection of London sewage alone would entail an expenditure of more than £4,000,000 sterling per annum. These figures show, not only the extravagance of disinfectants, but that small quantities of them poured down sinks, closets, drains, and sewers can practically have no beneficial effect. Foul drains and sewers can only be disinfected by complete and constant flushing with water, and vestries are only wasting parish rates when they send round carbolic acid to be poured down street gullies in small quantities. The principal sphere of usefulness for disinfectants is to be found in hospitals and sick-rooms, where they may be employed with advantage.

In opposition to those who are denouncing the unseasonable weather experienced during the present winter, the Rev. B. Smith, writing from Crayford Rectory, Kent, says: "In proof of the healthiness of the last few weeks I beg to state that the burial-register of this parish for the month of January does not record a single interment of a person dying in the parish, an event which has no parallel since the year 1824, when the population was probably not a third of what it is now—about 4000."

As was rumoured some time since in reference to changes about to take place in the Veterinary Department of the Privy Council Office, the post of Secretary, vacated by Dr. Williams, will not be filled up. Professor Brown has been appointed Professional Officer of the Department, and it is expected that he will deal with all questions relating to disease, and to the inspection and transit of animals under the immediate direction of the Privy Council.

An influential deputation last week waited upon the Home Secretary to present a petition signed by a large number of persons affected by the Artisans' Dwellings Act, praying the intervention of the Government to protect them from wholesale exclusion from their homes during the rebuilding of dwellings on the site whereon their houses stood, and requesting that temporary provision be made for their habitation after the demolition of their homes. The deputation was introduced by Mr. McCullagh Torrens, M.P., who, in alluding to the new street about to be made from St. Martin's Church to Holborn, pointed out that it would run though neighbourhoods inhabited by very poor people, yet no provision was made for housing the persons who would be turned out.

He admitted the healthful advantages to be derived from the construction of such a thoroughfare, but he wanted to see a clause introduced into the Bill which would be submitted to Parliament for the necessary authority by the Board of Works, providing for that class of the public on whose behalf the deputation appeared. In previous cases it had been stated that ample provision would be made for those turned out of their homes, but he was prepared to say that, as far as Finsbury was concerned, there had not been since 1872 one person turned out for improvements who had been provided with a dwelling. The Home Secretary and Sir H. Selwin-Ibbetson promised that the subject should have full attention, and Mr. Cross expressed his intention of conferring with the Board of Works on this matter. In all the schemes of metropolitan improvements which were coming on this year, one of the points to which special attention would be directed was that people should not be turned out wholesale, but that they should be provided for piece by piece, the new buildings designed to be erected being constructed by degrees.

It is to be hoped that Colonel Ponsonby Cox, on the part of the Local Government Board, will be able to arrive at some definite solution of the Thames Valley drainage difficulties. But the more the matter is ventilated, the great appears the divergence of opinions. Thus, during the past week the Kingston Rural Sanitary Authority received a deputation from the parish of Thames Ditton, who said they were opposed to a combination of districts for sewage purposes, believing that a separate system was both practicable and preferable. They surmised that had Thames Ditton, like Esher, taken time by the forelock and prepared a scheme which they could lay before Colonel Cox at the adjourned inquiry next week, they would no doubt be excluded from the proposed united district. It was therefore determined that when the Government Inspector next sat, any idea of combination should be strenuously opposed. Almost at the same time, at a special meeting of the Vestry of Barnes, the following resolution was put and carried unanimously:—"That the Vestry of Barnes desires hereby to reiterate the opinion expressed by resolutions passed in 1872 and 1874, that it is not desirable to establish local drainage works, but that it is their wish to be united with other districts in a combination, which may be sanctioned by the Local Government Board."

The question of the metropolitan water-supply seems suddenly to have taken a foremost position amongst the topics of the day. We last week recorded the reception by the Home Secretary of a deputation which sought to obtain from Mr. Cross a promise that Government would support a Bill for the purchase by the State of the present water companies' interests; and last week the subject was brought before the Metropolitan Board of Works at their meeting, when the following resolution was put, and, after some discussion, carried:—"That the whole question of the water-supply of London be referred to the Works and General Purposes Committee, to consider and report on the advisability of introducing a Bill into Parliament authorising the Board to purchase the interests of the several water companies." It must long since have become evident to the most casual observer that the water-supply of the metropolis was on an unsatisfactory footing. The time has not only arrived, but long since passed, when the supply of one of the great necessaries of life should no longer be administered by a corporation as a means of gaining large profits from the community. Under Government management the public may look for increased accommodation at a reduced rate, whilst the absence of motive in accumulating large profits for the benefit of a few shareholders will enable the Board of Works to increase the present facilities for the extinction of fires, and also to provide a large quantity of water for the efficient flushing of sewers in dry weather. The matter, having now been seriously taken up, should not be allowed to sleep until some definite action is taken.

It is reported that the Committee appointed to investigate the sanitary condition of the War Office buildings have concluded their labours, and that the report will, in the first instance, be presented to the Queen, the Committee having been appointed at her Majesty's request. We presume that eventually the suggestions of the Committee will be made public, and some curiosity is manifested to ascertain whether the inquiries of these gentlemen have resulted in what is generally thought to be the only solution of the difficulty, namely, the total demolition of the present series of old houses, and the construction on their site of an appropriate block of buildings for the purpose required.

The decision in the Common Pleas Division of the High Court of Justice, which was given last week in the case of the Tunbridge Wells Local Board of Commissioners *v.* Dr. James Bisshopp, must be received with satisfaction by all right-thinking persons. The local magistrates had refused to convict Dr. Bisshopp for unlawfully and wilfully exposing a patient suffering from scarlet fever, and the appellants, being dissatisfied with the decision, applied to the Bench to state a case, which was complied with. The evidence showed that, through some crotchet of the assistant-clerk to the sub-inspector of nuisances, who refused the certificate of the respondent, showing that the patient was suffering from an infectious disease, and should be at once admitted to the temporary hospital for isolation, the man was compelled to wander about the streets of the town, and finally return to his lodgings to sleep. The next day Dr. Bisshopp himself walked with the man to the house of the Chairman of the Local Board, and obtained the necessary order. This act of walking with the patient was endeavoured to be construed into having "charge" of him, but Justices Grove and Denman ridiculed such an idea, and the appeal was accordingly dismissed with costs.

The latest reports state that nearly 2000 houses in Richmond have now been connected to the mains of the new waterworks, leaving only 200 or 300 more connexions to be made. The Local Board of Wimbledon, which is supplied at present by the Southwark and Vauxhall Water Company, is taking steps to secure a water-supply of its own from artesian wells. Mr. Homersham, C.E., has been consulted, and has given a decided opinion that a pure and ample water-supply could be obtained from wells to be sunk at Wallington at an expense of about £55,000.

THE ARMY MEDICAL SCHOOL.

The thirty-third session of the Army Medical School was brought to a close on the 5th inst., in presence of numerous distinguished officers and gentlemen, among whom were Sir Garnet Wolseley, G.C.M.G., K.C.B., Sir William M. Muir, K.C.B., Sir Joseph Fayrer, K.C.S.I., and others, in addition to the staff of the School and of the Royal Victoria Hospital. Professor Maclean, C.B., announced the results of the examinations, which decided the final positions of the candidates for the three services, in which Mr. W. B. Allin took the first place for the Army Medical Department, Mr. J. D. Henwood for the Royal Navy, and Dr. James Moorhead for the Indian Medical Service. Dr. Moorhead, having gained the highest number of marks, was awarded the Herbert Prize. The occasion was especially interesting, as the memorial medal in remembrance of the late Sir J. Ranald Martin, C.B. (two of whose sons were present among the visitors), was to be awarded for the first time. It having been decided that it should be given for proficiency in military medicine, a special paper was set, in addition to that forming part of the ordinary examination. Twenty-six gentlemen competed—namely, nine from each of the Army and Indian Services, and eight from

the Navy. Finally, the contest lay between Mr. Allin, of the Army, and Dr. Moorhead, of the Indian Service, and it was at last decided in favour of the latter by a majority of only twenty marks out of 1075 (the possible maximum being 1100). Sir Garnet Wolseley, in presenting the medal to Dr. Moorhead, addressed a few words to the assembled candidates, in which he expressed his regret that (in the absence of Lord Salisbury) the pressure of public business prevented Lord George Hamilton or Sir Louis Malet from coming down to represent the India Office, at the same time stating that it afforded him great pleasure to have the opportunity of doing so in their stead. In advising them on their future course he counselled them to start with a determination to do the work of their respective posts with thoroughness and assiduity, however irksome or unpleasant some of it might be. He himself had entered the Service nearly a quarter of a century ago, with a firm determination to succeed in it if possible, and to his adhering to this resolution he attributed the fact that he had risen to honour and distinction. Opportunities nearly always came to those who honestly desired to use them, and if they did not come, good men could make them for themselves. Many men, however, started in life with good abilities and good resolutions, but lacked the stability to adhere to the one, and make use of the other, the consequence of which was that they degenerated into grumblers and men with a grievance, who cursed their luck, instead of themselves, who were the real cause of failure. He thought that no profession provided so much opportunity for intellectual enjoyment as the medical, and he could conceive of no purer pleasure than looking back upon the amount of pain and suffering one had been enabled to alleviate. But there was something higher still, and that was the prevention of disease—sanitary science—which was now the great question of the day. To no one did sanitary science owe more than to the late Sir Ranald Martin, who had been one of its early and energetic pioneers. Both in India and at home, indeed over the whole world, men owed a deep debt of gratitude to him, who was one of the finest types of a soldier-doctor, and who had done so much for the prevention of disease and suffering. He had therefore great pleasure in being called upon to present the Martin Memorial Medal for the first time. In conclusion, he wished the candidates every success in their future career. The proceedings terminated, the distinguished party retired to lunch in the mess-room.

THE PROTECTIVE RESULTS OF REVACCINATION.

The following facts should be considered sufficient to establish the importance of revaccination in the minds of those few who may still have any lurking doubts on the subject. Dr. Gayton, Medical Superintendent of the Small-pox Hospital at Homerton, reports under date January 30 last:—"During the present epidemic fifty-six fresh servants have been engaged here; of these twenty-seven had previously suffered from small-pox, and twenty-eight were revaccinated on taking office. One who was unfortunately not reported to me, and who had neither been vaccinated since infancy nor previously had small-pox, speedily contracted it." With this exception our staff has enjoyed perfect immunity." Dr. Collie, Medical Superintendent of the Fever Hospital at Homerton (now devoted to small-pox patients), says, in his report dated January 31 last—"About twenty-five persons in the service of this Asylum have been revaccinated during the present epidemic. None of these have contracted small-pox." This recent testimony confirms the report which was presented by a Committee to the Metropolitan District Asylum Board in 1872, in which it was stated that "the necessity of revaccination, when the protective power of the primary vaccination has to a great extent passed away, cannot be too strongly urged. No greater argument to prove the efficacy of this precaution can be adduced than the fact that of upwards of 14,800 cases received into the hospitals, only four well-authenticated cases were treated in which revaccination had been properly performed, and these were light attacks. Further, conclusive evidence is afforded by the fact that all the nurses and servants of the hospitals, at one time to the number of upwards of 300, who were hourly brought into contact with the disease, who constantly breathed its atmosphere, and than whom none could be more exposed to its contagion, have, with but few exceptions, enjoyed complete immunity from its attacks. These exceptions were cases of nurses or servants whose revaccination, in the pressure of the epidemic, was overlooked, and who speedily took the disease; and one case was that of a nurse who, having had small-pox previously, was not revaccinated, and took the disease a second time." Revaccination is to the general public what the safety-lamp is to the miner; it affords a protection which only exceptional circumstances render inefficacious.

THE INQUIRY AT THE HOMERTON FEVER HOSPITAL.

We have received the following letter from Dr. Collie with regard to a case which created some little stir at the time. Our readers will hold with us that it completely exonerates Dr. Collie from all blame whatsoever:—

"Homerton Fever Asylum,
"January 26, 1877.

"Dear Sir,—In reply to your letter of the 16th inst., enclosing for my observations the letter of the Local Government Board, the report of Dr. Bridges, and the letter of Mrs. Linklater, I will regard the subject to which it relates in two aspects—the medical and the administrative. Of the former I have but two observations to make—first, as regards the allegation of 'mis-statement' contained in the letter of the Board; and second, as regards Dr. Bridges' view that the patient should have been removed to the Small-pox Asylum. (1.) I beg to say that I have made no mis-statement. Margaret Sletter, while in the scarlet fever ward, showed symptoms which were correctly described by the name of purpura hæmorrhagica. Whether or not the purpura was related to undeveloped small-pox is a matter upon which there was properly hesitation in forming an opinion. Accordingly the symptom was recorded, and the disease which perhaps underlay it was not recorded. I myself judged that the purpura was related to small-pox, and had the girl isolated, but did not put small-pox on the card until I could have more information. Both my colleagues with whom I took counsel on the case thought that the disease was probably not small-pox, and it was one of those colleagues who wrote the words 'purpura hæmorrhagica' on the bed-paper, and entered the death in the death-book. Under these circumstances, there was, I submit, no mis-statement. If I did not succeed in making these matters plain to Dr. Bridges at his inquiry, it was because of the manner in which the inquiry was conducted. (2.) In the belief that the patient was beginning to suffer from small-pox, I placed her in the special isolation-ward of the Asylum, then containing certain small-pox cases. I did not send her to the Small-pox Asylum, because she was desquamating from scarlet fever, and because, by sending her there, I should have put the patients of that Asylum in danger of contracting scarlet fever. The isolation-ward has been provided, and the same use has before been made of it with the full concurrence of the Committee.

"Of the administrative aspect of the subject I have to observe that it is not for me to comment on that part of Dr. Bridges' report which relates to the non-delivery and to the opening of letters, nor to the distress which resulted from defects in the mode of their distribution, inasmuch as Dr. Bridges admits that the arrangements under this head in nowise fall within my province. As regards, however, the non-receipt of news of Margaret Sletter by her friends, I think it right to say that she had every facility for herself writing to them, and that I myself on one occasion remonstrated with her for not doing so.

"As regards Mr. Linklater's request for an interview, it must be remembered that, in the interests of the patients themselves, visits to patients (except in the case of dangerous illness) were prohibited some time in October last by Dr. McCombie, medical superintendent for the time being, in

consequence of there being reason to believe that visitors had introduced small-pox into the Asylum. This prohibition had the approval of the Committee on the 25th of the same month. I could not, therefore, without some valid reason, set their instructions aside by permitting an interview with Margaret Sletter during her convalescence from scarlatina on the bare application for it. As matter of fact, an interview was granted when special reason for it was shown, and it was granted at the time and in the manner that it was asked for, I myself seeing that needful precautions were observed.

"In conclusion, I have to say that nobody can regret more than myself the circumstances attending Margaret Sletter's death; and especially, in view of these, I sincerely regret having seemed to give cause of offence to her friends. I trust, however, that I have made it plain that the judgment of the Local Government Board has been passed upon incomplete apprehension of the facts. For the rest, it will be enough that that Board has recognised the value of my services, and that I may rely on retaining the confidence of the managers.

"I am, dear Sir, yours faithfully, ALEX. COLLIE.

"W. F. Jebb, Esq., Clerk to the Metropolitan Asylums Board, 37, Norfolk-street, Strand, W."

MEDICAL SOCIETY OF LONDON.

ON Monday, the 29th ult., Wm. Adams, Esq., F.R.C.S., President, in the chair, Dr. Dowse read before the Medical Society of London a paper on Diphtheritic Paralysis. He spoke in reference to the history of this disease, its etiology, diagnosis, prognosis, treatment, and pathology. He collected from more recent authors their various opinions, and explained by numerous examples how insidious attacks of this form of paralysis really are. Sometimes it involves the muscles of the throat alone; at others merely the muscles regulating ocular accommodation are affected; whilst in some cases every muscle of the body is brought under its influence. Dr. Dowse said that in his experience it was impossible to state with any certainty in what patients paralysis was likely to supervene on an attack of diphtheria, and *vice versâ;* neither had he been able to trace in the constitution of patients any especial idiosyncrasy which rendered them more prone to the paralysing influence. He first spoke of the altered condition of blood in diphtheria, and the relationship of the paralysis to albuminuria, the periodicity of the paralysis, its nature in reference to motion and sensation, and the migratory character of the latter, which made it to resemble in some respects hysterical paralysis. He considered, although the disease was one which usually terminated favourably, that there were four remedies of great value in treatment—viz., nutrition, rest, the injection of strychnine, and the use of the galvanic continuous current. In bad cases he invariably fed the patient repeatedly through the day by means of the nasal tube. This gave what was of the highest importance—rest to the palsied muscles. From one-twelfth to one-sixth of a grain of strychnine was injected subcutaneously every day, and the continuous current applied to the spine and the palsied muscles. And lastly, Dr. Dowse spoke of the pathology of this disease. For his own part he quite agreed with MM. Charcot and Vulpian, that the paralysis was more or less reflex rather than central; that an advancing neuritis extended from the nerve periphery throughout its trunk. He thought the theory quite admissible in reference to the palatine muscles, and its extension would be accounted for by the direct anatomical connexion between the spheno-palatine, otic, and Gasserian ganglia.

SMALL-POX IN LONDON.

THE deaths from small-pox in London, which had been 79 and 86 in the two previous weeks, rose in the week ending Saturday, February 3, to 103, the highest weekly number since the commencement of the present epidemic, except that returned in the first week of January. The 103 included 53 certified as unvaccinated, and 14 as vaccinated; in the remaining 36 cases the medical certificates either did not furnish any information as to vaccination, or contained statements that the medical practitioner was unable to certify whether the deceased had or had not been vaccinated. The 103 deaths from small-pox included 36 in the Metropolitan Asylums Hospitals at Homerton, Stockwell, and Hampstead, 2 in the Highgate Small-pox Hospital, 2 in the North-street Infirmary, Poplar, 1 in the Whitechapel Workhouse, and 1 in the Mile-end Workhouse; the remaining 61, or 59 per cent. of the total cases, occurred in private dwellings. The proportion of deaths in private dwellings shows considerable increase upon that which has prevailed in any week since the disease became severely epidemic. After distributing the hospital cases, it appears that 13 of the deceased small-pox patients had resided in Hackney, 12 in Southwark (including 8 in St. George's), 9 in Pancras, 9 in Lambeth, 7 in St. George's, Hanover-square, 7 in Bow, 7 in Islington, 6 in Poplar, and 6 in Bethnal-green; in all, 11 belonged to the West, 32 to the North, 3 to the Central, 26 to the East, and 31 to the South groups of districts. The fatal cases showed a marked increase in North London, and were also more numerous in the West and East districts. The Metropolitan Asylum Hospitals contained 838 small-pox patients on Saturday last, against 873 and 830 in the two preceding weeks. These Hospitals contain accommodation for 1077, including 177 beds for convalescents at Limehouse; 239 new cases were admitted during the week.

HOSPITAL ELECTIONS AT LIVERPOOL.

WE have received the following exceedingly temperate letter from a member of the Committee of the Royal Infirmary, Liverpool. It well illustrates the view we tried to urge on both sides—the ready possibility of compromise. Let both sides appoint a committee to meet and consider the matters in dispute. They will not be long, we think, in coming to an agreement:—

"Sir,—I have read the article on hospital elections in your paper of the 3rd inst., and am induced to write to you, not from a wish to enter into a discussion of the question, but merely to say that the Committee of the Royal Infirmary (of which I am a member) have not proposed to 'assume' the responsibility. Their chairman at the late meeting especially disclaimed any such desire; for it is evident that the trustees alone by the laws are the parties to determine how elections shall be conducted. Recognising this, the question was left to the trustees, and on the part of the Committee no recommendation was put forward to influence a decision.

"The 'authorities' (if the Committee is meant by the term) have not 'proposed their ordinary committee as the future electoral body.' That might be the result; and, if so, the members must accept the responsibility or retire.

"I am sure, from the tenor of your article, you wish to consider this question with due impartiality; and if you will bear in mind that a third of the Committee retire each year, and the Medical Board can be represented by two of its members at all committee meetings, I think you will see there is every opportunity for correcting any abuse of any delegated authority, and every opportunity for the expression of the feeling of the profession on any subject.

"The relations between the Medical Board of the Royal Infirmary and the Committee have been so harmonious, that I am persuaded neither wishes the discussion of this question—upon which so much can be urged from opposite points of view—to be carried on otherwise than in a temperate manner."

The most important points, in our view, are that the electoral body should be representative and temporary—representative of all the bodies concerned in the government of the hospital and temporary inasmuch as certain of its members should be chosen solely for electoral purposes.

THE FOREIGN DIPLOMA QUESTION.

A CASE came before the Lord Chief Justice and Mr. Justice Mellor, in the Queen's Bench Division of the Supreme Court of Judicature, on Monday last, which raised the important question whether, under the present Medical Act, persons holding foreign diplomas only have the power to practise on

this country as medical men. The question had arisen thus:—The defendant practises as a general medical practitioner, having over the door of his shop or dispensary "Dr. Thornton, Member of the Eclectic Medical College, Pennsylvania," and then again, "Thornton, Eclectic Dispensary." Upon this he was charged before the local magistrates, under the 40th section of the Medical Act, 1858, with wilfully and falsely using a name—*i.e.*, the name of "Thornton, Dispensary," as implying that he was recognised by law as a practitioner in medicine. He produced before the magistrates certain documents purporting to be American diplomas, but there being no regular proof of their authenticity, they were rejected, and he was convicted and fined £10. The defendant now appealed against this decision, and filed an affidavit that he was prepared with proper proof of the diplomas. It was contended on the part of the defendant that the conviction could not be sustained, as, instead of wilfully and falsely representing himself to be a legally qualified practitioner, he represented himself as a foreign practitioner only, that being the plain and obvious meaning of the words over or upon his door. On the other hand, it was urged that the effect of the title "Dr. Thornton" was to represent that he was qualified in this country as a doctor of medicine; and after some discussion the Lord Chief Justice said that the question was one of great public importance, and should be decided upon a fuller statement of facts than took place at the first trial, and the case would be sent back for that purpose.

ARMY MEDICAL DEPARTMENT.

The following is a list of candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
1. Allin, W. B.	5360	18. Laffan, G.	3402
2. Ryan, M. R.	4896	19. Bourke, U. J.	3397
3. Reynolds, E. O.	4570	20. Robinson, R.	3146
4. Robbins, H. J.	4546	21. Lamprey, J. J.	3072
5. Morris, G. G.	4474	22. Allen, W. H.	3050
6. Hayes, A. E.	4333	23. Gunning, R. C.	3010
7. Williamson, J. F.	4270	24. Russell, G. M.	2945
8. Carey, J. T.	4236	25. Cotton, H.	2910
9. Rainsford, W. J.	4183	26. Hunt, J. P.	2893
10. Boulger, J.	4105	27. Peyton, J. L.	2882
11. Tuthill, P. B.	4015	28. Carleton, A. W.	2878
12. Boyd, T.	3930	29. Hughes, G. A.	2866
13. Johnston, P. H.	3896	30. Keith, A. C.	2861
14. Murchison, F.	3625	31. Brodie, J.	2685
15. Emerson, J. B.	3482	32. Eagar, F. G. L.	2662
16. Hewett, A.	3480	33. Large, B. W.	2478
17. Roche, E. A.	3477		

THE PUBLIC HEALTH.

Everyone knows that the month of January, this year, was unusually mild and wet. We learn that the mean temperature of that month at the Greenwich Observatory was 42·7°, exceeding the average temperature for the corresponding period in 105 years by 6·2°; and that an excess of temperature prevailed on twenty-eight days. On twenty-three of the thirty-one days of the month, rain was measured to the aggregate amount of 4·35 inches, while the average rainfall for January in sixty-one years was only 1·9 inches. In connexion with this the Registrar-General remarks:—"It is now well established that diseases of the respiratory organs are most fatal in winter, while those of the digestive organs prevail in summer; the differences of temperature in those seasons being very great. Now, with this winter weather rarely below the freezing-point, and 6·2° above the average, it appeared desirable to see how far the deaths from the two classes of diseases differed from their averages. To determine this, and the effect of the smaller range of temperature, the deaths from several classes of diseases during the first five weeks of the year were compared with their averages: the result is that diseases of the lungs were fatal in the five weeks to 1558 persons, the average being 2191; conversely, diarrhœa was fatal to 81 instead of the average 71; diseases of the liver and digestive organs were slightly more fatal than the average of the season. Deaths from diseases of the brain and the heart were below, from those of the kidney slightly above, the average."

SALICYLATE OF SODA IN DIABETES.

Dr. Müller-Warnek, Assistant-Physician in the Clinic of Professor Bartels at Kiel (*Berliner Klin. Wochenschrift*, 1877, Nos. 3 and 4), sums up the results of a prolonged and careful observation of two cases of diabetes which were treated with the above drug, as follows:—1. Salicylate of soda can completely remove the symptoms of diabetes mellitus, although its action does not always appear to be permanent. 2. The symptoms of diabetes disappear more rapidly the larger the dose that is administered, and the longer the drug is continued in any particular case. 3. In moderate daily doses (nine to ten grammes per diem) the initial influence of the salicylate upon the diabetic process appears to become gradually exhausted, whereas large daily doses (fourteen to sixteen grammes) exert an increasingly powerful effect upon it. 4. Salicylate of soda can be administered in large daily doses in chronic diabetes mellitus for a long period without any special disturbance of the general health, and if any symptoms of poisoning should occur, they rapidly and completely disappear if the remedy be discontinued for a short time. 5. Salicylate of soda appears to have only a slight irriting effect on the kidneys in diabetes, even after prolonged administration. Dr. Müller-Warnek gives full details of his cases in the article referred to. Attention was first called to the use of salicylate of soda in diabetes by Professor Ebstein, of Göttingen, in No. 24 of the *Berliner Klin. Wochenschrift*, 1876. In his cases the salicylate in doses of five to ten grammes per diem produced considerable diminution, and even at times complete disappearance of the sugar from the urine, and he found that still smaller doses maintained the good effect of the earlier large ones.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The fifth meeting of the twenty-first session of this Society was held at the Royal Kent Dispensary, Greenwich-road, on Friday evening, February 2; Dr. Thomas Creed, President, in the chair. Dr. Arthur Leared read a paper on "Flatulency: its Causes, Effects, and Treatment." The author pointed out that, as there is always gas in the intestines, flatulency must be regarded relatively. There are three possible sources of gas—viz., (1) atmosphere; (2) blood; (3) fermentation of food. The oxygen is derived from swallowed air, and is subsidiary to digestion. He opposed the idea of some writers, that nitrogen or any gas is evolved from the blood through the mucous membrane; and explained the sudden gaseous distension occurring in hysteria by irregular contraction of parts of the stomach and bowels from defective innervation. Fermentation is undoubtedly the chief cause of flatulency, but Dr. Leared considers common fermentation rare. From hydrogen being so largely evolved, he concluded that there was a fermentation peculiar to the gastro-intestinal tract. From long experience and observation, the author thought deficiency of gastric juice was seldom the cause of dyspepsia, seeing that in many cases of wasting diseases, and even during the last hours of life, there seems sufficient for digestion. In these cases the fault seemed to lie in the impaired peristaltic action of the stomach; the food lying quiescent, and the gastric juice being unable to convert it into chyme in a reasonable time, fermentation and gaseous distension ensued. In these cases strychnia was very valuable. In many cases of flatulence the power of expel-

ling gases is lost, owing to temporary paralysis, from over-distension, putting great stress on the muscular coats of the stomach and intestines. In these cases vegetable charcoal as a gas-absorbent acted admirably. As the dose, to be effective, must be large, and perhaps produce constipation, and possibly obstruction, the author recommends vegetable ivory charcoal, in hermetically sealed gelatine capsules (introduced by Dr. Leared some years ago to the profession), and finds them practically possessed of great gas-absorbing powers.

"COMPETITION" FOR ARMY MEDICAL APPOINTMENTS.

It will be remembered that at the first examination for commissions in the Medical Department of her Majesty's Army, after the publication of the new Army Medical Warrant, thirty-four candidates presented themselves to "compete" for fifty appointments, and thirty-three of the thirty-four were successful in the competition. To outsiders such results seemed discouraging; but, as we informed our readers, it was said the Department was not at all cast down, and felt confident that, as all the great boons offered by the new Warrant became better known, candidates in plenty would come forward to really "compete" for commissions. We ventured to greatly doubt this view, and the profession generally, we believe, agreed with us in suspecting that the Department would be disappointed. Another examination is to be held on the 12th of this month, and we have endeavoured to learn how many candidates are likely to present themselves. In this we have not been quite successful, for the list is not yet closed; but, from what we hear, it seems very probable that about twenty men will enter to compete for the fifty appointments offered! There may possibly be more, as additional aspirants may come forward at the eleventh hour; but we have good reason to believe that up to the 8th inst. the list of intending candidates for the prize of a commission in the Medical Department of her Majesty's Army, under Mr. Hardy's Warrant, contained barely twenty names.

THE REPORTING OF CASES OF CONTAGIOUS DISEASE.

A new Police and Improvement Bill has just been drafted by the Greenock Board of Police, and by its 241st section it was intended to make it compulsory on medical men to report all cases of infectious or contagious disease to the Local Authority; but the medical men of the town held a meeting on the 22nd ult. to consider the question, when it was unanimously resolved that a deputation should wait on the Local Board and express their determined opposition to the clause. On the following day the Police Board resolved to expunge the objectionable clause from the Bill.

SIR WILLIAM FERGUSSON.

We regret to learn that the improvement in Sir William Fergusson's condition which occurred after our last report has not been maintained, and during the last few days there has been a continuous and rather rapid decrease of strength.

Case of Gastrotomy.—M. Koeberlé, of Strasburg, has communicated to the Société de Chirurgie a case of irreducible retroversion of the uterus, which, by compression of the intestine, induced a complete arrest of fæcal matters, accompanied by the ordinary symptoms of intestinal obstruction. Gastrotomy was successfully performed, the uterus being adjusted by passing the finger through the aperture in the abdomen, after which all accidents ceased. Profiting by the aperture, the surgeon fixed one of the ligaments within the wound, with the intention of fixing the uterus to the wall of the abdomen, and in this way effected a radical cure. He sacrificed a healthy ovary, but he would not have proceeded thus had not an opening been made in the abdomen for an operation that was absolutely necessary. He utterly discountenanced any operation of this kind undertaken expressly for the reposition of a retroverted uterus.—*Gaz. des Hôp.*, January 27.

FROM ABROAD.

Tying the Common Carotid in Tic Douloureux.

Prof. Patruban, at the latter end of last year, read a paper to the Vienna Medical Society, relating several cases in which he has tied the common carotid for the relief of obstinate facial neuralgia. This has subsequently been published in the *Allg. Wien. Med. Zeit.*, 1876, Nos. 48 to 50.

1. A strong, industrious girl, whose age is not given, who had always enjoyed good health, came under Prof. Patruban's care after all the various remedies for a severe diffuse neuralgia of the first and second branches of the fifth pair had been tried in vain. There was much visible local hyperæmia and excessive hyperæsthesia; and, on the occurrence of the paroxysms, violent pulsations were felt in all the arteries that were accessible. As the attacks continued to increase in duration and intensity, the common carotid was tied, on the strength of the success which had been obtained in other cases. From the moment the patient awoke from the effects of the anæsthetic to the present time (now six years) she has had no recurrence, while all hyperæmia has disappeared. 2. A woman, sixty-three years of age, was seized with the most intense pain in the whole range of teeth on the right side, no relief following their extraction. After all the most reputed remedies had been tried, neurectomy of the infra-orbital nerve was performed with the effect of completely relieving the pain for nine months. After that period the neuralgia recurred, affecting the supra-orbital and infra-maxillary nerves of the same side. The common carotid was tied, and the pains disappeared for four entire years. A relapse then occurred, but in a very mild form, so that hypodermic injections sufficed to relieve the pains. The neuralgia, however, became associated with great local hyperæmia, especially affecting the mucous membrane of the mouth, and requiring for its relief deep scarifications, which gave discharge to an abundance of blood. 3. An intelligent man, aged forty-one, underwent neurectomy of the infra-orbital nerve for severe neuralgia. Obtaining relief only for eight months, the carotid was tied. The immediate result was, as usual, remarkable; but at the end of eight months another relapse occurred. Chloral was given with good effect to relieve the pains; but the patient, emboldened by its use, on one occasion took three drachms, with the result of producing all the symptoms of poisoning. The symptoms immediately threatening life were warded off; but an ophthalmia, which set in with the commencement of the symptoms of poisoning, rapidly increased in severity, so that in sixteen hours the eyeball burst, discharging the vitreous body and lens, the patient only awakening to consciousness after thirty-six hours' sleep. Attacks of neuralgic pains, which still sometimes recur, are kept under by hypodermic injections of morphia. It is interesting to observe that the paralysis of the nerves of the vessels, which in recent times is regarded as the explanation of the passive or asthenic inflammation of the eyeball, and which was here doubtless due to the poisoning by chloral, occurred on the side on which the ligature of the carotid had given rise to permanent changes in the condition of the circulation. 4. This was a case of infra-orbital neuralgia occurring in a married woman, aged thirty-seven, for which, after numerous remedies had been tried, neurectomy was resorted to with such good effect that no attack occurred during fourteen years. A relapse then took place, showing itself first as neuralgia mentalis and infra-maxillaris of the same side, and then as infra-orbitalis of the opposite side. These various nerves were excised with temporary relief, when the pains recurred with such violence, sometimes in one spot and sometimes in several, that the patient was almost driven to suicide. The left carotid was tied, and the result was quite successful, at least for two years, at the end of which time she died from cancer. 5. A strong young man contracted rheumatism in Lombardy, which was followed by infra-orbital neuralgia of a very obstinate character. Neurectomy was performed, but as a relapse occurred in a year, the carotid was tied with great difficulty, owing to the great violence which the patient exhibited while under the influence of chloroform. A second neurectomy was performed, but with only temporary benefit. 6. A tradesman from Hungary applied on account of an excessively severe neuralgia infra-maxillaris, for which neurectomy was performed. At the end of a year the neuralgia returned, radiating over all the

branches of the fifth pair, and the carotid was tied. How little the operation deranged the general system of the patient may be judged of by the fact that six hours after its performance he was found playing cards at a *café;* and when the wound was still unhealed, and the ligatures had not come away, he insisted on travelling to his distant home. A relapse occurred in about eleven months, after exposure to severe weather, and excision of the second branch of the fifth pair, just under the foramen rotundum, was performed. At the end of a year he wrote to say that he still had slight attacks of pain from time to time, and since then he has not been heard of. 7. A Polish priest, who suffered from the severest diffused neuralgia accompanied by local hyperæmia, had the carotid tied, but died of pyæmia. 8. A woman, who had undergone great mental anguish and suffered from rheumatism, became the subject of infra-orbital neuralgia, for which neurectomy was performed; and, after an interval of fourteen months, the same operation was performed on the third branch. This gave relief for two years, when neuralgia again showed itself in a diffuse form, even extending to the hairy scalp. This was accompanied with local hyperæmia of the parts and a remarkable inflation of the skin. All the accessible arteries could be felt pulsating forcibly, and there was great increase of temperature. Here was evidently an indication for ligature of the carotid, which was performed with the most beneficial results.

These cases, Prof. Patruban believes, offer a complete justification of the operation in obstinate cases of neuralgia.

Prelachrymal Oily Cysts.

Under this designation Prof. Verneuil recently brought before the Société de Chirurgie (*Union Méd.*, January 6) a pathological condition which, he believes, has not been described by writers on affections of the eye. By a curious coincidence, he has met with three examples within a few years. The first of these occurred in 1874, in a young man who had a cyst at the inner angle of the eye of the size of a cherry-stone, placed in front of the lachrymal sac. It had been there a very long time, and was indolent, colourless, and irreducible. M. Verneuil believing it to be a tumour of the sac, punctured it and drew off the contents by a Pravaz syringe, and was much astonished to find that the liquid withdrawn had all the appearance of olive oil, which also it resembled in chemical characters. The tumour disappeared, and the patient quitted the hospital at once and did not return.

In 1875, a young girl, aged nineteen, was brought to him for the purpose of having a tumour removed from the angle of the eye, which, she said, she had had from childhood, but which had increased much of late. It was placed a little above the lachrymal sac, was very hard, and of the size of an ordinary cherry, greatly distending the skin that covered it. M. Verneuil, believing that he had to do with a congenital cyst of the orbit, made an incision with the intention of cauterising its wall. Hardly had the bistoury penetrated, when there issued a filiform jet of what looked just like oil, about a gramme of which was caught in a watch-glass, but was afterwards lost. Enucleation was sought to be practised, but, owing to the firm adhesions to deep-seated parts, only about two-thirds could be removed. In this crystals of cholesterine and margaric acid were detected.

A third case presented itself last November, in the person of a man, aged twenty-one, who had a tumour the size of an almond, which occupied the whole of the inner angle of the orbit. The skin was extremely distended and transparent. It had existed from early infancy, and was now very firm and resisting, being deeply attached to the subjacent parts, and possessed of no real mobility. It was quite indolent, and never had caused any disturbance of vision or obstruction to the flow of the tears. A puncture practised by Dieulafoy's aspirator allowed about two grammes and a half of a liquid exactly like olive oil to be collected, the tumour immediately subsiding after its evacuation. During the two days the man remained in the hospital no reproduction of the liquid took place. M. Perrin stated that he had met with two such cases, the evacuation sufficing for their cure. M. Le Dentu said that he also had met with such a case in an infant.

One-sided Deafness in relation to Military Service.

At a recent meeting of the Medical Society of the Vienna Garrison (*Feldarzt*, December 12), Prof. Politzer was invited to give his opinion as to whether one-sided deafness should act as a disqualification for active military service, which it does in the German army. In reply, he observed, first, that persons who were partially or totally deaf on one side very frequently heard just as well, especially at long distances, as those whose ears were in quite a normal state. But this one-sided deafness is connected with an anomaly in hearing which is of the highest importance—that is, it is accompanied by an impossibility of judging of the direction of sound. Even in the normal condition of the organ of hearing, the power of judging of this is possessed only in an imperfect degree; for the distinguishing the direction of the sound is no act of the sensation itself, but is the result of our judgment, based on preceding experience. The source of sound will be referred to the right or left accordingly as the sound strikes the one or other ear more forcibly; but our judgment as to its direction becomes entirely uncertain if both ears are in the same position as regards the source of sound—when we are frequently unable to decide whether the sound comes from before or behind. Prof. Politzer having observed that so many persons suffering from diseases of the ear not only were not able to indicate the direction of the source of sound, but frequently referred it to quite the opposite of the reality, instituted some experiments. He found that if a loud-ticking watch be held over the vertex of a person with closed eyes, and moved over the head from before backwards, he will not be able to state with certainty whether the watch is in front, above, or behind. Whenever he closes one ear the sound of the ticking is immediately transferred to the side of the open ear. Although our judgment concerning the direction of the source of sound is greatly assisted by the sense of sight, yet, even with this aid, the decision on the point will be surprisingly altered if one ear be closed. When this is done, the ticking of the watch placed over the vertex, even if its position be seen, will be projected in the direction of the unclosed ear. From these and other experiments Prof. Politzer concludes that our judgment concerning the direction of sound can only be determined by binauricular hearing, and even with this we are not always able to be certain. Similar results followed trials with speaking. Most surprising were the errors made in well-marked one-sided deafness. Even with the greatest attention the subjects of this were often unable to detect the direction of the sound until they saw the object producing it, or had acquired the knowledge by frequent change of position of the head. This was very remarkable in the hunting-field, when the sounds were often supposed to come from the opposite direction, if the deaf ear was turned towards the spot whence the sound came.

From the foregoing it results that the exemption of persons with one-sided deafness from active military service is amply justified. It is evident that the placing such persons as outposts on a dark night might give rise to dangerous consequences.

Medical Defence Association.—A meeting of the Council of the Medical Defence Association was held at the residence of Dr. B. W. Richardson, F.R.S., the President of the Society, last week, when twenty-one new members were elected, of whom nineteen were members of a branch recently formed at Accrington. It was resolved to take offices for transacting the business of the Association at 6, John-street, Bedford-row. A committee, consisting of Drs. Stevenson, Thomas, Maclean, Drew, Brooks, and Carpenter, and Messrs. Spencer Watson, Aubin, Mason, and Brown, was appointed to consider what steps should be taken by the Association with a view to the amendment of the Medical Act.

The Norfolk and Norwich Hospital.—A special and very important meeting of the subscribers to the building fund of the Norfolk and Norwich Hospital was held on Saturday last. The Earl of Leicester, K.G., as chairman, stated the object of the meeting, and read a letter from the Prince of Wales, in which his Royal Highness expressed himself very strongly in favour of the erection of an entirely new Hospital, and promised, were this decided upon, to give 200 guineas in addition to his former donation in aid of the fund; adding also that the Princess of Wales had desired him to say that she would give 100 guineas for the same object. Several able speeches were made in favour of entirely rebuilding rather than "restoring" and adding to the Hospital; and some other very handsome donations with this understanding were announced. It was finally unanimously resolved—"That it is expedient that a new Hospital shall be erected in lieu of any plan for improving the old building."

REVIEWS.

Nutrition in Health and Disease: A Contribution to Hygiene and Clinical Medicine. By James Henry Bennet, M.D., etc. Second Edition. London: J. and A. Churchill, New Burlington-street. 1876.

The first edition of this work was published nearly ten years ago, and since then the views of physiologists with regard to the relative value of foods and the origin of muscular force have undergone considerable change. Dr. Bennet has, it seems to us, very fairly expressed the physiological teachings of the present day, and presented them in a way which will tend to make them acceptable to those members of the profession who have been some time in practice, and who wish to know what is scientifically correct. We entirely agree with the author's remarks on the exaggerated belief in the importance of animal food which exists among English people; and no doubt his physiological knowledge has been confirmed by the sight of the hard-working Italian masons on the Riviera and elsewhere, whose chief food is bread, maccaroni, and Indian meal, with a few figs, and but rarely any meat. A good deal of this book is devoted to the consideration of the value of the deposit of urates of soda and ammonia in the urine as a sign of imperfect digestion. We agree with Dr. Bennet's main conclusions as to this point, but we rather question whether the perpetual "perusal of the chamber-pot," as it has somewhere been termed, might not in many persons induce a condition of hypochondria which would aggravate their malady instead of curing it. There are some excellent and thoughtful remarks on exercise and on the use of purgatives in confirmed dyspepsia which well deserve attention, and the Appendix II., entitled "Why do Successful Medical Men often Die Prematurely?" may make many a rising medical man pause and think whether he is not drawing too early and too largely on the store of strength which he will want so badly in later years. The picture of the *soirée* at the College of Physicians year by year is very happy: "The young physicians and surgeons, as also those who have acquired reputation, but as yet little practice, are more or less pink and rosy; their nutrition is mostly good. But it is far different with the heads of the profession, on whose shoulders rest the weight of London consulting practice, and who are making large incomes; they are mostly pale, sallow, anæmic." Dr. Bennet, as he walks about, and, "like Cassandra, mentally prophesies evil," must congratulate himself that he can not only preach, but also practise hygiene, and that to his successful application of the laws of "nutrition in health and disease" he owes his continued existence and his victorious struggle with a too often fatal malady. Hence, we feel that it is with just pride that he announces himself as "a writer who is the author of various successful books, and who has a benevolent sympathetic auditory scattered over the world, to read what he writes and listen to what he says"; and, believing that his book may "with their aid contribute to the destruction of wide-spread errors," we are not sorry that a summer which was to have been spent "in renewing acquaintance with the English poets, the friends of early youth, in his country home, reclining in a hammock under the trees," was sacrificed by a sense of duty to the careful revision of it which we spoke of above.

A Handbook of Hygiene and Sanitary Science. By George Wilson, M.A., M.D. and C.M. Ed., F.C.S., Medical Officer of Health for the Mid-Warwickshire Sanitary District, etc. Third Edition. London: J. and A. Churchill, New Burlington-street. 1877. Pp. 490.

After having been out of print for nearly a year, a new edition of Dr. Wilson's "Handbook of Science" has just been issued from the press. The delay which has taken place in the publication of the present edition is due to the fact that the author felt it necessary, in order that the work should maintain its position as a trustworthy guide to medical officers of health and others who are engaged in sanitary measures, to re-write a very large portion, and to add much new matter, which has, although some portions have been omitted, increased the size of the volume by more than a hundred pages. Among the new matter there is a large amount of information relating to water-supply, drainage, and the disposal of sewage, sanitary engineering, infectious hospitals, and the prevention of contagious and infectious diseases. The passing of the Public Health Act, 1875, has also necessitated the re-writing of the chapter on the duties of medical officers of health, and the author has added a special section on the important subject of vital statistics. The work is undoubtedly worthy of the position claimed for it, and we have great pleasure in recommending it as a guide to medical officers of health, and as a text-book of sanitary science to all who may be called upon to give advice on matters relating to public health.

GENERAL CORRESPONDENCE.

ART IN HOSPITALS.

Letter from Mr. J. Lawrence-Hamilton.

[To the Editor of the Medical Times and Gazette.]

Sir,—A misapprehension has arisen as to the *bona fides* of my offer of a hundred guineas towards a fund for introducing art into hospitals, because of the condition that one thousand subscribers should each also contribute a similar sum. I withdraw such condition. I will gladly give one hundred guineas to a responsible committee, as soon as one is formed, to promote the Art Fund of the Hospitals of London.

I am, &c., J. Lawrence-Hamilton.

34, Gloucester-terrace, Hyde-park.

CONDENSED MILK.

Letter from Dr. J. Dudgeon.

[To the Editor of the Medical Times and Gazette.]

Sir,—I was certainly astonished to read, in your issue of January 27, the letter on the above subject by Dr. Griffith, reproduced from one of the London daily newspapers. You have called attention to the impropriety of sending such a letter to a public unprofessional journal. I should attack it on other grounds. I have been in the habit for a dozen years of not only recommending its use among my patients, but of having at times used it in my own family, and without ever having witnessed any bad results whatever; but, on the contrary, with decided benefit and satisfaction. I have used both the American ("Eagle" brand) and also the Swiss condensed milk. I have found the latter especially good. The former, latterly at least, was frequently insoluble, and many tins were rendered useless on this account. The Swiss milk I have found invariably sweet, fresh, and easily soluble in either cold or warm water. In most of my cases it has been supplemented by breast-milk in the earlier months; later, and after weaning, it has been used either exclusively or as the chief food. The infants have always taken it readily, and have thriven upon it. I have never seen diarrhœa follow from its use; in fact, I have frequently advised it in cases of diarrhœa from *mixed* cow's milk or other causes. My patients have been loud in its praises: it can be so fully depended upon; the mother is independent of the wet-nurses, whose indiscretions in diet not unfrequently produce diarrhœa in the infants. Difficulties have always been experienced with cow's milk, not the least important being that in our cities the cows are too often fed largely, or almost exclusively, on distillery refuse, which I presume affects the quality of the milk, although it undoubtedly increases its quantity. The mother, abroad at least, is saved by this milk from an infinity of troubles with dirty or careless servants, etc. She can rely upon this milk as always fresh and ready for use. It has met a great and felt want, and with proper care in regard to clothing, exposure, and other matters, infant mortality from improper diet at least ought to be very greatly reduced. It is remarkable that in our late epidemic of typhoid fever, which carried off so many infants, caused by the milk from infected dairies, all such as were fed on condensed milk escaped. It has been proved invaluable, too, both by land and sea, in artificially reared children. Mother's milk, of course (everything else being equal), is the best and most natural; but among the poor, or the delicate, or those with certain hereditary tendencies, the infant and mother are both benefited by the use, in whole or in part, by the child, of condensed milk. It looks as if nothing could be more nutritious and agreeable than milk so prepared from Alpine-fed cows, with the addition (the only addition) of the purest sugar. I never heard of diabetes.

In this connexion allow me to draw attention to the great

value of rice, millet, or oatmeal gruel to nursing mothers, as producing a copious secretion of milk. As a substitute for breast-milk, the Chinese make a pap with rice-flour and sugar. This is steamed or dissolved in a little hot water, which reduces it to the consistence of paste, and it is then smeared on the child's gums. The preparation is called "kau kan." I am, &c., J. Dudgeon, M.D. (Pekin).

TAUNUS WATER.

Letter from Mr. G. A. Ledeboer.

[To the Editor of the Medical Times and Gazette.]

Sir,—We read in your issue of the 20th ult. a letter from Mr. J. A. Wanklyn, in which he speaks unfavourably of the Taunus water. We trust that, in justice to us, you will kindly insert in your next issue the following statements:—

1. We have the written testimonials of eminent medical men, amongst whom we may name Dr. Morell-Mackenzie, M.D., Mr. Alfred Cooper, F.R.C.S., Dr. J. C. Thorowgood, M.D., Dr. Schmitz, M.D., of Neuenahr, Dr. Schwarz, M.D., of Cologne, etc., who state that after having prescribed the Taunus water for a length of time, they have not only found it wholesome, but peculiarly beneficial in cases of indigestion, acidity, etc.

2. We ourselves know, by experience, from persons who have been using the Taunus water for a lengthened period and in large quantities, that their health, instead of being impaired, has greatly improved.

3. The opinion of the *Vienna Medical Press* about the Taunus water runs as follows:—"This water can be classed amongst the 'hard waters.' They are, as a beverage, more wholesome than soft waters. By 'hard waters' we mean waters which contain, like the Taunus water, a certain amount of carbonate of lime, which exercises a highly beneficial influence on the body, and protects it from many injurious influences. The water of the Taunus Brunnen is therefore highly to be recommended as a wholesome beverage."

We think you will agree with us that the above totally contradict Mr. Wanklyn's wrong opinion. We are, &c.,

The Taunus Company (G. A. Ledeboer, Director).

6, Clarendon-mansions, New Bond-street, Feb. 3.

*** Unfortunately, we by no means "agree" with Mr. Ledeboer as to the statement made above "totally contradicting Mr. Wanklyn's wrong opinion." Mr. Wanklyn stated certain facts; in opposition, Mr. Ledeboer states certain opinions; but that is all.—Ed. *Med. Times and Gaz.*

Cardiff Medical Society.—The following gentlemen have been elected officers of the Cardiff Medical Society for the present year, viz.:—*President:* Mr. R. F. Nell. *Vice-President:* Dr. Henry J. Paine. *Honorary Secretary and Treasurer:* Dr. Alfred Sheen. *Committee:* Dr. W. T. Edwards, Dr. M. G. Evans, Dr. William Price, and Mr. James Milward; together with the President, Vice-President, and Hon. Secretary *ex officio*.

Composition and Quality of the Metropolitan Waters in January.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	18·90	0·135	0·120	0·001	0·007	13·2	3·8
West Middlesex .	18·40	0·133	0·150	0·000	0·008	13·2	3·8
Southwark and Vauxhall . .	19·00	0·138	0·105	0·001	0·006	13·2	3·8
Chelsea . .	18·80	0·120	0·150	0·007	0·009	13·2	2·9
Lambeth . .	20·90	0·094	0·210	0·006	0·009	14·8	4·2
Other Companies.							
Kent . . .	27·90	0·003	0·300	0·000	0·003	20·6	6·0
New River . .	20·50	0·094	0·216	0·000	0·006	14·9	3·3
East London .	22·70	0·079	0·150	0·001	0·008	14·9	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be slightly turbid in all cases.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, January 19.

Dr. Buchanan, President, in the Chair.

Mr. Lee F. Cogan was elected as an extra-metropolitan member.

Dr. Julius Hardwicke and Mr. F. A. Best (of Walthamstow) were nominated to be balloted for at the next meeting.

Dr. T. O. Dudfield then called attention to a letter recently addressed by the Local Government Board to vestries and district boards on the subject of hospital accommodation for non-pauper cases of small-pox, and moved a resolution in reference thereto. The members of the Society had been urged to press their vestries to provide hospitals of a temporary character for meeting the present emergency. In referring to the letter of the Local Government Board, he drew attention to a change of front under the apparent pressure of the Asylums Board. The boards of guardians had agreed to take cases into the district asylums for some weeks past, whether paupers or non-paupers, but subsequently a letter was addressed to them by the Local Government Board, entirely repudiating a previous letter of October 12 last, and virtually telling the guardians that the district hospitals were only intended for the reception of paupers, and those could alone be provided for. Section 42 of the Poor-law Medical Act is referred to as particularly providing for the class of non-paupers. The opinion of the Local Government Board, as expressed on January 2, is much more in accordance with the spirit of the Act than their previous letter. It is very desirable to extend the powers of the Act, and to make it more generally applicable to the present and future emergencies, so as to include all fever cases without proper accommodation for isolation and disinfection, with especial reference to the needs of the metropolis. Dr. Dudfield concluded by moving a series of resolutions to the effect that in all cases of infection isolation is necessary, and that this is generally impracticable in the homes of the non-pauper class,—therefore it is most necessary to erect special hospitals for the reception of such cases; and that it is undesirable to depend upon the local infirmaries for such cases. The Vestry of Kensington had made repeated offers to the District Asylums Board to accommodate their fever cases at Highgate, etc., without any limitation of payment for the needed accommodation, offering even to build a special wing adjoining the District Asylum for such purpose on the large piece of ground surrounding the hospital; but all these offers were refused. He urged the Society to request the Local Government Board to provide accommodation at once for all infectious cases.

Dr. Tripe remarked that these resolutions were not necessary, seeing that the Council had already agreed to represent their views to Government in accordance with the resolutions before the Society, which comprehended those brought forward by Dr. Dudfield, and were as follows:—1. "That, in the opinion of the Society, whenever a case of infectious disease occurs in any house or vessel, it should be the duty of the person in charge of the house or vessel, or of the person in charge of the case, to report the fact to the Sanitary Authority without delay." 2. "That it should be the duty of every medical practitioner in attendance upon any such case to give immediate information respecting its nature to the occupier or other person responsible for reporting it to the sanitary authority." 3. "That the Council be requested to form a deputation for the purpose of bringing these views under the consideration of the Government, and to endeavour in other ways to promote the above views." 4. "That such deputation be desired to represent to the Government the generally unsatisfactory nature of the present legislative provisions for preventing the extension of infectious disease, and the need for inquiry into the subject."

The President, referring to these resolutions, said that the Council would require to have fresh instructions from the Society if they were to bring the special wants of London or the country before the Government at their intended interview with the Home Secretary on Friday, January 26, as the Council only purposed at present to state generally the necessity for further legislation.

Dr. LIDDLE remarked that the Society should insist upon the admission into hospital of all fever cases, regardless of charges for the non-pauper class. If a fever-stricken patient is urged to go into hospital for the general good, he ought not to be charged.

Mr. WHITMORE was not in favour of largely increasing the hospital accommodation. It was not desirable to take persons away from their homes if isolation could be provided. The details of any required reform should be left to the Local Government Board.

Dr. STEVENSON thought it right to distinguish between the pauper and non-pauper classes. According to the present state of the law, the vestries were bound to provide adequate hospital accommodation. A central authority ought to be required to do this. He thought there was no chance of getting isolation for all cases.

Dr. DUDFIELD urged that the existing hospitals should be open to all comers so long as space remains and there are patients to fill the beds. With a site of twenty-one acres of land at Highgate, the Asylums Board refused to do anything to assist the vestries.

The PRESIDENT summed up the discussion by stating that any argument showing that an inquiry into the whole subject is wanted is what the Council desire, but beyond this there are no powers for dealing with special or local deficiencies. At the proposed interview with the Government on Friday, the points raised by Dr. Dudfield being such as were certainly not agreed upon, it would not be possible to go beyond a resolution to ask the Council to consider generally the sanitary wants of London relating to hospital accommodation in view of the present epidemic. The Council would indicate the best means of providing this accommodation to the Local Government Board.

"CONTAGIUM VIVUM."

Dr. SANDERSON then read a paper with the above title, of which an abstract follows:—The characteristic of contagium is contagiousness; it is neither the organic form nor the molecular constitution of the morbific material that interests us, but the action which it exercises in our own living bodies and in the bodies of the animals which are fellow-partakers with us of the ills that flesh is heir to. By contagium, I mean material which forms part, or previously formed part, of the body of a diseased person or animal, with respect to which it is known that if it is inserted into the body of a second healthy person or animal of the same species, the disease of the first will be communicated to the second. The question of the nature of contagion identifies itself with that of characters of the material conveyed when *in transitu*. For investigating these characters, all our information has been derived from a few cases—viz., those of glanders, small-pox, and rinderpest—in which we are able to take the material in hand and submit it to experimental examination. There are two facts which we have learnt from these examinations: contagium always presents itself, whether suspended or diffused, in aqueous and in gaseous media in the form of concrete particles, and never in that of a soluble chemical body or a gas; and it is distinguished from organised matter in general by possessing the power of resisting those chemical changes to which such matter is usually prone. The knowledge of the first of these attributes—the non-solubility and non-diffusibility of contagium—might have been arrived at on general grounds, inasmuch as it can be shown, with reference to every contagium, that, being transmissible by the atmosphere, it has a locality—in a word, that it is somewhere, not everywhere; and that the localisation of the contagious influence is limited. The other proof is derived from the now well known observation that all contagious liquids can be deprived of their virulence by such mechanical processes as are capable of depriving them of their particulate constituents. These methods are chiefly filtration and subsidence. However certain we may be that typhoid fever may originate from sewer emanations, none of us would for a moment suppose that the result is due to any gaseous body or vapour which exists in the atmosphere of sewers. The characteristic property of contagium—the power which it possesses of originating a diseased process—is one which it acquires by virtue of its having been a constituent of diseased but living protoplasm. With reference to its actual condition, there are therefore two possibilities—viz., (1) that it is still living; and (2) that it has ceased to live. If it had not ceased to live it would certainly have undergone a chemical change. The fact that it has not undergone such change affords a *primâ facie* ground for assuming it to be living; and if this is so, there are two alternatives open to us as to the source of that life. It may spring from diseased tissue itself, or it may be dependent on the existence in the tissue of independent organisms. If we accept the latter alternative, we have an explanation of many well-known facts. It is a character of the simplest and smallest organisms to alternate between a state of rest in which energy is stored up, and a state of activity in which it is spent in motion; and there is nothing more ready to the mind than the notion that the contagium contained, for example, in a mass of dry vaccine crust, is in a condition analogous to that which we see in the resting spores of protophytes. Comparing the wonderful power by which the potential endowment of the spore is preserved during long periods until the proper moment arrives at which its energy is liberated by the action of the proper stimuli, with the equally wonderful power by which the potency of a contagious particle is preserved in its long journeys over land and sea, the mind jumps at the conclusion that the two wonders have the same explanation. What I desire now to show is that this is not necessarily true, and for this purpose to draw a comparison between the contagia and the bodies with which they are more comparable than with any others. During the last ten years we have learnt to become familiar with a class of bodies as existing in the living tissues of man and the higher animals—the unformed or unorganised ferments (so called because they have nothing to do with ferment organisms). Let us suppose that we have before us a solution in glycerine of the ferment of the pancreas. Add a drop to an alkaline albuminous liquid at a proper temperature, a series of complicated chemical transformations will ensue, as the result of which a series of bodies of definite chemical constitution will be produced out of the albumen. Now, this substance was originally part of the pancreas of an animal. Let me take one other example. By precipitating blood with alcohol, dehydrating the precipitate, and then extracting it with distilled water, a body in solution is obtained, of which the properties are as follows:—If a liquid which contains the material out of which fibrine is formed is prevented from coagulating by the presence of a neutral salt, such as magnesic sulphate, the liquid will not coagulate, even when placed under the most favourable circumstances. But if to the liquid so prepared a drop of this solution is added, a clot is formed in a few minutes. Here is a process started by a body which acts after the manner of a contagium, and which, although it was formerly a constituent of living protoplasm, has now as remarkable a power of resisting disintegration—of preserving its own potentiality—as the rest-spores of protophytes. As regards its most striking properties, therefore, contagium resembles the unformed ferments as closely as those which are associated with the life and development of minute organisms; for the two properties of permanency and insolubility belong as much, and in the same sense, to the one as to the other; for although the pancreatic ferment, for example, can be invisibly suspended in an aqueous liquid, it can be removed from it by purely mechanical means. If the pancreatic ferment is a chemical body, it is a system of similar molecules, each of which is in its structure or constitution identical with all the rest. Now, it is characteristic of all ferments that they induce changes in other bodies without being themselves acted upon—a kind of action which nothing that is known of the action of molecules on each other serves to explain. In defining the nature of ferment action we are therefore in a dilemma, out of which there is no escape except by compromise. A ferment is not an organism because it has no structure. It is not a chemical body, because when it acts on other bodies it maintains its own molecular integrity. On the whole it resembles an organism much more than it resembles a chemical body, for its characteristic behaviour is such as, if it had a structure, would prove it to be living. What is more characteristic of living protoplasm than that, while maintaining its own integrity, it alters the surrounding medium? Ten years ago the opponents of spontaneous generation were called panspermists, because it was supposed that in so-called *generatio equivoca*, in every case in which bacteria appeared to spring out of nothing, the result was referable to the influence of unseen but actually existing germs. The researches of the last few years have carried us beyond this stage. There are heterogenists and those who refuse to believe in heterogeny, but the outer line of defence, represented by the aphoristic expression, *omne vivum ex ovo*, has been for some time abandoned. The ground which the orthodox biologist holds now, as against the heterodox, is

not that every bacterium must have been born of another bacterium, but that every bacterium must have been born of something which emanated from another bacterium, that something not being assumed to be endowed with structure in the morphological or anatomical sense, but only in the molecular or chemical sense. It is admitted by all, even by Professor Tyndall, that, so far as structure is concerned, the germinal or life-producing matter out of which bacteria originate exhibits no characters which can be appreciated by the microscope; and other researches have proved that the germinal matter is capable of resisting destructivo influences, particularly those of high temperature, which are absolutely fatal to the bacteria themselves. Germs have given place to things which are ultra-microscopical—to molecular aggregates—of which all that we can say is, what we have already said about the ferments: that they occupy the border-land between living and non-living things. If this is so, it may be asked, Why do you not surrender? You have given up organised germs, why do you stick to what now is a mere *ειδωλον*? The difference between us and the heterogenists is as fundamental as it ever was. Admitting that it cannot be shown that the septic ferment consists of things which have any morphological existence, we stick to what is proved. In all cases which up to the present time have been investigated, it has been found that neither the septic ferment, nor any other ferment, is capable of coming into existence by chance. The aim of the heterogenists is as in the words of Schiller's song—

"Vier Elemente Innig gesellt,
Bilden das Leben, Bauen die Welt."

"All that is necessary to the building up of a living organism is that the needful elements should be present." We, on the contrary, refuse to believe that molecules of such enormous complexity as those which must be supposed to be the constituents of protoplasm, can originate otherwise than by a long process of evolution. Up to this point it may be said that there is no difference of opinion among vital physicists, so that it is now acknowledged to have become possible to allow germs to retire for a short time—to withdraw themselves from observation, in order that the much more important question of the nature of the molecular changes with which their development is associated may receive attention. Accordingly it is to the elucidation of the chemical process of putrefaction, rather than to its morphological characteristics, that the most important investigations of the present moment are being directed. The comparison of the process by which a morbid virus infects a healthy person, with the process by which the septic ferment infects a suitable soil for the development of the putrefactive process, cannot fail to be helpful to the pathologist, for it is founded on a real analogy. The relation between a particular characteristic or phenomenon of a diseased process and the process itself is often a source of confusion; for the characteristic, if it be very prominent, is apt to take the place of the disease itself. Similarly as regards the morbid ferments: if it should be proved—as it very likely will be proved—that a contagious liquid possesses, among other characters, certain peculiarities in the organic forms which inhabit it (just as each exanthem has its own characteristic eruption), it is quite probable that most persons would find it very difficult not to give the particular characteristic so important a place in their conception of the disease as to allow it to supersede all others. It may be regarded as established that, in surgical practice, the dangers which attend wounds and other discontinuities of surface are dependent on the intrusion of septic material from the atmosphere, and may be prevented by sedulous care in preventing that intrusion; and it has also been shown that in three or four specific diseases, particularly small-pox, vaccine, relapsing fever, and diphtheria, the development of the morbid process is attended with, or accompanied by, the appearance of characteristic forms which seem to be organised. The leading fact relating to wounds is, that the discharge of every wound which is freely exposed to the air contains septic bacteria, the numbers of which depend, other things being equal, on the time during which the discharge remains in contact with the secreting surface—in other words, on the accumulation. The second fact is the more important of the two—viz., that if by sedulous care in the surgical treatment of wounds the access of septic material from outside is prevented, neither the bacteria nor the septic processes, of which they are the exponents, make their appearance. It has been Mr. Lister's merit to demonstrate this to the whole world by finished clinical experiments, and to found a method by which he has introduced the exactitude and conscientious cleanliness previously thought necessary only in the laboratory into the care and management of sick persons. However certain it may be that the initial infection by which a wounded surface becomes the seat of septic changes in the discharge, and unhealthy action in newly forming granulations consists in the introduction of contaminating material from the atmosphere, this affords no explanation of the subsequent development of the evil, for it is equally certain that those forms of contagium which are most virulent are not derived from primary inflammations, however putrid they may be, *i.e.*, however offensive the surfaces, and however the discharges may teem with bacteria. Clinical observation teaches that the virulent forms of infection only occur in association with a general process affecting the whole organism, which we therefore call "septicæmia," and that the new inflammations which originate under the influence of this general change (secondary inflammations of serous membranes, of joints, of cellular tissue) yield products which exhibit a virulence and a contagiousness altogether out of relation with those of the primary inflammations. As to the nature of the process by which a poison of intense malignity is developed, often in an entirely unexpected way, out of a traumatic inflammation, I need not say that there have been of late years grave discussions. Here also the direct influence of bacteria has been invoked to account for the virulence of the newly developed contagium, and hundreds of experiments have been made with a view to the elucidation of the subject. Having learnt from the study of tuberculosis that in the guinea-pig all serous inflammations of the peritoneum assume a septic character—*i.e.*, that they are attended with abundant development of bacteria, which originate quite irrespectively of contamination from outside,—I set to work to communicate the primary peritonitis from one animal to another, and found that it could be done with great facility. But after one or two transmissions a moment arrived at which the disease altered its character, and assumed a malignancy which was out of all relation with that previously observed; and the product obtained from such an animal was of such extreme virulence that a very few drops of it were sufficient to kill a large dog. I concluded that the augmentation of virulence which I obtained experimentally by transmission from animal to animal takes place in the human body by a similar process of pathological evolution, the difference between the two cases being that in the man, by reason of the greater endurance of systemic life, a virulent process has the time necessary for its development in a single individual. My object was not to ascertain whether the septicæmic contagium was a *contagium animatum*, but to determine the conditions of its evolution. In the guinea-pig and other similarly constituted animals, the products even of a simple inflammation of a serous cavity contain bacteria, which, if the inflammation has lasted several hours, are extremely numerous. In malignant inflammations they also exist in countless myriads, but differ so much from those first referred to in their form and character, that with a good microscope it is easy to distinguish the exudation of a malignant peritonitis from that of a primary one by its structural characters. You are, no doubt, well aware of all that has been made out with respect to the existence of spheroidal organisms of characteristic appearance and development, not only in the liquid contents of the small-pox and of the vaccine vesicle, but also in the tissue of the cutis and in the lymphatic vessels, during the development of the pustule. The only point to which I ask your attention is that of the grounds which exist for supposing that these organisms are, or are not, endowed with morbific powers. Dr. Hiller, of Berlin, who is very strongly opposed to the so-called germ theory, has lately examined a very large number of specimens of vaccino lymph, and found the characteristic spheroids which I described in 1870 in four-fifths of the cases. His examinations derive their chief value from the fact that he has compared the specimens of vaccine containing these spheroids with those in which none could be found, as regards the character of the vesicles produced in vaccination. The experiments were made on 740 recruits, and the general result was that there was no relation between the microscopical character of the lymph and the appearances recorded on inspection; it was indeed noted that although good arms were obtained with lymph that contained organisms, some of the best resulted from lymph which was free from them. I learn that Mr. Godlee, of Charing-cross Hospital, has recently made some very important and interesting experiments in the same direction, which he will shortly com-

munication to the Pathological Society. I am not, therefore, disposed to go beyond the statement that I made the last time that I had the opportunity of discussing this subject—viz., that all that can be said at present as to the organic forms which occur in contagious liquids, is that they are characteristic concomitants of the specific processes with which they are associated. We must not, however, regard them as unimportant; for just as the crystalline structure of bodies is now known to have relations with their molecular constitution, of which the chemists of a former period had not the vaguest conception, so it may turn out, at no very distant time, that relations of a most important and interesting kind may be discovered between the specific contagia and their morphological characteristics.

In the debate which followed the reading of the paper, Dr. Tripe asked whether, in the fluids which were the subject of careful examination, no morphological matter was detected, as Mr. Sorby had asserted that chemical bodies may be present, and yet not be discoverable by the highest powers of the microscope.

Dr. Klein asked for a more accurate definition of the bodies occupying the border-land between living and dead matter in putrefactive changes. Is this *contagium vivum?*

The President asked for a detail of the statements on the cultivation of particular organisms as existing in vaccine lymph, hydrocele fluid, glycerine, etc. Do these undergo septic or putrefactive changes?

Dr. Sanderson replied that the cultivation would be unsuccessful if this were the case. Contagion is not merely an influence; it is something substantial, chemical or morphological. Unformed ferments were five in number—viz., that of the stomach, of the pancreas, of the blood, of the saliva, and of the liver. All have definite characters which are capable of setting up in the liquid a chemical process of a specific kind, which continues without the ferments themselves undergoing any change; and nothing but a ferment will do this—for instance, the conversion of albumen into peptones, and of starch into dextroles. An active coagulation is promoted where none took place before. An illustration of the border-land between organised ferments and molecular change is best seen in the pancreatic fluid. The ferment changes into a liquid with albuminous compounds; leucine and tyrosin are formed, with definite characters; and this is set on foot by the presence of bacteria. We can destroy bacteria, and derive from them a ferment which will determine these changes. There is no *à priori* difficulty in supposing that there are transition-forms between living and non-living anatomical forms, of extreme simplicity, which reproduce living organisms. There are properties belonging to each which show the same characteristics. All the processes of life disappear gradually. They are first formed, and then they possess a power of acting upon any material that they come in contact with, without undergoing loss or gain of substance.

Dr. Thudichum remarked that Dr. Sanderson has succeeded in establishing a happy marriage or union between organisms and non-living matter. There is, however, positive proof that that which produces vaccinia is not organised, because it is most potent when no living germs are present. Dr. Thudichum does not believe that a healthy pancreas would produce a ferment.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 23.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

On the Minute Anatomy of Two Cases of Carcinoma of the Breast preceded by Eczema of the Nipple.

Mr. Butlin read a paper on the above subject. The author observed that the same conditions were found in these cases as in the two breasts which were the subject of a communication to the Society last session (see *Transactions*, vol. lix.)—namely, dilatation of the ducts and alteration of their epithelium, with proliferation of the same; infiltration of the surrounding connective tissue with small cells; dilatation of the small ducts and acini, with proliferation of their epithelium. Further, there were in these cases—fusion of the acini and ducts thus filled with proliferating epithelium into larger and irregular spaces; escape of the contents, or growth of the contents into the surrounding tissues, producing the full formation of carcinoma. With a view to discovering the origin of the newly formed epithelium in the ducts and acini, a careful comparison of the characters presented by this epithelium and by the cells in the connective tissue was made. The difference was most marked. No transitional forms could be discovered. No connexion was found between the two sets of cells. The author said it was therefore held that the disease is essentially a disease of the epithelium of the mammary gland; and it is thought to travel from the surface of the nipple and areola through certain of the ducts to the smaller ducts and acini.

Mr. Morris remarked that it seemed to be the experience at St. Bartholomew's Hospital that eczema of the breast was commonly followed by cancer; at all events, he understood it had been stated that this was Sir James Paget's experience. He had examined the records of some 400 cases of cancer in Middlesex Hospital, but had not been able to elicit any history of previous eczema in cases of cancer of the breast. Last July he had seen a female, the mother of seven children, aged forty, who had suffered from eczema of the breast for five years. She had, when seen, an ulcerating sore close to the nipple, with some hardening around it. There was also an indurated gland in the axilla. Epithelioma was suspected; the breast was removed, and the woman made a good recovery. On examination no epithelioma or other form of cancer was discovered. The surrounding induration was merely inflammatory.

Mr. Hulke said Mr. Butlin's conclusions confirmed the opinion he had now long entertained—namely, that the various forms of cancer had an epithelial origin. In cancer of the skin the process could be gradually traced from the proliferation of epithelium to a pure epithelioma, with filling, choking, and breaking-down of the sebaceous glands. So in ichthyosis of the tongue: this might remain for long a simple hypertrophy of the natural epithelium, till that began to dip down into the deeper parts, and so produce an epithelioma.

Dr. Thin said that the connexion of cancer and eczema had hardly been observed save in England. The causes for eczema of the breast which were usually assigned by Hardy could hardly have existed in Mr. Butlin's case. The epithelial origin of cancer was becoming more and more recognised. Cornil and Ranvier attributed the origin of cancer to the spaces in the connective tissue; but, by making careful sections, the connexion between the epithelium and cancer was easily made out. But the views as to the mode of growth of epithelium lay at the bottom of all this, and these were still unsettled. Dr. Thin also criticised the use of certain common terms now made use of—such as "connective-tissue corpuscle," "nucleated protoplasm," and the like,—and advocated a return to the use of the old word "cell."

Sir Joseph Fayrer was quite sure of the intimate connexion between epithelioma and the various forms of cancer. The close alliance was seen in the development of epithelioma from irritation of the lip, and of cancer from the cicatrix of a burn.

Mr. Gaskoin said the term "eczematous cancer" had been employed by some writers, as Bazin.

Sir James Paget had no doubt in his own mind that chronic eczema, or any other irritative disease of the breast, might be followed by cancer. He was so certain of the connexion that he would venture to predict, in a person of a certain age suffering from such irritative disease, the likelihood of cancer following. In some cases the local affection was psoriasis, and in one instance he had seen simple excavation of the nipple followed by cancer. He had observed fifteen or twenty cases which illustrated this general law; and he would go so far as to say that the rule applied not to cancer of the breast alone, but to any other organ, where, the conditions being favourable, continued irritation would set up cancer. There was no over-statement involved in saying that half the cases of epithelioma of the tongue occurred this way.

Mr. Butlin briefly replied.

Slowly advancing Sclerema, attended by Cardiac and Gastric Disorders.

Dr. John Harley read notes of a case as above. The patient has been under the author's observation for nearly five years. He is a man of fair complexion, and of rather feeble constitution; he is in his fiftieth year, and a stonemason by trade. He was obliged to give up work in February, 1872, and applied to the author a month later. Then he was unable to close the hands, on account of induration of the subcutaneous tissue. The fingers were of normal size, hard

like wood, dusky, very cold and moist. The induration was marked around the wrists so as to reduce the movements of the joints to a minimum, and render them painful. The rotatory movements of the forearms were reduced to one-half. The induration gradually subsided at a little distance below the elbow. The temperature of the fingers was usually from 3° to 5° only above that of the external air. Touch was but very slightly, if at all, diminished. From the first there had been a tendency to gangrene at the extreme tips of the fingers. During the progress of the case the face gradually lost power of expression, the mobility of the skin (especially over the malar bones and forehead) decreased, and the subcutaneous tissue became firmer. The affection spread over the neck and upper part of the chest, and the aponeurosis of the external oblique became hard and unyielding. The characteristic features of the disease are best displayed on the neck. The skin in front forms a thin, hard, rigid, plane, gathered into vertical ridges feeling like knotted cords, and complete extension of the head is prevented. The skin is drawn very tightly over the upper part of the chest. The sides and back of the neck are mottled red and white, with what may be regarded as interrupted lineæ atrophicæ, forming regularly arranged areolæ measuring from one-half to three lines in width. The pink areolæ exhibit to the naked eye ramifications of minute blood-vessels, such as are seen in this locality in persons much exposed to the weather; the extremities of these vessels terminate abruptly in the margins of the colourless areolæ. These latter are of ivory-like whiteness and opacity, and usually are absolutely bloodless. The skin of the affected parts retains, as far as can be ascertained, its normal degree of sensitiveness. Apart from wasting of the muscles from want of use, and excepting the cutaneous muscles, the muscular system is free from disease. The course of the disease has been marked by increasing debility, and the patient has for the last two years experienced attacks of pain in the cardiac and epigastric regions, attended with flatulency, and ending in retching and vomiting of sour or bitter fluid. The pulse began to intermit, and at times the intermission was so regular, that with a regular radial pulse of 40 to 42 there were just double the number of cardiac systoles, every other one being too feeble to reach the wrist, and occasionally the secondary beats disappeared from the heart, which then beat in unison with the pulse 40 to 42 times a minute. Some days the pulse is regular, other days very irregular. Associated with the stomach derangement, he is liable to attacks of palpitation, and sometimes of extreme faintness. The patient is at present weakly, ill-nourished, and semi-anæmic. After slight exertion he "feels faint, as if he had no breath at all," and slight prolapse of the mucous membrane of the bowel, with a little mucous discharge, comes on. He is liable to profuse perspirations. The lungs and kidneys are normal. With regard to the pathology of the case, the author, drawing attention to the condition of the skin of the neck, and to cases in which the subcutaneous tissue of the palm becomes slowly adherent as a depressed, hard, tucked-in cicatrix (a condition which exists in the patient himself), concludes that the sclerema is merely the direct result of atrophy, *pari passu*, of the bloodvessels, and of the lacunæ and canaliculi of the connective tissue, converting thereby the soft, moist, open, and well-nourished network into a hard, comparatively dry, close, and ill-nourished tendinous tissue. The atrophy he believes to be due to depression of sympathetic (vaso-motor) nerve power, that the functional disturbance of the heart and stomach is due to the same cause—in a word that the case above described is one of slowly advancing paralysis of the sympathetic system of nerves generally, and that the affection is manifested at the periphery by the atrophy of the connective tissue, and nearer the centre by the grave disturbances of the circulatory and digestive functions.

Curious Cause of Vomiting in an Infant.—Dr. Fisher, called to an infant eleven months old, learned that it had attacks of vomiting, since when it had refused the breast. On examination of the throat, a finger-ring was observed deep in the pharynx, which it filled, its anterior part being caught and held in its place by the epiglottis. Deglutition was not much interfered with, as the infant swallowed water without difficulty; but the muscular motion involved in sucking was no doubt productive of pain in the throat, and caused the child to refuse the breast.—*New York Medical Record*, December 2.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 1:—

Godfrey, Charles Walter, The Hundred, Romsey.
Meek, John William, Macclesfield.
Langdon, John Winkley, Chester.

The following gentlemen also on the same day passed their primary professional examinations:—

Beard, Spencer Francis, Sheffield Infirmary.
Crouch, Edward Thomas, Guy's Hospital.
Deakin, James, Owens College, Manchester.
Eliot, George, Westminster Hospital.
Hepburn, David, Middlesex Hospital.
Low, Charles Arthur, London Hospital.
Sharples, C. William, Middlesex Hospital.
Smith, F. Clarence, University College.
Stewart, Frederick George, Guy's Hospital.

At the preliminary examination in Arts held at the Hall of the Society on January 26 and 27, ninety-seven candidates presented themselves, of whom thirty-seven were rejected, and the following sixty passed, and received certificates of proficiency in general education, viz.:—

In the first class, in order of merit—

First: C. E. Paget and E. Tomlinson. Third: A. L. Copney, H. Greiffenhagen, and R. A. Palmer. Sixth: G. N. Stephen. Seventh; C. G. Colville, J. M. France, J. P. Myles, and H. L. Swinson.

In the second class, in alphabetical order—

H. L. Albert, G. T. Bates, D. M. Barry, W. C. Beatley, W. B. Benjafield, H. Blackburn, G. A. Branson, E. C. Bray, H. W. A. Burke, J. M. Carvell, H. R. Colborne, C. V. Cotterell, S. J. A. Cotterell, D. R. Davies, E. Davis, E. S. Earle, T. Edwards, A. W. Fairles, I. B. Goodridge, C. H. Greet, E. Harvey, J. P. Hayes, J. W. C. Herbert, H. Holcraft, R. L. Holland, R. Holton, G. Jones, C. H. Lamerle, H. Ley, A. Livingston, D. H. G. Maclean, E. D. Minter, J. D. Maloney, C. A. Morton, G. H. Moxon, W. A. Nutt, Y. O'Keeffe, C. Pound, L. O. L. Raymond, W. B. Skelton, D. J. Slater, W. H. Stephens, H. B. Strong, E. C. H. Van Buren, F. J. Walker, H. Webb, T. A. Wise, T. Whitaker, G. C. Wilkin, and J. Woodgate.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Strugnell, F. W., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A.—Resident-Surgeon, Small-pox and Vaccination Hospital, Highgate-hill, N., *vice* J. F. Marson, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office.—Militia.—Northumberland: Assistant-Surgeon Robert Wilson to be Surgeon. 1st Somerset: Assistant-Surgeon Wavill Arundel Dene to be Surgeon. 3rd Royal Surrey: Assistant-Surgeon Matthew Owen Coleman to be Surgeon. The King's Own Royal Tower Hamlets: Assistant-Surgeon Richard Commander Kibler to be Surgeon. Royal Ayr and Wigtown: Assistant-Surgeon David Wield to be Surgeon. Antrim Artillery: Assistant-Surgeon David Redmond Taggart to be Surgeon.

BIRTHS.

Carter.—On February 2, at 4, Clarence-terrace, Leamington, the wife of T. A. Carter, M.D., F.R.C.P., of a daughter.

Davson.—On February 3, at Mount Galpine, Dartmouth, the wife of F. Adams Davson, M.D., of a daughter.

Finlay.—On January 31, at 2, Stanley-road, Trinity, Edinburgh, the wife of W. A. Finlay, M.D., of a son.

Hampshire.—On January 29, at Cliff House, Shanklin, Isle of Wight, the wife of Fred. K. Hampshire, M.B., Civil Surgeon, Straits Settlements, of a son.

Liddard.—On January 30, at 71, Ladbroke-grove-road, Notting-hill, the wife of Thomas Liddard, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter, stillborn.

Pearce.—On February 2, at the Manor House, Brixton-rise, the wife of J. Chaning-Pearce, M.B., of a daughter.

Shewen.—On February 6, at 12, Hogarth-road, Earl's-court, S.W., the wife of Alfred Shewen, M.D. Lond., of a daughter.

Wilmot.—On February 1, at Petworth, Sussex, the wife of Robert Eardley Wilmot, M.B., of a son.

MARRIAGES.

Burn—Blackwell.—On January 6, at St. Anne's, Limehouse, G. Wilson Burn. M.R.C.S., of Brixton, to Elisa Caroline, youngest daughter of the late E. C. Blackwell, formerly of Newbiggin, Northumberland.

Fleetwood—Binger.—On February 1, at Holy Trinity, Rhyl, Wm. J. Fleetwood, L.R.C.S.I., L.K.Q.C.P.I., of Walton, Liverpool, to Mary, second daughter of the late J. C. Binger, of Chester.

Hutchinson—Lane.—On February 6, at St. Augustine's Church, Queen's-gate, South Kensington, G. Wright Hutchinson, M.D., of Chipping Norton, Oxon, to Bridget, third daughter of William Lane, Esq., of Marston Maisey, Wilts.

LAUTOUR—BARBER.—On November 29, at Hamilton, Otago, New Zealand, Harry A. de Lautour, M.R.C.S., to Harriet Emma, only daughter of the late E. Barber, of Hamilton.

MACAN—WANKLYN.—On January 30, at St. Dunstan's, Cheam, Surrey, Arthur Vernon Macan, M.B., eldest son of the late Judge Macan, of Mountjoy-square, Dublin, to Mary Agnes, younger daughter of the late John B. Wanklyn, of Cheam.

SAUNDERS—HOWIE.—On February 1, at St. Margaret's Church, Lee, Wm. Egerton Saunders, L.R.C.P. Lond., M.R.C.S. Eng., elder son of Deputy Inspector-General Saunders, M.D., R.N., to Serenah, second daughter of Thomas Howie, Esq., of Blackheath.

SPARKS—ELLIOTT.—On February 6, at Clifton Bethesda Chapel, Clifton, Robert Eugene, only son of R. Sparks, M.B., of Belfast, to Catherine Rose, eldest daughter of the late Christopher Elliott, M.D., of Colombo, Ceylon.

WEAKLEY—DRING.—On February 3, at Emmanuel Church, Upton, Essex, Samuel Joseph John Weakley, L.R.C.P., M.R.C.S., of Stickney, Lincolnshire, late of Upton, to Rebecca Hannah, only daughter of Francis Dring, The Briars, Forest-gate.

DEATHS.

BERNARD, MARIANNE, wife of James F. Bernard, M.D., at Clifton, on January 30, aged 64.

BLAND, LOTTIE, wife of George Bland, L.R.C.P., L.R.C.S. Edin., suddenly, at Minster, in Sheppey, on January 26.

GOLDSBROUGH, W. J., M.D., at 40, West-square, Southwark, S.E., on January 29, aged 56.

KENT, WILLIAM HENRY, M.D. Edin., at Becchgrove, Ballyvourney, Macroom, co. Cork, on January 29, aged 57.

LEE, ROBERT, M.D., F.R.S., late of 4, Savile-row, at 15, The Avenue, Surbiton-hill, on February 6.

NORMAN, GEORGE BLAKE, M.R.C.S., late of Ilkeston, Derbyshire, at Manton, near Oakham, Rutland, on February 1, in his 77th year.

SPONG, WILLIAM NASH, F.R.C.S., at Albion-terrace, Faversham, Kent, on January 31, aged 56.

WELCH, MARY, wife of Robert Ryder Welch, B.A., M.R.C.S., at Kenninghall-road, Clapton, on February 3, aged 79.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House-Surgeon. Candidates must be possessed of both medical and surgical qualifications. Applications, under cover, to the Secretary on or before February 24.

KENT COUNTY LUNATIC ASYLUM, BARMING-HEATH, NEAR MAIDSTONE.—Assistant Medical Officer. Applications, with testimonials, to Messrs. Beale and Hoar, Maidstone. Applicants must be unmarried, and are to state their age and professional qualifications.

MALDON UNION.—Medical Officer. Applications, stating age and present occupation, accompanied by testimonials of recent date as to character and ability, to Alfred C. Freeman, Clerk to the Board, Maldon, Essex, on or before February 12.

WESTBOURNE PROVIDENT DISPENSARY AND MATERNITY.—Resident Medical Officer. Applications, with testimonials, to 24, St. Petersburg-place, Bayswater, on or before February 17.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Faversham Union.—The First District is vacant; area 7123; population 6946; salary £92 per annum. Also the Workhouse; salary £80 per annum.

Leek Union.—The Longnor District is vacant; area 25,087; population 3797; salary £40 per annum.

Stow-on-the-Wold Union.—Mr. F. E. Pearse has resigned the Longborough District; area 16,143; population 2489; salary £35 per annum. Also the Workhouse; salary £15 per annum.

Thame Union.—Mr. T. W. Lee has resigned the Great Milton District; area 5728; population 1457; salary £45 per annum. Also the Little Milton District; area 4599; population 987; salary £36 per annum.

Whitehaven Union.—Mr. Walter Somerville has resigned the Gosforth District; area 18,925; population 2191; salary £20 per annum.

APPOINTMENTS.

Bosmere and Claydon Union.—Wm. W. Cuthbert, M.R.C.S., L.S.A., to the Debenham District.

Carmarthen Union.—Morgan Lloyd, M.R.C.S. Eng., L.R.C.P. Lond., to the Conwill and Treleach District.

Clifton Union.—Henry Grace, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Sixth District.

Dewsbury Union.—Sidney T. Steele, M.R.C.S. Eng., L.R.C.P. Edin., to the Morley District.

Godstone Union.—George P. M. Woodward, L.K.& Q.C.P. Ire., L.R.C.S., to the Caterham District.

Hastings Union.—Charles A. Brodribb, M.R.C.S., L.S.A., to the Second District.

Liverpool Parish.—Wm. McAfee, M.D., M.Ch. Ire., Assistant Medical Officer at the Workhouse.

THE HUNTERIAN ORATION.—We are requested to state that the Library and Museum of the College of Surgeons will be closed on Tuesday, the 13th inst., and that the doors will be open to Fellows and Members *only* at two o'clock, and that the Oration will take place at three o'clock precisely.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.—Professor Wilson will bring his course of lectures to a close on Monday next, and will be succeeded by Professor W. K. Parker, F.R.S., who will commence his course of nine lectures on the Osteology of Birds on Monday, the 16th inst. The following is the programme of the learned Professor, viz.:—Introductory Remarks on the morphology of the Vertebrata, and the place of the bird in the sub-kingdom; the main groups of the class, and their geographical distribution—The development of the chick in the egg—The morphology of the vertebrate skull—The morphology of the fowl's skull—The main varieties of the skull seen in the bird-class—The spinal column of birds—The shoulder-girdle and wing of birds, with comparisons—The hip-girdle and leg of birds, with comparisons.—Recapitulation, with general remarks upon the vertebrate form; and conclusion.

LOTION FOR ACNE SEBACEA.—Dr. Hillairet recommends the following lotion to be used several times a day, employing at the same time a bitter *tisane*, frequent laxatives, and vapour douches:—Borate of soda fifteen parts, sulphuric ether ten parts, and water 250 parts.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Received with thanks: Dr. A. J. Steele, St. Louis; Dr. St. John Roosa, New York.

Carnivorous.—The statistics show that in the year 1875 the inhabitants of the United Kingdom consumed nearly 34,000,000 cwts. of butchers' meat. Taking the population at 33,000,000, the quantity consumed gives 114 lbs. per head—men, women, and children.

A. W. C.—The total population of New South Wales at the present time scarcely exceeds 600,000.

Vigilans.—Dr. Priestly, Buffon, and Dr. Jurin were among the first writers who devoted great attention to the tendency to squinting in babies.

Fides.—The Convalescent Hospital at Vincennes was founded in 1857 by the Emperor of the French.

G. L. E.—In 1867, and chiefly through the exertions of Dr. McCarthy, of Melbourne, the Australian Government brought in and carried through the Houses of Legislature a measure placing inveterate inebriates in the same category with insane persons, and providing, in connexion with a Lunacy Amendment Act, for their voluntary admission to any asylum or refuge, or compulsory control and maintenance, should there be satisfactory evidence brought before the Master in Lunacy of the necessity for the step.

M. D., Brighton.—Your application should be addressed to the President; but we are informed that there is not the slightest chance of your request being complied with (not being a Member of the College), as the theatre is not half large enough to accommodate the members entitled to be present.

Mr. Williams, London Hospital.—The late Mr. John Adams, of your Hospital, was one of the Honorary Fellows of the College of Surgeons, of which institution he was admitted a Member on October 3, 1823. His son, Mr. James Adams, is a Fellow of the College by examination.

Ophthalmologist.—We are in no way responsible for advertisements appearing in this journal. The gentleman is a member of the Council of the College of Surgeons, but *not* a lecturer on ophthalmology.

Cuvier and H. M.—Professor Flower will not commence his course of lectures until the 9th prox., when he will give the first of a course of nine lectures on the "Comparative Anatomy of Man," in conclusion of his course of 1873.

Dr. Campbell.—We regret much to confirm the statement that Sir William Fergusson is very ill.

Mr. Williams.—The lamented B. R. Haydon, the grand historical painter, in a letter to Miss Mitford, states that Dr. Elliotson took him to see one of his extraordinary cases of mesmerism, which poor Haydon thoroughly exposes, adding in a postscript, "It was a scene for H.B.: five 'great men' holding a young girl in a catalepsy. O dear! my poor friend Elliotson was evidently deluded, and believed." Notwithstanding this extraordinary delusion, Elliotson was a thoroughly honest man.

FIRE-BURIAL.

The Town Council of Gotha, in Germany, which some time ago resolved upon permitting fire-burial, has now, says a contemporary, also decreed the erection of a "*columbarium*." It will be set up in the projected new graveyard, and is to consist of an open peristyle connecting two halls, in one of which the dead bodies are to be temporarily deposited, whilst in the other the cremation will take place. The walls near this colonnade are to receive the urns with the ashes of the cremation, together with any votive tablets, or other sculpture, that may be added by the family or the friends of the departed. The apparatus constructed by Mr. Siemens will be built into this fire-burial hall for the reception of the coffins. The ancient Germanic practice of cremation is thus to be combined with a Roman institution, and Gotha will have the first *columbarium* of the modern world.

COMMUNICATIONS have been received from—

Dr. Wm. Squire, London; Mr. W. E. Poole, London; Dr. Herman, London; Mr. John Chatto, London; Mr. B. R. Wheatley, London; Dr. George Johnson, London; Mr. J. T. W. Bacot, Seaton, Devon; Mr. Jonathan Hutchinson, London; Mr. George Brown, London; Dr. Barlow, London; Mr. J. W. Hulke, London; Dr. Halstead Boyland, Maryland, U.S.; Dr. Clin, Paris; Mr. J. Bisshopp, Tunbridge Wells; Dr. Max Schuller, Greifswald; Dr. R. R. Good, Paris; Mr. C. J. Egan, British Kaffraria; Dr. Meymott Tidy, London; The Registrar of the Apothecaries' Hall, London; Mr. T. M. Stone, London; Dr. Sparks, Mentone; Dr. Dudgeon, of Pekin; Dr. J. Netten Radcliffe, London; The Secretary of the Army Medical Department, London; Mr. J. Lawrence, London; Mr. Langton, Liverpool; Dr. Duncan, Greenous; Dr. Brinsley Nicholson, Brighton; Dr. H. K. Hitchcock, Lewisham; Mr. S. Messenger Bradley, Manchester; Dr. Bristowe, London; Mr. G. A. Ledeboer, London.

BOOKS AND PAMPHLETS RECEIVED—

Thirteenth Annual Report of the Board of State Charities of Massachusetts—Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S., Medicinal Plants, part 17—Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases, part 17—Thos. F. Rumbold, M.D., The Function of the Uvula and the Prominence formed by the Azygos Uvulæ Muscles—Seventeeth Annual Report of the Cranley Village Hospital—William Pepper, A.M., M.D., The Sanitary Relations of Hospitals—Chas. Thos. Kingzett and Henry Wilson Hake, Physiology and its Chemistry at Home and Abroad—Rev. John Stock, LL.D., Confessions of an Old Smoker—Andrew Wynter, M.D., M.R.C.P. Lond., The Borderlands of Insanity—Edward R. Squibb, M.D., Note on the Administration of Phosphorus; The Age of Science—Henry Heylyn Heyter, Notes on the Colony of Victoria.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Journal of Anatomy and Physiology—American Journal of the Medical Sciences—Obstetrical Journal of Great Britain and Ireland—Home Chronicler—Indian Medical Gazette—Transactions of the Odontological Society of Great Britain—Analyst—Archives of Dermatology—Sanitary Inspector—Practitioner—Students' Journal and Hospital Gazette—Enciclopedia Médico-Farmaceutica.

APPOINTMENTS FOR THE WEEK.

February 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Mr. J. A. Symonds, "On Florence and the Medici."

12. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Woakes, "On some Sympathetic Ear Symptoms." Dr. Thorowgood, "Two Cases of Cirrhosis of the Liver; with remarks."

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. Henry Morris, "On Dislocations of the Thigh; their mode of occurrence as indicated by experiments and the anatomy of the hip-joint."

14. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8½ p.m. Adjourned Discussion on Dr. Smart's paper on Dengue.

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Harveian Society, 8 p.m. Dr. De G. Griffiths, "Fæcal Collections simulating Utero-Ovarian Disease." Mr. Osman Vincent, "On the Anatomy, Pathology, and Treatment of Knock-Knee."

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

16. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. F. Guthrie, "On Solid Water."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 3, 1877.

BIRTHS.

Births of Boys, 1313; Girls, 1252; Total, 2565.
Average of 10 corresponding years 1867-76, 2423·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	800	728	1528
Average of the ten years 1867-76	788·9	776·8	1565·7
Average corrected to increased population ...	...	...	1675
Deaths of people aged 80 and upwards ...	...	...	60

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	7	1	3	...	1	...	1	1	3
North... ...	751729	52	4	2	...	20	2	3	...	4
Central ...	334369	3	2	5	...	6	...	1	...	1
East	639111	20	6	7	1	8	...	...	...	4
South... ...	967692	21	9	6	3	6	3	9	...	6
Total	3254260	103	22	23	4	41	5	14	1	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·808 in.
Mean temperature	43·0°
Highest point of thermometer	51·7°
Lowest point of thermometer	33·7°
Mean dew-point temperature	38·2°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week...	0·42 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 3, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Feb. 3.	Deaths Registered during the week ending Feb. 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2565	1528	51·7	33·7	43·0	6·11	0·42	1·07
Brighton	102264	43·4	71	31	50·3	34·0	42·7	5·95	0·56	1·42
Portsmouth ...	127144	28·3	93	30	51·5	35·8	44·4	6·89	...	...
Norwich	84023	11·2	57	37	51·5	34·0	42·6	5·90	0·56	1·42
Plymouth	72911	52·3	36	27	53·0	35·5	45·2	7·33	0·67	1·70
Bristol	202950	45·6	120	120	54·0	35·7	44·2	6·78	1·33	3·38
Wolverhampton ...	73389	21·6	62	33	52·6	30·1	41·0	5·00	1·23	3·12
Birmingham ...	377436	44·9	297	140	54·2	33·4	43·3	6·28	1·02	2·59
Leicester	117461	36·7	83	45	53·8	34·8	43·1	6·17	0·87	2·21
Nottingham ...	95025	47·6	64	42	53·7	32·1	42·5	5·84	0·81	2·06
Liverpool	527083	101·2	410	321	53·0	35·0	43·8	6·56	1·04	2·64
Manchester ...	359213	83·7	245	213	53·0	34·5	43·1	6·17	2·36	5·99
Salford	141184	27·3	123	91	52·6	31·2	41·8	5·45	2·46	6·25
Oldham	89796	19·2	81	43	...	...	...	...	...	...
Bradford	179315	24·8	125	76	55·4	33·6	42·4	5·78	1·67	4·24
Leeds	298189	13·8	212	110	55·0	34·0	43·4	6·33	1·40	3·56
Sheffield	282130	14·4	198	113	53·0	32·5	43·3	6·28	2·04	5·18
Hull	140002	38·5	104	63	52·0	32·0	40·5	4·72	0·82	2·08
Sunderland ...	110382	33·4	82	60	55·0	30·0	43·9	6·61	0·45	1·14
Newcastle-on-Tyne	142231	26·5	122	59	...	...	...	...	...	...
Edinburgh	218729	52·2	127	89	51·0	31·0	39·6	4·23	2·03	5·13
Glasgow	555933	92·1	398	268	...	...	...	...	...	...
Dublin	314666	31·3	177	158	56·7	32·2	43·3	6·28	1·13	2·87
Total of 23 Towns in United Kingdm	8144940	38·3	5857	3697	56·7	30·0	42·9	6·06	1·20	3·05

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·81 in. The lowest reading was 29·20 in. on Tuesday, and the highest 30·09 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

THE HUNTERIAN ORATION.

DELIVERED AT THE ROYAL COLLEGE OF SURGEONS, ON TUESDAY, FEBRUARY 13,

By SIR JAMES PAGET, BART., D.C.L., LL.D., F.R.S.,
Serjeant-Surgeon Extraordinary to H.M. the Queen;
Surgeon to H.R.H. the Prince of Wales;
Consulting Surgeon to St. Bartholomew's Hospital, &c.

MAY it please your Royal Highness, Mr. President, my Lords, and Gentlemen,—I have no doubt that it is my first duty to offer to your Royal Highness the thanks of the whole College of Surgeons for your presence here to-day. In honouring the memory of John Hunter you make us more than ever proud to be the guardians of his Museum and his reputation; you make us more than ever anxious to promote that true scientific surgery of which we reverence him as the great founder. And we shall venture to believe that your Royal Highness approves the efforts of this College for the public welfare, and is anxious to promote the sciences, in the cultivation of which our reputation and our utility are maintained. On all these grounds, and on many others that need not be told to-day, I venture, for the whole of the College of Surgeons, to render to your Royal Highness our very respectful and our grateful thanks.

When time and the favour of my colleagues in the Council brought to me the occasion of delivering the Hunterian Oration, I thought it right to study afresh the character of John Hunter: and now I beg your leave to tell some of the facts and thoughts to which, in my study, I have been led—chiefly to tell, if I can, what were the motives of John Hunter in his scientific life, and what were the chief characteristics and methods of his work; to tell also some of his achievements and the lessons that may be read in the story of his life. I may thus, I hope, however imperfectly, fulfil the design of the founders of the Oration, by promoting the honour of John Hunter, and perhaps even the advancement of surgery, by showing in his illustrious example the good influence of the scientific mind.

The motive which at first urged John Hunter to the pursuit of science seems to have been only the necessity of earning his livelihood. For we find him at first, as the youngest child of a Scotch laird, idle, and negligent of education. In the first twenty years of his life he showed no desire for the knowledge of science or any of the arts that minister to it, or, indeed, for any intellectual pursuit whatever. We find no tales of early enterprise, no childish love of nature, no signs of the future mental power. When he was seventeen he tried to assist a brother-in-law who was a bankrupt cabinet-maker at Glasgow, and it seems probable that, if he had been successful, cabinet-making might have been the occupation of his life. But happily he failed. His brother-in-law was past helping, and then, after two years more of idleness, what was next to be tried? His brother, William Hunter, was prosperous in London, and was beginning to be esteemed as a great teacher of anatomy and surgery: so he offered to assist him in his dissections, and if that should fail, he would go into the army. Thus in mere idleness, or of necessity, with no other reason than that there seemed nothing else to be done, John Hunter drifted into the opportunity of scientific study,—drifted into the career in which he was to become great among the greatest men of science, and among all the surgeons of all times the most renowned.

It seems strange that a mind so remarkable, so vigorous, and self-willed as John Hunter's proved, should not have shown or felt some consciousness of its power till it was brought to scientific study. He had not lived in darkness or among dull people. His father was a shrewd and sensible man; his mother was well educated; both his brothers, and at least one of his sisters, were persons of remarkable mental power. Among these his mind had had opportunities of culture and of exercise, but he neglected them as if they were to him useless. And he had lived among the same wonders of the organic world, the same truths and utilities in nature, as moved him in his later years to restless study. But he passed them all by unheeded; no desire of knowledge was stirred in his mind till he came into the presence of scientific men at work. It may be that now, for the first time, his mind had reached the maturity necessary for the desire of scientific knowledge; but I think it was rather that now, for the first time, he found in the society of his brother both the objects and the method of work for which alone he was naturally fitted. In 1748, when John Hunter came to London, there was great intellectual activity in all the medical sciences; and William Hunter was in the midst of it. He was an intimate associate of the best minds of the time; the best lecturer on, and the best teacher of, anatomy; fluent and well-read; enthusiastic in his devotion to science and to art; a very keen observer and a laborious collector, willing to devote all that he could earn in practice to the increase of his Museum and his means of teaching. We may, indeed, count William Hunter as the first great teacher of anatomy in England; the founder of the first great school; and, among all the biologists of his time and country, second to none but his brother.

Now, to pass from idleness in a Scotch farm into an activity of life such as Hunter found here, was like being born into a new world; and this was the very world, if not the only world, in which the best parts of his mind could live and grow. For he had a natural fitness for the study of living things. For other things he seems to have had no more desire or capacity of knowledge than ordinary men have. But this natural fitness was, in the first instance, wholly intellectual. There was no love or desire in it, and so the mind had no motive power until it was set to its right work, and in work found happiness. For the happiness of intellect is in its work; that of the highest intellect in vigorous self-guided work. The highest intellects find the happiness, the desire of which is their energising motive, not in the reception or in the mere possession of knowledge, but in the process of acquiring it and of using it in thoughtful exercise. Moreover, to some intellects, and among them some of those by whom the greatest results in science have been achieved, there is but one kind of knowledge which satisfies either in the getting or the having. To Hunter there seems to have been no great intellectual happiness except in the pursuit of the knowledge of living things; and to this he was now brought, and hence onward there was no lack of motive. The mind that had been idle, heedless, and aimless had come to its right field of action, and in that field every opportunity of intellectual pleasure and exercise was offered to it, and it grew into capacity for all. Gradually the desire for knowledge grew to be an insatiable passion, a motive to incessant work.

With this passion another coincided. Hunter had a passion for collecting. He may have learned it of his brother, or he may have only followed the fashion of the time, which was as dominant then as it is now; but I think it was natural to him—a natural instinct for gathering and keeping: and it worked with his desire for knowledge, and each continually animated and provoked the other. It cannot be maintained that Hunter's desire of collecting was only secondary to his desire of knowledge. Science gave it its first and chief direction; and his great ambition was to have a grand museum, richly illustrated with catalogues and drawings. If he could, he would, I believe, have collected everything by which he might show to himself and his friends every great fact in biology that he could find. But even this would not have satisfied his love of collecting. He collected a crowd of things besides, that must have been useless even to himself, and must have helped to keep him poor—pictures of considerable cost; engravings; works of art in ivory, bronze, and marble; stuffed birds; and implements of savage warfare. With all these, his house in Earl's Court must have looked like a curiosity shop. This may easily be pardoned. No earnest collector ever yet bound himself within the limits of science, utility, or prudence; and if an extravagant love of collecting, silly as it often is, need be apologised for, the example of John Hunter may be quoted; for it led him constantly into wider and deeper ranges of study, and it incited him to the industry and skill with which he collected the great stores of facts that are treasured in this College. Gathered around them now are the museums of the College itself, twice as large as his own; and they form what Hunter longed to see—the greatest and the best museum of anatomy in the world.

One other motive of Hunter's scientific life must be mentioned. He was a master in all the arts of anatomy—dissecting, injecting, and all the then known ways of displaying specimens. I suspect that his first success in life was that which is told of his first dissection. It is said that he was so fond of this study that it was among the motives that induced him to go beyond the study of human anatomy into that of comparative anatomy, which before his time had hardly been pursued in this country.

These were the motives of John Hunter's scientific life; and they deserve study, for he led that life with as much

purity and simplicity as any man. Doubtless, as we read his biography, we may trace the influence of other motives which added to these their various forces; but they were all casual and subordinate, altogether outweighed by the constantly increasing power of those which I have mentioned; and chiefly by the desire of knowledge: and that desire continually increased in him with indulgence, with contest against difficulties, with the constant presence of new objects for his study, and with the encouragement of success. He filled himself with knowledge, and through knowledge he became an ardent lover of nature. I say "through knowledge," for Nature in her manifold perfections inspires many kinds of love, and Hunter's was almost wholly intellectual. He had none of the love which moves the poet, or the idealist, or the theologian; for, in truth, neither poetry, nor idealism, nor theology ever coloured the simplicity of his scientific mind. He had the social love of nature, and he writes and speaks of the animals around him as if they were his companions. But his chief love was for the charms of truth that lie hidden beneath the veils, the appearances of nature; and his love for these was continually increased when every search revealed the utility of all he saw, the perfection of adjustment of everything to its purpose, the evidence of design in every change, the evidence of grandeur in a world of infinite variety of form, held steadfast by few laws. All these were motives to fresh study, and I cannot doubt that he attained to that great achievement and satisfaction of the intellect when it can rest in a loving contemplation of the truth, loving it not only because it is right, but because it is beautiful. I cannot doubt that there is given to some high intellects, in view of a great field of scientific truth, a source of as pure delight as are the sensuous beauties of nature to the cultivated artist-mind, or virtue to the enlightened conscience. Hunter had a pure, calm happiness in such contemplation. So Reynolds, his friend, seems to tell of him. For in that masterpiece of portraiture which teaches like a chapter of biography, Hunter is not shown as the busy anatomist or experimenter searching for objective facts; the records of his works are in the background, and he is at rest, looking out, but as one who is looking far beyond and away from things visible, into a world of truth and law which can only be intellectually discerned. In the clear vision of that world was his reward. It may be the reward of all who will lead the scientific life with the same devotion and sincerity.

Let me now speak of some of the characteristics of his work and of his method. That which first and always strikes one is the vast quantity of work that he did. It is recorded of him by one of his pupils that he "rose regularly at the dawn of day, and never ceased from his labours until the night was far advanced"; by others, that he allowed himself only five hours for sleep; and by another, that when he gave him a letter of introduction he was asked to call on him the next morning at five o'clock, and at that hour he found him already at work in his museum. Such as these were the habits of Hunter for at least the last thirty years of his life. And, reckoned in mere quantity, few men have left so large results of scientific labour as Hunter did. Besides the four published volumes of his works, he left many in manuscript, all written or dictated by himself. There is evidence that he dissected the bodies of 500 species of animals, and, of some of these, several examples. He left records of 300 of these dissections, and these included none of his studies of human anatomy, or of the hundreds or even thousands of morbid structures which he examined. His museum contained nearly 14,000 specimens; and all these were either prepared, or at least very closely studied, by himself: and this was the work of about thirty years, during the whole of which he was in the active practice of surgery. Even his "amusements," as he calls them, were such as idle men would call hard work. "I amuse myself," he says, "with bees"; and the result of his amusement is in essays, which the best recent writer on the subject calls almost faultless. They might have served alone to gain for him considerable scientific reputation. In evidence of the quantity of work which he would devote to a single subject, let me read you what he states of his observations on the development of young birds in eggs. After many trials which were, to him, unsatisfactory, to investigate the subject in the eggs of chickens, he says, "I kept a flock of geese for more than fifteen years, and by depriving them of their first brood in my investigations, they commonly bred again the same season. And as hours make a difference in the first days, it becomes necessary to examine in the night as well as in the day, by which reason the latter brood in the summer is best adapted, having then short nights." Surely one might suppose that this was the one great work of his life,—this hourly examination by day and night over parts of fifteen years. Yet it seems, in truth, to have been only a casual by the way pursuit. He became, indeed, so enchanted with the study of young birds in eggs that he says "it would almost appear that this mode of propagation was intended for investigation." But though he reached very far beyond the results obtained by any before him or in his own time, he did not publish the results, and they were not known until many years after his death.

The range of Hunter's work matched with the time devoted to it. Never before or since—I think I am safe in saying this—was anyone a thorough investigator and student in so wide a range of science. He was an enthusiastic naturalist; as a comparative anatomist and physiologist he was unequalled in his time; among the few pathologists he was the best; among the still fewer geologists and students of vegetable physiology he was one, if not the chief; and he was a great practical surgeon. He was surgeon to a large hospital in London, and for many years held the largest practice in the metropolis. In all these things at one time no one but Hunter ever was eminent and successful. For it is not only in the range of his study, but in the thoroughness and depth of it, that he is distinguished. It is not possible, indeed, to point out by examples the thoroughness of Hunter's studies. Let it suffice to say that in the whole range of subjects which I have just now indicated he studied as thoroughly as was possible. There is not one of them in which he did not make investigations wholly original,—not one of them of which he did not enlarge the area very far beyond that which had been covered by his predecessors,—not one of them in which he did not leave facts and principles on record which it is impossible to count and very hard to estimate.

In all these characters of Hunter's works we see that which was the dominant character of his mind—massiveness and grandeur of design were indicated in all to which he applied himself. And in perfect harmony with this was the simplicity of his ordinary method of work. It consisted mainly in the orderly accumulation of facts from every source, of every kind, and building them up in the simplest inductions. If he had been an architect, he would have built huge pyramids, and every stone would have borne its own inscription. He knew nothing of logic or the science of thought. He used his mental power as with a natural instinct. He worked with all his might, but without art. I know no instance so striking as is in him of the living force which there is in facts when they are stored in a thoughtful mind.

But Hunter was not only a great observer, he was a very accurate one. I think it would be difficult to find in all the masses of facts which he has recorded any one which was either observed or recorded erroneously. If there are errors in his works, they are the errors of reasoning, not of observation. And it may be noted, as a singular example of his accuracy, that when he tells his inferences it is generally with expressions implying that he regarded them as only probable: a fact he tells without conditions; when he generalises, it is with "I suspect," "I believe," "I am disposed to think," or the like. And I believe there cannot be found one instance in which he endeavoured to add to the force of evidence by any strong assertion of his own opinion, as if his opinion should be taken for weight in a balance of testimony. Nay, there are very few instances in which, on any of the larger questions of biology, Hunter speaks with any positiveness at all. No one seems to have known better than he did that, in science, strong convictions are not usually the signs of knowledge. He seems to have thought he had never reached farther than the nearest approach to truth which was at that time attainable, and that a year or more of investigation would bring him nearer to the truth, and then that which now seemed right would be surpassed or set aside. He used to say to his pupils in his lectures, "Do not take notes of this; I dare say I shall change it all next year."

Another instance of this singular caution was in the slowness with which he published. He was at work for eighteen years before he published anything in his own name. He was forty-three when he published his first work, that on the Teeth; and for his great work on the Blood and Inflammation he may be said to have begun collecting materials while he was a student. Some of the experiments recorded in it for the

first time were made while he was House-Surgeon at St. George's Hospital; he worked at it for forty years, and he had only just begun to print it when he died.

And his patience was equal to his caution. Abernethy, who knew him well, says—"It is scarcely credible with what pains Mr. Hunter examined the lower kinds of animals," and he quotes Mr. Clift as saying that "he would stand for hours motionless as a statue, except that with a pair of forceps in either hand he was picking asunder the connecting fibres of some structure" that he was examining. A very striking picture this,—for this was in the last year of Hunter's life. He was growing old, and he had lately been very ill, and he knew that he was in constant peril of that sudden death in which at last he fell; yet he would stand for hours motionless as a statue; patient and watchful as a prophet, sure that the truth would come: it might be in the unveiling of some new structure, or in the clearing of some mental cloud; or it might be as in a flash, in which, as with inspiration, intellectual darkness becomes light.

Now, in these things we may discern that, in the character of Hunter, the massiveness and grandeur of design of which I have spoken, and which were matched with a strong will, and a power nearly equal to them, were combined with a singular scientific prudence; and yet he was very fond of scientific enterprise and speculation. The characters may seem incongruous: but they are met with in the most attractive minds, and they may be studied in Darwin and in some others, the best of our own times. His enterprise was shown in his devotion to experiment. If there were one kind of truths which he preferred before all others, they were those which he could thus obtain. He seems to have had a keen delight in the condition of the scientific mind in which it stands waiting for the solution of a problem which itself has made—standing always, as it were, in the presence of the about-to-be-known. And, as he was always projecting his mind beyond his knowledge, thinking out beyond the course of facts which he could discern in the normal course of nature, so he made every question that he could the subject of ingenious experiment. He used to say to those about him who seemed too fond of thinking about matters that might be known, "Don't think; try; be patient; be accurate." And yet, when he came beyond the reach of observation or experiment, there were few who were so bold in thinking as Hunter was; and I believe that his long practice in the art of experiment justified him in this, by training and educating his mind for more distant enterprises. For a well-devised experiment, such as many of Hunter's were, deserves the name of project, in that the mind, throwing itself forward in advance of facts already ascertained, discerns that the truth must be in one of two, or a few more, probabilities, and then devises means for deciding where it is; and a mind which has been long trained and practised in this art acquires sometimes the power of thinking out very far beyond the range of facts, and of discerning far off, and even sometimes from a standpoint of partial error, some great truth. Hunter seems to have possessed the power, in a very remarkable degree, of thus thinking the truth. For example, he thus thought the truth that the blood is alive, and that not in any supernatural or transcendent sense, as others before him had thought, but in the same sense as are all other parts of the same living body. This was a true discovery of which he saw all the bearings, and it led him to the first steps in a true pathology of the blood. Yet, if we look at the facts on which he based it, we must believe now that they were very insufficient, and we must assign the discovery mainly to the force of a strong, clear mind, looking out far beyond its facts.

So in another instance, in the observations which I have just quoted on the development of the bird within the egg, he discerned that marvellous law in development, that every higher creature in its passage from its embryo to its perfect state passes through a series of changes, in each of which it resembles the perfect form of some order lower than itself. And this was no mere lucky guess just made and then left. Hunter saw the fact in all its force, and it became to him a fruitful doctrine.

And I find at least one instance of his projecting his mind far into a doctrine of evolution. When writing on hermaphroditism, which he studied very carefully, he says, in a footnote—"Query: Is there ever, in the genera of animals that are natural hermaphrodites, a separation of the two parts, forming distinct sexes? If there is, it may account for the distinction of sexes ever having happened."

It is not strange that one who could thus sometimes think out rightly far beyond the truth, should strive for a decision on that great question in physiology which, from the earliest days of scientific inquiry, has never ceased to be discussed,—the question, What is life? Hunter strove for a decision on it, and his opinion had great influence upon his own pursuits, and much more, for a time, on his reputation and his influence in science. He spoke of life as a vital principle—as something separate from organisation; and although he spoke also of a *materia vitæ diffusa* and a *materia vitæ coacervata* in the brain, yet I think he did not regard it as material, or any property of matter. I believe that he meant by vital principle that which Joseph Henry Green—the most eloquent and philosophical of his interpreters—held: "a power anterior in the order of thought to the organisation which it animates, sustains, and repairs—a power originative and constructive. But Hunter could not clearly express this, and I believe he could not clearly think it; for he wrote upon this and several allied subjects very obscurely—so obscurely, that we cannot but believe that his own mind was in uncertainty. And this, I think, we must assign to one of the few intellectual defects we can discern in him—namely, a singular inequality in the powers of language and of thought. In every mind, thoughts and words are so closely interwoven that each shares always the qualities of the other. Thoughts and words are like mutual reflectors; if either of them distorts an object placed between them, the other cannot but receive the distorted image and reflect it. Or, each is alternately master and servant. Now, thoughts use words for their expression, and then the words take part in directing the next thoughts; if either be erroneous or defective, the other suffers with it. Now, Hunter was a great master of facts; and in plain and customary English he could with great power collect, compare, arrange, and construct whatever might be made of them. But he was not a master of words. His strong, large mind does not show in any instance that subtlety which, whether in thinking or in writing, can use accurately many words of scarcely different meanings—a power which is essential to the discussion of abstract ideas, and the want of which not only hinders the expression of thought, but hinders even the process of thinking.

This defect in Hunter was, I believe, a natural one. Most of the defects that might be assigned to imperfect education he corrected in his later years; but to the last he was, whether in thinking or in writing, in language most incomplete; and his mind, strong as it may have been for thinking, was hindered and baffled by its weak associate. Nevertheless, however incomplete his idea of the vital principle may have been, he used it very wisely as an hypothesis. It guided him continually to large ranges of study; it enabled him to throw off the shackles of the erroneous chemical and physical doctrines of life which had prevailed in his time; and it served as a single band to hold together all the subjects of his study. Moreover, some of his pupils made it the groundwork of his reputation; and although it was neither a new doctrine nor one essential to his system, yet it became a chief dogma of his school, and it served, at least, the useful purpose that in a time of need it kept alive the influence and reputation of his great name.

But what I think is most to be observed in respect to the character of Hunter on this point, is the very careful estimate he made of the relative value of hypotheses and facts. He bore well that severest test of the scientific mind, the test of its power to resist subjection to its own hypotheses. Feebler men worship the works of their own minds; they fall down before their own idols made of words; they have more confidence in what they call their principles than they have in plain facts. It was not so with Hunter. He may have admired the hypothesis of a vital principle, and he used it very wisely, but he admired much more the accumulation of facts, and the plainest inductions from them. He gathered them as with avarice, he stored them up in memory and in manuscript, and he read in them as he best could the laws of life. This was the principal, the best, the abiding part of his work; and hence came his greatest influence in science.

But in the mind of Hunter, thus careful in observing and bold in thinking, we have an epitome of the whole course and temper of biology. It is eminently a science of observation; and yet none who love to think can study the phenomena of life without asking themselves, What is life? or even beyond this, Whence is it derived? An imperious instinct commands us to look beyond or beneath the phenomena. We cannot believe it to be impossible that

we should reach far beyond the evidence of the senses; and when beyond phenomena we discern, as we believe, the operation of forces measurable and correlated, still we cannot stay here. For the knowledge how forces act tells us nothing of their origin; and this, especially in respect of life and mind, is what we most earnestly desire to know,—What is life? and Whence is it derived? Is it a power anterior to the organisation? Is it a power originative and constructive?

Now, I cannot doubt that in the doctrine of the correlation of physical and vital forces we are nearer to the truth than we were in the Hunterian doctrine, which held that life is something altogether alien and different from other means or methods of activity. But the holding the correlation and mutual conversion of the forces does not determine the precedence of either the one or the other. If the vital and physical forces are mutually convertible, either may have preceded the other; the vital force may have preceded the physical, although life appeared late upon this planet, in any of the phenomena in which we can now study it. And even if we were to hold the possible conversion of physical or vital into mental force, into consciousness and will (though against this what I believe to be my consciousness and will are utterly repugnant), yet this would not prove the precedence of the physical force. The opposite conversion can be as well or as ill traced. Mental forces may have preceded physical; mind may have existed before any of the properties of matter; and thus, even in the view of science, the first essence may have been a Being willing and knowing, and the prime source of all the forces whose operations we now trace. I believe there is not anything in science to disprove such a belief as this; but I doubt whether it be within the power of science to determine an order of precedence among the forces. I cannot imagine anything before a natural force except a supernatural will; and a belief of this kind is held by untutored minds, as if it were instinctive knowledge. For man seems naturally prone to believe that, beyond all that there is in the world, there must be a mind, or minds, in the likeness of which his own is made, and with which he is in some kind of personal relation. But science cannot yet reach to the proof of these things; and until it can reach to proof science cannot rest and must not rest; but the firm and life-guiding belief that a supernatural Will and Knowledge was, and is, and will be, rests on the whole and manifold evidences of the Christian faith. These may seem often opposed to what we believe to be true in science. Then let us wait. Time—or, if not time, eternity—will prove that science and the Christian theology are as two sides of truth, and that both sides are as yet only known in part.

I pass from this, which may seem a too far digression, that I may speak of one character of Hunter's mind which seems to have remained unchanged even from the days of his idleness on the Scotch farm. I mean the unconsciousness of his own mental power. He could be provoked in his later life into saying that he knew he was better than some of those that spoke ill of him; but he said he felt a mere pigmy in the presence of the work he had to do; and even the sensitiveness and vexation with which he sometimes speaks of rivals is enough to prove that he doubted whether he had done work good and great enough for permanent renown. He stands, as he stands all other tests, so this of mental greatness—well,—the test of self-unconsciousness; and it is happy for science that he did so; for if Hunter had thought of himself as we think of him—wherein, we must admit, he would only have thought justly,—he must have lost his time, being self-enamoured, in seeking work that would be adequate to the grandeur of his mind, or putting his mind in attitudes that might command just homage. And, according to his own judgment, he would have failed; for, as he wrote with more than usual disparity of words and wisdom, "There never was a man that wanted to be a great man ever was a great man."

And now, what were some of his achievements? What was his influence in science? We have seen that his work was various; so were its consequences. Hunter worked at life in both health and disease; and in his mind they were manifestations of the same power and design, although sometimes in diseases often overborne; but he held them to be parts of one science to be studied alike. Yet he had too much common sense not to see the broad practical differences between health and disease, and he studied them separately, and he taught them separately; and in estimating his influence on science, we must make a similar separation. His greatest work was on Physiology. Holding under that name the science of the whole normal life of all things that live and have lived, he grasped it with the widest mental grasp. He saw and he taught the way to the whole science of life. And this he did as of his own force. He neither followed other men, nor merely drew a plan on which other men might work; but with his own mind he planned, and with his own hand he wrought, a larger and truer work in the whole science of life than any man before him. And in this work no man succeeded him. His lesser work, great as it was,—greater, I believe, than that of any man before or since,—was in Pathology; and the influence of this lesser work was greater than that of the greatest of the achievements in physiology. For from among his pupils there went out all the great surgeons of the time next after him—Abernethy, Astley Cooper, Cline, Home, and Blizard. These all boasted of being his pupils; they all taught after his method, and they made that method a tradition in the schools. Hunter was thus, in the fullest sense, the founder of a school of surgery. But from among his pupils there went out not one who devoted himself to physiology; not one who worked at it as he did. And although he was an active and influential member of the Royal Society, intimate with all the leading men of science of his time, the founder of a scientific society of his own, yet in his study of comparative anatomy and physiology not one of the younger men of science followed him. In all these deeper studies of life Hunter had not one disciple.

Now, how may we explain so marked a contrast as this? I believe by the different levels of men's minds at that time in the two subjects. There was not, at that time, in this country either capacity or desire for any of the deeper studies of life. There was, as we say, no taste for them: for no one but Hunter had at that time tasted intellectual happiness in the study of them. It was not so in pathology. The practitioners of medicine and surgery were willing and able to receive his teaching; and although, during his lifetime, it never excited enthusiasm, yet the best of those who heard it could not but see that it was the right way to truth. In comparative anatomy and physiology, Hunter was in advance of his time; not far in advance, for Cuvier and Meckel quickly followed; and then these sciences became, as they have remained ever since, pursuits of the largest intellects. It may well be, that if Hunter had been more apt to teach he might have made more disciples. Some men, by mere personal influence, can make them. Hunter had none of the power by which these men make their schools. He had no attractions easily to be felt; he was too busy and occupied to exercise influence over men. His lectures are said to have been dull and tedious, and ill-delivered; and there was really nothing but the power and example of his work that could move men to follow him. These were enough in medicine and in surgery; they were not enough in the deeper sciences of life. And so it came that when Hunter died, poor, and with his work half finished, there was not one who could complete his unfinished essays, or write the catalogues of his collections; there was not one who knew the extent or depth of the work he had done. His works had been like the waves in advance of the on-coming tide. A few of those that watched them thought them beautiful and grand; but they broke on the shore in what seemed like only trouble and confusion, and the tide passed over them and hid the treasures they had borne.

It was not till Owen came that the treasures were recovered; and by that time others had done the work of Hunter, and had reaped the just reward. But Owen showed—partly in his catalogues of the Museum, and much more in his two volumes of Hunter's Essays and Researches—how great and various Hunter's work had been; how great beyond that which was shown in the essays which he had published. As Mr. Flower has written of him—"Hunter had, before the time of Cuvier and Meckel, collected materials for a work which needed but the finishing touches to have made it one of the greatest, most durable, and valuable contributions ever made by one man to the advancement of the science of comparative anatomy."

It may seem useless to dwell on these things, and to revive the vain regret that not Hunter alone, but England, lost so great renown. But it is not useless to indicate the grandeur of the character by which our English (I mean, of course, our national) school of surgery was founded; for it is only by imitation of the founder that the worth and merit of the school can be maintained.

Hunter's chief renown in surgery is told by saying that he was the founder of scientific surgery; and so he was, for he first studied and he first taught in the light and with the methods of a large physiology those very processes of disease and repair

with which the practice of surgery is concerned. There were excellent surgeons before him and in his time,—sagacious, observant, practical men,—by whom surgery was being rapidly advanced in both utility and precision. Not to speak of the members of the French Academy, there were in this country alone three at least—Cheselden, Percival Pott, and William Sharpe. Of the first two Hunter was for a time a pupil, and it is great praise of him as a practical surgeon to say that he was worthy to be their successor; but before the time of Hunter surgery was the surgery of experience alone. In so far as it was a science it stood by itself. It had hardly any connexion even with medical science; and with the sciences beyond medicine it had no relation whatever. Between surgery and physiology there was a broad distance. No one strong mind had ever held them both, and seen that they were parts of one science, each to be studied by the other's light, each to be the test of the other's truth. This was Hunter's great work. He brought the scientific method into the study of practical surgery; he welded scientific knowledge with the lessons of experience. And in all this Hunter was not only a great thinker, but he was a great worker. As I have said of his work in physiology, so I may say of this—that with his own mind he planned and with his own hand he did the work, and he left behind him facts and general principles in surgery which it is literally impossible to count.

But while I thus speak of Hunter's scientific surgery, I desire to correct an error into which, I think, some of his eulogists have fallen, when they have implied that the whole of Hunter's practice was founded upon his scientific knowledge, and that no practice can be sound which is not derived either from pathology or physiology, or is at least consistent with what we believe to be true in them. Now, as for Hunter —and herein again, I think, he may be our model,—he was very cautious in making deductions. No one seems to have known better than he did the danger of reasoning from physiology into practical surgery. As he says, "The man who judges from general principles only shows ignorance. Few things are so simple as to come wholly within a general principle. We should never reason on general principles only, much less practise upon them, when we are or can be master of all the facts; but when we have nothing else but the general principle, then we must take it for our guide." It is in obedience to the wisdom of this principle that in all his works of surgical practice it is difficult to find out that he was a great physiologist. In his work on "Venereal Disease," I believe there is not one sentence that would clearly tell it; and even in his great, and chiefly physiological, work on the Blood and Inflammation, he very seldom draws any deductions from physiology, and even the deductions from pathology to surgical practice are very few. We can see in every one of his works the same scientific mind, the same earnest desire for the collection and accumulation of facts, the same plain reading out of them, the same swiftness and accuracy in generalising; but the great effort of all is to be "master of all the facts," and then from them to draw the plainest conclusions.

A striking instance of this is in Hunter's great achievement in surgery—the invention of the operation for the cure of aneurism by tying the artery far above the seat of disease. This was no laborious result of physiological induction; it was a plain result of facts collected in the wards and in the dead-house. I shall not discuss Hunter's claim to the discovery of this operation; it is as clear as the discovery of any fact in science. But if there must be arbitration between Anel and Desault on the one side, and Hunter on the other, or between France and England (for it has been almost made a national question), let the Italian, Assalini, be the arbitrator; for he had the singular good fortune to see three decisive operations. In 1781 he saw Spezzani at Padua tie the femoral artery previous to an amputation of the thigh for popliteal aneurism; in June, 1785, he saw Desault in Paris tie the popliteal artery for popliteal aneurism, which he did not, according to the then prevalent practice, lay open; and in December, 1785, he saw Hunter at St. George's Hospital tie the femoral artery in the sheath of the triceps muscle for the cure of the same disease,—and this operation, he says, "excited the greatest wonder, and awakened the attention of all the surgeons of Europe." It was indeed a splendid achievement, and its utility is not half told by counting the thousands of lives which it has been the means of saving; for its yet greater utility is that it still abides as a testimony of the value of the scientific mind in the practice of surgery.

Such was Hunter's great work in surgery, and this it is which still abides; for, since the time of Hunter, science has never yet been absent in the teaching of our schools. Since his time the teaching of practical surgery has never been divorced from the study of biology. They have been cultivated in various degrees in various schools by different men, but both have held their ground, and both will still increase and grow. Yes; both will increase, though the great master of the art, the greatest practical surgeon of our time, is gone. Men will no longer watch those eyes that were so keen, nor try to imitate those hands that were so strong and yet so sensitive, so swift and light; nor wonder at the keen and clear perception, the prompt invention, the perfect calmness in the greatest difficulties. All these are gone, and with them are gone those things that endeared him to us still more—the warm heart, the friendliness, the generous rivalry, and the social grace. These are gone; but Fergusson's lessons will still remain amongst us; and among them will be this, that every man, according to his ability, should have both art and science —should work with both as with both hands, as with one mind and one design. It was thus that Hunter wrought in surgery.

These are some of the works that Hunter did for surgery; and now mark what he did for surgeons. Before his time they held inferior rank in the profession. There were some among them—men of great personal ability—who gained high rank, as Wiseman, Cheselden, Hawkins, and Percival Pott: but for the most part they were subordinate to the physicians, and very justly so; for the physicians were not only better learned in their own proper calling, but were men of much higher culture —educated gentlemen and the associates of gentlemen. Besides, they were the chief teachers of the medical sciences. From Hunter's time a marked change may be seen. Physicians worthily retained their rank as they do now, and surgeons rose to it; and surgery, in the lessons of Hunter, repaid medicine for the teachings of a century. After his time surgeons came to be the chief anatomists, and took a fair share in the teaching of all the schools; and they gained entrance into the ranks of the most cultivated class. Yes, more than any man, Hunter helped to make us gentlemen; and the lesson of this fact is very striking. For it was not by any personal qualities, it was not by wealth or social skill that he did this. There are but few records of what manner of man he was; but they tell that he was a rough and simply mannered man, abrupt and plain of speech; warm-hearted, and sometimes rashly generous; emotional and very impetuous, quickly moved to tears of sympathy, as quickly ablaze with anger and fierce words; never appearing to those about him as if he were a man of large mental power; never personally attractive; and far too busy to influence those about him;—and so he had but few friends, and he obtained the personal regard of very few, and no man paid him the homage of mimicry. The whole of the influence which he exercised on surgery and surgeons was the influence of the scientific mind. What follows? Surely, that if we are to maintain the rank of gentleman, if we are to hold this highest prize of our profession, it must be by the highest scientific culture to which we can attain; and to this we are bound, not for our own advancement alone, but by the plainest, strongest motives of our duty.

These are some of the grounds on which, beyond all question, Hunter's memory deserves the honour that we pay to it to-day. There are many more than these, but in want of time I have omitted some, and in want of just appreciation of him I have omitted more. Whatever one might tell of his honour to-day, his claim to honour is not closed, for the influence of men like Hunter extends far beyond the time and space of their own conscious activity: their true thoughts live after them: they not only endure and remain, but in the continuity of mental life they really live; they pass on from one generation to another, and in each succeeding generation they grow and are developed, and come nearer to perfection. Thus the true thoughts of Hunter still live in us, and when we do honour to his memory, we do it not as to that which is past, but to a power still abiding with us doing good. His true thoughts still live in us, and they will live beyond us, never ceasing to urge and help men onwards in the pursuit of truth. For in the world of mind he that is mortal may produce that which may have immortality.

INTERNATIONAL MEDICAL CONGRESS, GENEVA.—A sum of 10,000 fr. has been granted by the Swiss Federal Council for the printing of the protocols of the next International Medical Congress, which is to meet at Geneva.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XV.

WOUNDS—*Continued.*

Continuing the subject of *Wounds*, as understood in legal medicine, commenced in last lecture, I now come to advert to—

3. *Contusions and Contused Wounds.*—I class these together for obvious reasons. The forcible contact by which these injuries are produced may give rise to effects on the human body of three several kinds, viz., (1) Concussion, (2) Contusion, and (3) Disorganisation; and these effects may be coincident with a wound, the extent of which may vary from a simple excoriation up to the most extensive solution of continuity.

These distinctions, however convenient in practice, must not, nevertheless, be pressed too far. Though, for all practical purposes, we may admit the occurrence of contusion apart from concussion, or of contusion apart from either concussion or disorganisation, the three different effects of the injury are perhaps seldom or never met with singly. Thus it has been forcibly urged, of late especially, that such a concussion or shock as would give rise to serious or alarming symptoms could not be received by the body without contusion or disorganisation, outwardly or inwardly, to some extent, at the same time; and *vice versâ*.

(1.) As regards *concussion*, it has been held that one effect invariably succeeding the forcible and sudden contact of the body with some hard or resisting external substance, is such a disturbance of the system as is best characterised by this term. The extent of injury thus produced will usually be found to vary with, *first*, the intensity of the impulse, *second*, the consistence of the part impinged against, and *third*, with the form of this part. These results manifest themselves in disorder of the functions of *the nervous system*—the disorder amounting to a mere *disturbance* of that system when it has been *slight;* a *temporary suspension* when it has been *more severe;* and *the complete cessation of its functions* when it has been *very intense*. The results of such strokes will be found to differ according to the part of the nervous system which has been the seat of the concussion; and according to its importance to the system in general.

Thus, a concussion of *the brain* may extinguish momentarily the general sensibility and power of motion; or death may supervene. A concussion of *the spine* may produce more or less injury of the mobility and sensibility of the parts supplied with nerves from the spinal cord.

When a stroke has been inflicted, or an impulse received, on parts of the body in the vicinity of the more important of the nerves of *organic* life, effects analogous to the above are observed in the *organs supplied from these sources*. Thus, a stroke over the *epigastrium* proves suddenly fatal, by *arresting* the *heart's action*—as is occasionally witnessed in prize fights; or its effect may be to derange *the functions of the stomach, liver*, or *heart*, to be followed by *a tedious recovery*. The same remarks apply to blows on the præcordia.

Blows in the vicinity of other organs besides the brain and heart, such as *the bladder, intestines, kidneys*, and *uterus*, may equally lead to simple derangement, temporary suspension of their functions, or the entire arrest of these.

Of course, where the organ is either a vital one, or one which is, indirectly, of equal, or nearly equal, importance to the well-being of the system, the consequence of the final suspension of its functions will be fatal.

These different effects of blows not unfrequently present themselves to the medical jurist *under puzzling circumstances*. Thus, in the case of *concussion proving instantly fatal*, death takes place by syncope, leaving no traces of the modes of its production in the interior of the dead body; while, except in the case of concussion of the brain, there will be no indication left at *the part struck* of the previous receipt of the blow. I have said "except in the case of concussion of the brain," because blows about the head, however suddenly fatal, usually leave some local indications in the scalp. This, however, is not always to be expected after fatal blows over the præcordia, or epigastrium, or front of the belly generally. I have inspected instances of these last forms of sudden death where a careful examination of the parts struck failed to detect any local injuries at or near the surface of the body,—cases of which I shall have occasion to adduce afterwards. How far, in instances of concussion of the brain of so severe a kind as to have proved instantly fatal, traces of injury of an obvious sort may not be detectable, has been disputed by surgical authorities. In the face of recorded cases to this effect, these parties challenge the validity of the statements hitherto accepted of instantaneous or very sudden deaths, attributed to "concussion of the brain," in which no deviation from the healthy structure of the cranial contents" could be detected.—(Holmes' "System of Surgery," vol. i. page 298.) They contend that, in the instances adduced of such *concussion simply*, if the examination of the bodies had been sufficiently close, and the condition of the spinal cord and the heart not overlooked or *insufficiently* taken into account, the conclusion come to as to the immediate cause of death might have been different. In cases of this sort, Holmes and others, therefore, contend that the effects "generally attributed to concussion are due, not to *the concussion* itself, but to *contusion of the brain*." "Though not all exactly agreed as to the precise lesion" that ought to be found in instances of this sort, they condescend upon certain indications of disordered structures—such as milletseed-sized extravasations of blood disseminated through the substance of the brain; circumscribed patches of contusion on the organ; and specks of extravasated blood in the structure of the pons Varolii. How far the views of these writers deserve adoption has yet to be determined. All that we need say of them is, that, *practically*, if found to be in advance of the views of the mass of our surgical and medico-legal authorities, they would only necessitate *the transference of the term* from *concussion* to *contusion of the brain* in cases of severe cerebral shock.

In the case of concussions of the spine instantly fatal, the same difficulty is not so apt to arise as after such concussions of the brain. From the more solid and immovable character of the bony skeleton in the former instance, the fatal issue of the injury will usually leave traces which can scarcely be overlooked: ruptures of the ligaments, extravasations of blood outside or inside the spinal canal, fractures of the laminæ or bodies of the vertebræ, dislocations or displacements of these, etc. On occasions of this sort, in railway accidents, I have seen the spine bent at nearly an acute angle.

Where, however, the spinal concussion is less severe, and life is prolonged—it may be almost indefinitely—the position of the medical jurist often comes to be one of great difficulty and responsibility. Witness the conflicting evidence we occasionally meet with in trials for railway damages; where one surgeon will allege that the patient is shamming or merely hysterical, while another will speak as to effects of the most serious sort, leaving indelible consequences affecting both the bodily and mental powers. And even should the patient sooner or later succumb to the alleged injury, conflicting testimony comes out as to the condition of the spinal cord or its investments.

This brings me to notice certain effects which are occasionally observed to follow shocks to the nervous system from blows over the spine, but more particularly over the præcordia and epigastrium, and which, though severe, are followed by ultimate recovery; the result being here a more or less tedious illness, marked by several of the most proteiform features—at one period, *head symptoms* predominating; at another, the *heart's action* being very irregular; at a third, the symptoms indicative of *functional disorder of the spine* presenting themselves; at a fourth, the train of morbid actions approaching the more marked forms of hysteria, or even of chorea; and all these, at times, interchangeably, in the same case. In these cases it is not always easy to connect the alleged injury with its results. There may, or may not, be local appearances indicative of the blow; and the train of morbid symptoms may, or may not, immediately succeed the stroke, or be such as can be clearly traceable to it. A good instance of this occurred here some years ago in a young man, in a street fight, whose opponent took a hammer out of his pocket, and struck him a severe blow with it over the præcordia. Such a train of symptoms followed as I have just described, lasting for three weeks, and showing no trace of the blow at the part struck. A similar train of symptoms occasionally follows strokes about the head, with consequences varying from some weeks of illness of the same ill-defined sort,

ending now in ultimate recovery, now in more or less prolonged illnesses, short of, or actually of, a fatal character. A case of this sort occurred at Mannofield in 1865, and another some years earlier at Methlic, both in Aberdeenshire. In the former a boy of nine was beaten about the head by an older boy with his cap. He was carried home insensible, and put to bed. Though no local injuries could be detected about the head, the boy was ill for six weeks; at one time his case looking like one of hysteria or chorea, at another like an irregular attack of typhus fever. In the other case, a boy of thirteen was engaged in a school fight, which left a trifling abrasion of the scalp, and he continued to attend school for a week; he then took to bed, and, after six weeks of anomalous symptoms, died. At the inspection, the only morbid appearances which I could detect, after a careful examination of *the whole body*, were a little thickening of the pia mater and some drops of pus over the upper surface of one of the cerebral hemispheres.

In instances of this sort the medical evidence must necessarily be of a somewhat indefinite character. Positive conclusions are with difficulty arrived at. The diagnosis becomes easier, and more definite and satisfactory, where the effect of the injury is not confined to the mere concussion or shock to the organ affected, but involves its mechanical disturbance—rupture of the vessels, and laceration or disorganisation of its tissues.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

ON YAWS AND SOME ALLIED DISEASES.

By GAVIN MILROY, M.D., F.R.C.P.

No. II.

The chief aim of my former paper in your journal (November 4) was, *first*, to invite the attention of medical men generally, and specially of those who are residents in our colonies or elsewhere abroad, or who may professionally visit those countries (as the officers of the navy do), to the characteristic and distinctive features of the yaws eruption in the earlier stages of the disease; and, *secondly*, to point out the lamentable sequelæ that are apt to supervene among a poor population when the malady is neglected and mistreated.

In connexion with these objects, I gave some reasons for my belief that the serious endemic of Ceylon, known as the "Parangi disease," and which has long occasioned such grave and fatal consequences in that fine island, is *allied* to the Yaws of the West Indies; and, at the close of the article, I alluded to the "Coke disease" of Fiji as belonging to the same nosological family. The profession are much indebted to Dr. Macgregor, the chief medical officer of the new colony, for the excellent first report he addressed to the Governor, Sir Arthur Gordon, on December 24, 1875, and a copy of which was received by the College of Physicians from the Colonial Office about the middle of last March. From this very instructive document the following descriptive account of the outward symptoms of this malady is derived:—

The eruption in young children, among whom it most frequently occurs at first about the corners of the mouth and about the fundament, "might be mistaken for a commencement of *herpes;* but it soon appears as if a small soft condyloma was developing itself. It becomes slightly elevated, the epidermis separating from the cutis, and a small quantity of sero-purulent matter gradually forming on the top of the latter, and giving the sore a peculiar whitish-yellow colour. At the same time, there is a circumscribed effusion of lymph going on into the cutis, which thus eventually forms tubercules of greater or less size and elevation."

This pustulo-tuberculate eruption may become scattered over the whole body; as a general rule it is very notably so over the face, round the mouth, nostrils, and eyes, and about the neck. The tubercules "are usually of a circular form or elongated, with rounded corners, varying in diameter from two inches downwards, and elevated above the surrounding skin sometimes as much as half an inch. Occasionally they are ring-shaped, with a spot of unaffected skin in the centre; and sometimes, by the coalescence of several contiguous tubercules, an irregular-looking sore may be produced. Individual sores, however, appear to always retain the rounded form."

The characteristic *frambœsoid* fungus or raw-flesh excrescence, from some of the tubercules which had become covered with a thin crust, is thus unmistakably described:—"This crust is easily removed, usually coming off entire, like a cap from the top of the tubercule. Beneath it there is a small quantity of purulent matter, through which protrude what appear to be papillæ of the true skin, very much enlarged, standing up separately sometimes an eighth of an inch in length, the brightness of their hue appearing in strong contrast with the creamy fluid bathing their almost contiguous bases."

That the occurrence of genuine cases of yaws may occasionally be met with in other countries besides those that have already been mentioned, is rendered more than probable by the following two instances. The *first* was seen in Madeira by Dr. Adams towards the end of last century, and is described in his work on Morbid Poisons. It occurred in a young Danish nobleman in the Danish navy, who had been left at Madeira in consequence of his health not permitting him to continue his voyage to the West Indies, from which he had been ten months absent before he felt any indisposition. After some febrile symptoms a pimply eruption broke out over the face, accompanied with inflammation of the throat. The eruption extended over the whole body and the extremities, and the papulæ became pustules. The pustules increased in size, and became covered with crusts, generally of a light-brownish colour. As the crusts hardened, this gave them the aspect of tubercules; some of them had quite a horny appearance. "On removing the scabs, a fungus, covered sometimes by a thin cuticle, was found shooting out of the foveolus. . . . If in the early stage of the pustule you remove the cuticle, you are to expect a ragged but moist slough. In a later stage, on removal of the scab, you find a fungus, varying in shape, size, and colour, according to the period of the yaw." The throat affection had also become ulcerative.

The local irritation caused by the numerous sores rendered life scarcely tolerable. Within a month or two from the commencement of the eruption, there were, besides a number of smaller ones, fifty-six large sores, some oval, and being of from two to three inches in their longest diameter. That the case was one of genuine yaws was attested by Dr. Wright, an experienced West India physician, who happened to be in Madeira at the time. "At the end of six months from the first symptoms of fever, and of four from the eruption, most of the pustules had scaled off, and the throat was nearly well." This satisfactory result seems to have been entirely due to the resources of the patient's constitution, which had merely been supported by suitable food and the exhibition of the mildest medicines. At first mercury had been administered; but, on being found to disagree with the patient's health, its use was soon discontinued, and never resumed.

The *second* case came under my own notice here (Richmond, Surrey), in a personal friend, an elderly gentleman who had been long a resident in this place, and, as far as I am aware, had never, at any period of his life, resided abroad. It was at the beginning of 1873 that I first had an opportunity of partially examining the character of the disease with which he had been for a length of time (one or two years at least, I believe) afflicted. He had been under the treatment of some of the leading dermatologists of the metropolis during this long illness. The following memoranda were jotted down in my note-book at the time:—

On the left side of the occiput is a concave or hollowed circular ulcer, between two and three inches in diameter, and at its centre a third of an inch or so below the level of the adjacent scalp. Its surface is unevenly smooth, and looks like raw flesh without any distinct granulations. The margins or edges are somewhat raised up, and here and there are fungiform. There is a profuse discharge of thin whitish pus, devoid of any offensive smell. The ulcer, although causing great annoyance, by interfering with the easy decubitus of the head at night, is not the seat of much pain.

The scalp of the right occiput exhibits several small ulcerated openings, with fungoid margins, from which there is a copious similar discharge. Occasionally, sharp transient pains are experienced at some of these ulcerated apertures.

On the top of the centre of the forehead is a round flat and smooth raw surface, between a shilling and a florin in size, scarcely above the level of the surrounding skin. It oozes out very little discharge, and is without pain, even when touched. It supervened upon the falling off of a dry yellowish crust, which had occupied the spot where the raw-flesh sore is

now seen. On the centre of the right cheek is a similar smooth raw surface of the size of a fourpenny-piece. The lobe of the right ear exhibits another spot, which looks like a recently vesicated wound.

Over the front of the thorax are several flat raw sores, all very slightly, if at all, above the level of the adjacent skin, and varying in size from that of a sixpence to that of a florin. One at the apex of the sternum is, especially in the centre, somewhat more prominent than the others. Its surface is nearly dry, the discharge being only sufficient to cause the shirt slightly to adhere, if ointment has not been applied. All those raw sores seem to have followed upon the falling off of a dry crust. None of them are sensitive on being touched; but they cause much distress by their moist surfaces being liable to adhere to the linen. There are, I understand (having not had the opportunity of personal inspection), several similar raw sores scattered over the back. I observed one, of the size of a sixpence, at the lower part of the nucha.

Over the head of the right fibula is an irregularly round ulcer, between two and three inches across, from which several fungous protuberances, each as big as a large currant or a small strawberry, stand out close to each other, and in the aggregate form an excrescence which looks like a portion of red cauliflower, projecting more than an inch above the level of the surrounding skin. Its surface is smooth and shining, scarcely moist, and not at all painful when touched.

This ulcer had at first, I was told, consisted of two circular smaller ones, each of about the size of a shilling, and supervening upon the detachment of a yellow crust.

Besides the above symptoms of frambœsial disease, the skin of the face, scalp, body, and limbs has been long, and still continues to be, affected with an eczematous eruption, which has left in various places, especially on the cheeks and scalp, scabby exfoliating crusts, and also with squamous psoriasis-like patches on the extremities.

The patient's pulse is small and weak, about 90. Although his sleep is uneasy and much broken by the irritation of the skin, his general health is not very seriously disordered, and his appetite is fairly good.

Three months afterwards I found the state of the circular excavated ulcer on the occiput nearly as before. One or two of the round raw spots on the forehead and scalp exhibited new (as well as I could judge from a very imperfect sight of them), slight, fungus-like granulations on their surfaces.

The ulcer on the right leg, previously occupied with very projecting excrescences, was now rather concave, and somewhat hollowed out in the centre, while the surrounding integuments had become much elevated, with a broad (an inch or so in breadth) and flattened ring of dense reddish induration, which was half an inch at least above the level of the surrounding healthy skin.

The former irritation of the general surface had, the patient remarked to me, for some time much subsided since he had discontinued the medicine which he had been previously taking, and since he had been put, by the advice of another medical attendant, on a more nourishing diet, with the free use of bottled stout. Although my examination of him was very brief and imperfect, the impression left on my mind was that he had been decidedly losing ground, and that the case would ere long issue unfavourably.

When I next saw him, at the beginning of May, he was much weaker, and his feet and legs had begun to be œdematous. I saw no part but the face, from his being muffled up completely. The nose was much swollen, and seemed to be the seat of purulent exudation all over, and most of the face that could be seen was covered with dry yellowish scabs or crusts. From this date his weakness gradually increased, the œdema became greater, and he sank at length exhausted about the middle of June. I understood from a non-professional friend, who continued to visit him to the end, that the occipital bone had become exposed at the bottom of the ulcer in that region for some time before death.

To the best of my knowledge, the above is the first recorded case of recognised yaws disease in this country. Bateman had evidently not met with an instance; for in his "Classical Synopsis" (1824) he remarks that "as it is perhaps never seen in England, a very brief account of it here will be sufficient." I much regret that I had no authentic account of the early phenomena of the eruption, or of the patient's condition of health before, and at the time of, this occurring. All that I learned from him was that in the summer of 1871 he had begun to suffer from boils in various parts of his body, and that one large and troublesome one occupied one of the cheeks, and that there was another situated on the occiput. It would seem also that about the same time he was affected with an eczematous affection about the face and in other parts. Neither can I state with any confidence what opinion or opinions as to the nature of the disease had been formed by the different medical men under whose care he had been during the two years and upwards that he had been an invalid. The non-professional gentleman, alluded to above, told me that he had heard the terms "epithelioma" and "cancroid" mentioned in connexion with the case. Beyond this I can say nothing. As regards the medicinal treatment during the last six months of the patient's life, I shall briefly allude to it when I come to consider this very important part of my subject.

(*To be continued.*)

ON THE

CHINESE KNOWLEDGE OF COD-LIVER OIL AND IODINE.

By J. DUDGEON, M.D., etc., Pekin.

In the Chinese Materia Medica no fewer than thirty-one different kinds of fish with scales, and thirty-seven without scales, are mentioned. Among so many, it would be strange if certain therapeutic virtues belonging to some had not been discovered. The cod is not known in Chinese waters, so far as I am aware, and no oil is extracted from the livers of fishes. The Chinese, however, have found out that the use of fish and fish oil—particularly shad—is of service, and especially in consumptive cases. Phthisis is believed to be infectious. They account for it on the hypothesis that at the moment of death a worm is expelled, which enters the bodies of those in attendance, through the breath. To stamp it out, therefore, the patient, while yet alive, is sometimes put into a coffin, and buried or thrown into a river. This notion among the people is another way, most probably, of asserting the hereditary nature of any malady. The distinguished author (Lishechen) of the Puntsao or Chinese Herbal, who wrote over two centuries ago, mentions a case of this sort, as reported in another work, where several persons were so affected. The young lady in this instance was found floating in her coffin, in one of the great rivers, by a fisherman, and being taken on board and fed on shad, she recovered, and afterwards became his wife. Here we have the germ of our present cod-liver oil treatment. This fish is said to possess insecticidal and anthelmintic properties, and this is the Chinese *rationale* of its use in phthisis. For a similar reason it is also prescribed in fistula in ano, hæmorrhoids, etc. Oil of this fish is said to be a most certain cure in pityriasis versicolor, the cure being effected instantaneously with one application.

This same Herbal mentions various species of seaweed as possessing strong and well-known therapeutic properties, and of special value in the dispersion of hard tumours—goître, for example. They have long been acquainted with the general virtues of the various species of *Laminaria*, and these varieties are mentioned as occurring along the coasts of the Eastern Sea, the coast of Corea, and the Malayan Archipelago. The great Herbal speaks of seven chief species. The people in the maritime provinces of China eat seaweed plentifully, both medicinally and as a vegetable food, besides using it as a manure; in this custom resembling the inhabitants of our own Hebrides. It is prescribed alone, chiefly in the form of tincture, its saltish taste having been first washed away, or it is mixed up with other medicines in various prescriptions. Chinese books speak in the most positive manner of the discutient properties of seaweed. Of one sort, it is said that tumours as hard as stones can be softened and removed by it. The uses to which the various kinds of seaweed are put correspond with our own uses before the discovery of iodine. It is prescribed also as a diuretic, and its efficacy in demonology is highly extolled. (The Chinese in medicine, as in everything else, unite sober fact with childish fable, science with sorcery.) It is especially recommended in enlarged testicle and in all sorts of hard, cold, chronic tumours that never suppurate. It is said to cause penile erection. In glandular swellings it is ordered to be sucked or chewed. From the Chinese practice, the following questions suggest themselves:—Considering the high price of iodine and its preparations, and the disagreeableness and occasional indigestibility of cod-liver oil, which has been supposed to owe a part, at least,

of its virtue to the presence of preparations of iodine and cognate principles, would it be advisable and advantageous to introduce a tincture and a powder of laminaria into our public dispensaries, poor-houses, etc.? Is the Chinese contra-indication of fatty things well founded? After a course of iodine or its preparations are other diseases more easily induced?

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASE OF CANCER OF LIVER, BRONCHIAL GLANDS, AND RIGHT LUNG—DEATH—POST-MORTEM.

(Under the care of Dr. JOHNSON.)

[For the notes of this case we are indebted to Mr. Nestor Tirard, M.R.C.S., House-Physician.]

A. E., a washerwoman, aged thirty, was admitted into King's College Hospital on October 5, 1876, complaining of impeded respiration, and having general venous turgescence and a large swelling in the abdomen.

The history of the case obtained by Mr. Thurston, the Assistant House-Physician, was as follows:—No tumours of any form had occurred in her family; she was married, and had had seven children; menses had not reappeared since the birth of her last child, fifteen months ago. Had enjoyed good health until two years since, when she was in Guy's Hospital for three weeks with rheumatism. From that time she seems to have been perfectly well until last Christmas, when she was troubled with cough, and noticed that her expectoration was streaked with blood; the amount of blood gradually increased, clots coming away at times, and finally, previous to her admission, she was bringing up pure blood, bright-red and frothy. Since the cough commenced she has been losing flesh greatly. In February she found that the veins in her neck were enlarged, and that her throat was swollen. Somewhat later she noticed that the veins in her chest, abdomen, arms, and legs were also becoming tortuous and prominent. On trying to rise from a stooping posture, her head felt full. Her feet and ankles became very swollen, and the first thing in the morning her face and eyelids were very puffy, getting better, however, in the course of the day. Last July, while in bed, she first observed a "slight swelling in the lower part of the abdomen." Subsequently she found that this was increasing in size, so that she could not fasten her dress. Latterly she has been getting much weaker.

On admission she was emaciated, her eyelids puffy, palpebral and frontal veins enlarged, slight exophthalmos; both external jugulars were prominent, and joined the tortuous mammary veins by means of a large vein crossing over the clavicle. The veins of the arms were not much distended. The superficial epigastric veins were very large, and visibly anastomosed with the internal mammary veins, the blood in these being conveyed from above downwards. An arc of distened venules ran along the inferior costal margin. There was a tumour in the abdomen, the boundaries and extent of which were most defined when the patient coughed. It appeared to commence about two inches and a half above the umbilicus, and extended downwards in the median line to about an inch and a half below the umbilicus, where its lower margin could be readily felt, being hard and irregular. Laterally it passed about two inches and a half to three inches to the left of the median line; on the right side it appeared to fill out the entire lumbar region, and on percussion over this side no separation could be made out between the dulness of the tumour and that of the liver. The surface of the tumour was firm, tense, irregular, and covered with distinct hard nodules. In the median line, below the lower margin of the tumour, and apparently in a notch between the lateral portions of it, was a rounded elastic swelling, having a diameter of two inches, which was made more prominent on coughing; the percussion-note over this was resonant. The right side of the thorax was completely dull in front; in the axillary line the dulness was found to correspond with the outline of the upper and middle lobes; there was also dulness posteriorly in the supra-spinous fossa. Tubular breathing was audible over the area of dulness. Rhonchi existed here, as also over the lower lobe. On the left side of the thorax the percussion-note was clear. Rhonchi were heard all over this side. Heart's sounds were normal. No liver-dulness could be differentiated from the dulness of the lung above and that of the tumour below. There were continuous fibrillary twitchings of the deltoid, pectoral, and interossei muscles of both hands. The larynx was examined, and was found to be slightly rotated to the left side. The vocal cords were movable. Urine, specific gravity 1024; no albumen. Temperature on admission was 97·4° Fahr.; pulse 108.

During the first few days after being in the hospital the patient had some hæmoptysis, coughing up about an ounce and a half to two ounces of frothy blood in the course of twenty-four hours. Temperature varied between 97° and 98·4° Fahr.; pulse, average 112. She complained much of feeling heated, especially about the face and neck. She perspired profusely.

On October 19 she had a sudden attack of dyspnœa and coughing, and became somewhat more cyanosed. From this time until her death on October 25 she had frequent attacks of dyspnœa; became more and more cyanosed; complained of difficulty in swallowing, feeling as though "something closed on each side of her throat"; and towards the end, the hæmoptysis became more frequent and more profuse. Pulse-rate increased to 144; respirations 30 to 40. During the last three days her temperature rose from 97·8° to 100·8° Fahr.

At the post-mortem examination, held the day after death, on opening the thorax, the right lung was found to be completely adherent; it was removed with the pleura. The pleura was greatly thickened all over—most so at the extreme apex, being there three-quarters of an inch thick. The lung substance of the upper and middle lobes was compressed, firm, engorged, and non-crepitant. The lower lobe was congested. At the posterior part of the upper lobe a cancerous mass about three inches in diameter was found, apparently arising from the bronchial glands, sending off processes which accompanied the bronchi in their ramifications. Numerous patches of cancerous material, about the circumference of a sixpence, were scattered through the upper and middle lobes. The cancerous mass was tough and of a white colour, a creamy fluid covering the surface after section. From the bronchial tubes a quantity of purulent-looking material exuded on pressure. The bronchial tubes of the right upper lobe were pervious through nearly their whole length; many of them were distended with blood-clots. The left lung was engorged, especially at the base. There was a clot in the right side of the heart extending up into the pulmonary artery. The abdominal tumour was found to consist of the liver enormously enlarged; it weighed 122 ozs.; it projected into both hypochondriac regions, the notch between the lobes affording the space through which the intestines had passed forwards, and caused the resonant bulging in the median line observed during life. Above the notch a firm white nodular mass of cancerous deposit was found on the anterior surface; the rest of this surface appeared smooth and healthy. The quadrate lobe was completely converted into a mass of cancer; another large mass occupied the upper and posterior part of the right lobe, and a similar mass existed on the right side of the right lobe. An isolated cancerous patch was present in the inferior and posterior portions of the left lobe. The gall-bladder was nearly empty and did not contain gall-stones. The head of the pancreas was the seat of cancerous deposit. The lumbar glands were enlarged but not carcinomatous.

On microscopical examination the masses of new growth in the lung were found to be encephalomatous, consisting mainly of large alveoli filled with cells of irregular outline containing large nuclei and highly refractile nucleoli. In some parts, however, numerous bands of fibrous tissue were found, these having a wavy parallel direction. In the specimens obtained from the liver, spindle-cells were found intermixed with the fibrous tissue. The greater part was made up of large alveoli and cells, as in the lung.

Remarks.—This case presents several points of interest. It cannot be clearly determined where the cancer originated—whether the bronchial glands or the liver formed the primary seat of the disease. The first symptoms to attract attention were evidently referable to the growth in the chest; the hepatic disease, however, may have been pre-existent, for it was only by the size of the tumour in the abdomen that the patient's attention was first attracted. Throughout there were no hepatic symptoms. The non-occurrence of jaundice corresponds well with the absence of pressure on the bile-duct (although there was a mass in the head of the pancreas),

and with the absence of gall-stones. As Niemeyer has pointed out, gall-stones very frequently occur in cases of carcinoma of the stomach and liver, but it was not so in this case.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 17, 1877.

THE DEATH OF SIR WILLIAM FERGUSSON.

Our weekly notes of the health of Sir William Fergusson will have prepared our readers for the sad news of his death, which took place on the evening of the 10th inst., to the deep regret of the whole surgical world. We will not go so far as to say that the loss to the science and art of surgery is irreparable, though he was a great surgeon as well as an incomparable operator. But, *Vixêre fortes ante Agamemnona multi*, and many brave men have also succeeded him; and, similarly, time and necessity will not fail to keep up the line of great surgeons, though it may be long before the world sees Sir William Fergusson's equal. As an operator he was without rival in his day for brilliancy (not showiness), finish, neatness, dexterity, and, when the occasion called for it, boldness. Never at a loss, whatever, and however unexpected, the difficulties of an operation might be, he was wonderfully quick to see what was best to be done, and to conceive the plan that must be followed out; while his hand was as sure and dexterous in obeying the promptings of his brain.

We have said that he was a *brilliant* operator, but we do not use that epithet as in any degree implying show or dash, for his manner of operating was singularly quiet, calm, and cool; but he was, nevertheless, a brilliantly rapid, perfect, and successful operator; and his powerful hands were wonderfully sensitive, nimble, and dexterous,—they were the perfection of surgical hands. And he was much more than a peerless operator. He was a great conservative surgeon. He never operated for the sake of operating, and he ever taught that the saving of a limb, or of any part of one that could be useful, was a much greater triumph of surgical skill than the removal of it. He was not, indeed, the founder of "conservative surgery," but he originated the phrase, he persistently practised and taught the science and art of it, and he resuscitated the operation of the resection of diseased joints in place of amputation; and so, in the popular mind at any rate, he became identified with "conservative surgery." For the details of his career, his successes, and the operations for which he was most famous, we must refer our readers to the obituary notice, written by one who had long worked under and with him, which will be found elsewhere in our pages. We will only add here that Sir William was an eminently kind-hearted, genial, and hospitable gentleman, and a true friend, and that the man will be mourned for and missed as much as the surgeon. He had been for so many years prominent in the very front surgical rank, that but very few of either the profession or the public will learn without surprise that he was not yet sixty-nine years old when death took him.

SIR JAMES PAGET ON JOHN HUNTER.

It is well that the Hunterian Oration is now given only once in two years, instead of yearly as was long the custom; for though undoubtedly it is a high honour and distinction to be Hunterian Orator to the Royal College of Surgeons, we do not envy the man who has to succeed Sir James Paget in that office. It will be trying enough to any man to stand in his place two years hence; but, at any rate, the vivid impression made by the perfect finish and grace of his Oration, by its deep thought, masterly analysis of character and intellect, and remarkable suggestiveness, will have faded somewhat more in 1879 than after the lapse of one year only; though no doubt all who had the pleasure of hearing Sir James will ever gratefully remember the Hunterian Oration of 1877 as a triumph of oratory.

If we say that the Oration is evidently the outcome of great labour and study, we are not to be understood as signifying that it is in any sense laborious; for, as we have said above, it is remarkable for finish, graceful ease, and, we will add also, strength of style. But, as Sir James tells us, he had thought it right to study afresh the character of John Hunter, chiefly to see what were his motives in the work of his life, and what were the chief characteristics and methods of his work; and to note some of the achievements to be read in the story of his life. And the result is what must surely remain for all time as a singularly graphic, interesting, and instructive picture of the whole man John Hunter, and of his work, which was his life. For, after he had once begun to work, his entire life was work; and of the remarkable things about Hunter, one of the most remarkable is the enormous amount of the work that he had done when he died, at a comparatively early age. Sir James Paget of course speaks of, and naturally dwells somewhat on, the very curious fact that up to the age of nearly twenty John Hunter was an idle, purposeless lad, showing no signs of mental power, no inclination to follow any kind of study, nor any evidence whatever of remarkable capacity of any kind. So marked was this, that at the age of seventeen he was placed with a relative for the purpose of learning cabinet-making; but this plan failed, and then he offered to go and assist his brother William, already a prosperous and celebrated teacher of anatomy and surgery in London. And in this way it was that, of idleness, and moved by the necessity of earning his daily bread, John Hunter "drifted into the opportunity of scientific study,—drifted into the career in which he was to become great among the greatest men of science, and among all the surgeons of all times the most renowned." Till he joined his brother he had shown no notable capacity for observation, no love of nature; but William Hunter was a keen observer of nature, a laborious collector, a great teacher of anatomy, and the founder of the first

great school. And the coming to live with him, and meeting men of scientific research, was to John Hunter like being born into a new world—the world for which his mind was made, and in which it found its energising motive and power. He became possessed by a passion for collecting, for collecting and keeping, that he might learn facts, might gain knowledge; and his thirst for knowledge was insatiable,—he filled himself with knowledge and with accurate observations. He came to be an ardent lover of Nature, for the sake of the stores of truth that lay hidden behind her veils; and to the study of nature and of facts of all kinds he devoted his entire life. Sir James Paget dwells on the vast quantity of work that Hunter did, and on its wide range—a range never before or since worked so fully, thoroughly, and deeply by any one man; for he was the greatest physiologist, the greatest pathologist, the greatest anatomist, of his time; he was the founder of comparative anatomy, and he was a great surgeon, with the largest practice in London. "In all he did he was successful, and he pursued no study the area of which he did not enlarge, and in which he did not leave new facts on record." He was an observer and discoverer of implicit accuracy, so that it would be indeed difficult, Sir James remarked, to find an inaccuracy in his facts, though we may find it in his reasoning from facts.

He was, however, very cautious in making deductions; he leant on facts, and never gave positive opinions. When he generalised from facts, he always added "I think," or "I believe," this or that; but he never gave the force of his own opinion the power of a fact, for he well knew and taught that opinions, however strong, are altogether apart from true scientific knowledge. And he had a great ingenuity and delight in experiment after truth, and as great patience in waiting for "the to-be-known"; and thus he gave every question he could to be the subject of ingenious experiment, and would say, "Don't think; try; and be patient."

Yet, beyond the reach of observation and experiment he could be, and was, a deep and bold thinker, and illustrated the wonderful fact that the trained and disciplined observer and thinker may project the mind beyond knowledge, and may *think* a truth; for in this way Hunter *thought* the truth that the blood is alive, is a living tissue. But it is well known that, though a great master of facts, he was not a master of words. He had an exceeding difficulty of expressing his thoughts; and on this subject Sir James Paget dwells at some length. It is very curious to note Hunter's imperfections in this respect. His father was a shrewd Scotchman, who farmed his own land—a laird, in fact, or, as in England he would have been called, a yeoman; his mother was an intelligent woman; and his two brothers, and at least one sister, persons of culture and unusual mental power; but John Hunter had, one might suppose, but comparatively little early education and culture, for he never could express his thoughts correctly or clearly. His letters, as may be seen in the originals at the College of Surgeons, are full of inaccuracies; and his writings are often most laboured and obscure. How is this to be explained? Was it from want of early culture, or was the defect innate? Sir James believes it was the latter; but, however this may be, the defect was a great hindrance to Hunter, for, as Sir James observes, a want of power over words not only hinders the expression of thought, but hinders even the process of thinking; and Hunter "showed a singular inequality in the powers of language and of thought." "In every mind," Sir James well and eloquently says, "thoughts and words are so closely interwoven, that each shares always the qualities of the other. Thoughts and words are like mutual reflectors; if either of them distorts an object placed between them, the other cannot but receive the distorted image and reflect it; each is alternately master and servant. Now, thoughts use words for their expression, and then those words take part in directing the next thoughts; if either be erroneous or defective, the other suffers with it." Hunter's defective power of using words with subtle shades of meaning was, indeed, so marked, that a great worker and writer has, half in jest and half in earnest, spoken of him as one of the most inarticulate of men: and, when speaking of Hunter's modesty and unconsciousness of the greatness of his own work, Sir James gives an amusingly good example of his want of clearness of expression—Hunter having written, "There never was a man that wanted to be a great man ever was a great man."

Sir James Paget describes with great clearness and force some of Hunter's greatest achievements—how his greatest work was on Physiology; and yet in this part of his life's work, as in the study of comparative anatomy, "not one of the younger men of science followed him. In all these deeper studies of life Hunter had not one disciple;" and Sir James explains to us why and how this was so. That John Hunter was a great practical surgeon, as well as the founder of scientific surgery, and that "from among his pupils there went out all the great surgeons of the time next after," is all known, but is told again and explained in sentences full of teaching as well as of interest. Indeed, the Oration is so rich in thoughtful inferences, explanations, and suggestions suggestive of further thought, that it is difficult to resist the constantly recurring temptation to quotation. But we must, and well may, be content to leave it in the hands of our readers, by whom it will, we doubt not, be read, as it should be, over and over again. Surgeons will certainly learn from it, more than ever before, to appreciate how much Hunter did for surgery and for surgeons; and everyone will admire the skill and fitness shown in the selection of the place into which to introduce the graceful and touching reference to the great surgeon whom England has just lost.

We will only further direct attention, especially, to Sir James Paget's wise words on a question that has often perplexed, and does much perplex, many minds—the connexion, or opposition, or strife between science and religion; and we commend to all the conclusion he comes to: "Then let us wait. Time—or, if not time, eternity—will prove that science and the Christian theology are as two sides of truth, and that both sides are as yet only known in part." The closing sentences of the Oration are an eloquent reminder that it is not only men's works—in the more common meaning of that word—that live after them, but their true thoughts also; and these not only endure and remain, "but in the continuity of mental life they really live; they pass on from one generation to another, and in each succeeding generation they grow and are developed, and come nearer to perfection." What grander incentive can man have to true work? "For," Sir James adds, "in the world of mind he that is mortal may produce that which may have immortality."

THE SESSION OF PARLIAMENT.

The opening of the Session of the Parliament of the fortieth year of Queen Victoria was looked forward to with a degree of interest and excitement unusual of late, and the happy fact that her Majesty's health again allowed her to open the Session in person was a source of universal pleasure and satisfaction. The Speech from the Throne is long, and to politicians no doubt interesting; but to us and to all who really believe that care for the public health is a matter of primary importance and interest, and not merely a useful party-cry, it is very disappointing to find that throughout the Speech there is no reference whatever to any sanitary measure, or to any measure having even a distant connexion with sanitary legislation. Nor is that disappointment lessened, as it was last year, by our finding anything on the subject of sanitation in any of the speeches from members either of her Majesty's Government or of her faithful Opposition. It is

difficult to believe that the Prime Minister who raised the cry of "*Sanitas sanitatum, omnia sanitas!*" can suppose that that cry has been anything like satisfied, or the urgent need for sanitary legislation at all sufficiently supplied. Numerous subjects of vital importance to the well-being of the nation urgently demand the consideration and action of the Legislature. The question of efficient water-supply, pure and abundant, is daily becoming a matter of greater and more pressing interest; the working of the Public Health Act is unsatisfactory to the last degree; we are still without the legal power of promptly and efficiently preventing the spread of the commonest infectious diseases; the Vaccination Acts work so tamely, that we, in the country of Jenner, are still shamed by the frequent recurrence of epidemics of small-pox; there is a recognised need of amendment of the Lunacy Laws; and Government last year acknowledged that a reform of the Coroner's Court was urgently required. But not one of these subjects found place in the Speech from the Throne, or in any speech from either side of either House, on the opening of Parliament. Have the present Ministers been so frightened by the taunt that their only policy was "a policy of sewage" that, after such short-lived and, compared to the importance of the subject, petty efforts, they have grown ashamed of even seeming to care for the national health? Whatever the explanation may be, there is the melancholy fact that ex-Ministers can spend the Parliamentary recess in endeavouring to excite the nation by pamphlets and stump-oratory on the woes and miseries—terrible enough, heaven knows!—of a foreign people, till the beat of the drum politic resounds through the length and breadth of the land, and statesmen of all shades of politics are so absorbed by the same topic, that though preventable diseases are slaying every year thousands of men, women, and children in our own cities and towns, Parliament can meet without a word of regret or indignation being uttered about this slaughter, or even a suggestion of any effort to lessen it, or the frightful poverty and misery it causes and entails. It may be said that neither the people nor their representatives in Parliament care about, or can be interested in, this matter; but has any great statesman or leader of men ever made a serious effort to rouse public feeling, or to "educate a party" to wage war against vice, crime, disease, and death and misery at home? Let that be tried, and tried in vain, and then let the people be blamed, but not before.

Meantime, private members of the House of Commons bring in Bills committed to their care, or relating to interests or hobbies of their own; and thus we have again this year notices of the Permissive Bill, the Bill to remove the Electoral Disabilities of Women, and a Bill "for the more effectual Prevention of Cruelty to Animals"; but few will take the trouble to even question the Government on health matters. Among these few we are glad to number Sir Trevor Lawrence—a member of our profession, and the son and inheritor of the title of one of the most distinguished and accomplished surgeons of the present century. On Friday, last week, Sir Trevor Lawrence asked the President of the Local Government Board "whether, having regard to the severity of the present epidemic of small-pox, the urgent necessity of providing facilities for vaccination in its most efficient form, and the prejudices which, however unreasonably, exist in some parts against vaccination from arm to arm, he will take steps to provide a supply of vaccine lymph from the calf for such public vaccinators as may require it, as was done in Belgium?" The answer received is most unsatisfactory. Mr. Sclater-Booth said, in effect, that the practice as pursued in Belgium and other countries has been investigated by the present Medical Officer of Health of the Local Government Board, and that the results of the inquiry were not favourable to the adoption of the practice, and had been published,—all of which was already known. He added that subsequent experiences had been of a conflicting character; and, of course, that "the subject will not be lost sight of by the Local Government Board." We have pressed, and will continue to press, this subject upon the notice of Government. But our contention is not, nor ever has been, that animal vaccination is always followed by perfect results, or that there is no difference of opinion about its value as compared with arm-to-arm vaccination; but that there are dangers attending, or that may attend, the latter, from which the former is free, and that therefore Government, while rightly making vaccination compulsory, ought to offer a choice of the two kinds. Moreover, there is now a vaccine-lymph famine. Government could, we have no doubt, get a supply of animal lymph for us from abroad till they could supply it themselves; and small-pox will not wait while the Local Government Board considers the matter.

Another private member, Mr. Dillwyn, has called the attention of Government to the Lunacy Law, and has obtained their assent to the appointment of a Committee to inquire into its operation as regards the security afforded against the violation of personal liberty. The Home Secretary said the Government gave their assent because certain apprehensions were prevalent which it would be well to disprove; while, should they prove to have any real foundation, the facts ascertained by the Committee would enable the Government to deal with the law. In this the Government have done wisely, and though we much doubt the need of amendment in the direction pointed to by Mr. Dillwyn, we trust that the opportunity thus afforded will be taken advantage of to enact that certificates of lunacy duly granted in any one of the three divisions of the kingdom shall have equal legal force in the other two divisions.

THE WEEK.

TOPICS OF THE DAY.

At a time when much censure is being bestowed upon the police for their assumed carelessness in locking up persons suffering from serious illness on the ground of drunkenness, it is only right to publish the statement of Dr. Yarrow, Surgeon to the G Division of Police, with regard to a case of this description recently reported. At an inquest held upon the body of a man named John Pothecary, it was stated that the deceased was taken to the police-station with a wound on his forehead; he was placed in a cell, and after being examined by Dr. Yarrow, he was replaced in the cell till the morning; then, finding he was still insensible, the doctor gave a certificate for his removal to the Holborn Union. Dr. Yarrow states:—"This version of the affair is so utterly at variance with the truth, that I ask permission to state shortly the facts, which are as follows:—I was called to the station at 1.30 a.m. on the 19th ult., and found the deceased there smelling strongly of alcoholic liquor, but from his conduct I also believed him to be of unsound mind. I ordered him to be kept in the charge-room for a few hours that the smell of drink might pass off, and I wrote a certificate for his removal to the workhouse without seeing him again. From first to last he was never placed in a cell, nor was he, in the common acceptance of the term, ever insensible while at the station, for he walked about the charge-room, and from the police-station in Old-street to the Gray's-inn-road Workhouse, where, I understand, he lived ten days, dying ultimately of chronic alcoholism. In conclusion, I shall be glad if you will allow me to express an opinion that a large number of the cases which come under the notice of the police, in which the question of 'Drunk or dying?' arises, may very properly be described by the answer—Both."

The appeal in the case of "Dr." Monck, who, it will be remembered, was convicted by the Huddersfield magistrates

for "using subtle means, crafts, and devices, by palmistry and otherwise, with intent to deceive," at a spiritualistic *séance* at Huddersfield in October last, was heard last week in the Exchequer Division of the High Court of Justice. Barons Cleasby and Pollock were both of opinion that the appellant was properly dealt with as a rogue and a vagabond; and they accordingly ruled that the conviction must be confirmed, with costs. Counsel for the appellant again asked for leave to appeal; but the judges declined, at that time, to accede to such request, as they doubted their power to do so. "Dr." Monck will consequently now have to undergo the original sentence of three months' imprisonment.

Since Mr. Walter, in his speech at Newbury, at the Conference on Intemperance, recommended that for the future English beer should be made as much like German beer in its invigorating but non-intoxicating characteristics as possible, much discussion has taken place on the subject. From this it is to be gathered that the difference between the two is mainly in the mode of fermentation. If fermentation be conducted at a temperature above the ordinary temperature of water, the yeast in the process of fermentation will rise to the surface of the liquid; if it be conducted at a temperature lower than this, the yeast will be precipitated. In England, fermentation is usually started about 60° Fahr., more or less; in Germany, usually at 44° Fahr., or less. The English fermentation occupies from five to seven days; the German, from fourteen to twenty-one. Except in mid-winter, the German fermentation has to be carried on in the artificial temperature of an ice-house. The two fermentations yield beer of essentially different flavours. Much of the drunkenness of our own country might be removed if our great brewers would endeavour to combine the world-renowned flavour of pale ale with the non-intoxicating character of the German *lager bier*.

At the meeting of the City Commissioners of Sewers held last week, Dr. Sedgwick Saunders, the Medical Officer of Health, referring to the sanitary condition of a number of houses in the vicinity of Aldgate Station, said it was scandalous in the extreme, and never before had he seen anything like it in a civilised community; he did not recover from the effects of his visit to this locality for two or three days. The nuisance arose from hot water from the engines at Aldgate Station being emptied into the sewers, and he thought the strongest repressive measures should be resorted to by the Court to prevent such a state of things.

The Thames Valley Drainage question bids fair to emulate the Tichborne trial in its unending proceedings. Last week Colonel Ponsonby Cox again resumed the adjourned inquiry on the subject, at the Assize Court, Kingston-on-Thames. Resolutions from several authorities against combination having been handed in, Mr. Nelson reviewed the numerous ineffectual attempts made by Kingston, Surbiton, Hampton Wick, Richmond, and other places on the Thames, and contended that the enormous difficulties encountered could only be surmounted by combination. Mr. Grove, C.E., said that there would be no difficulty in combining the places for drainage purposes. Mr. Malcolm Ramsay, C.E., Surveyor to the Twickenham Local Board, on the other hand, gave evidence that it was undesirable for that place to join any such scheme. Sir Joseph Bazalgette having stated that he believed the existing ills could be remedied by combination, but not by such a combination scheme as that now proposed, the inquiry was again adjourned.

In addition to the other troubles imposed upon them by the water-supply of the town, the Richmond Select Vestry have, for several weeks past, experienced considerable difficulty in obtaining a supply of water from the old artesian well in the Lower-road, which some years ago furnished a supply for the whole town; and two pumps have from time to time been let down, one below the other, at various depths, to keep up a partial supply. Last week, however, a workman descended the well to a depth of nearly 200 feet, where the boring commences, and, having probed the pipe to a depth of about forty feet, succeeded in clearing away some obstruction. The water then came rushing up in such volumes as to necessitate a hasty retreat on the part of the workman, and rapidly rose to within twenty feet of the surface, or nearly 100 feet above the highest pump. The well proper is seven feet in diameter, and 200 feet deep, the boring extending 200 feet below that. The yield from this source is now estimated at from 250,000 to 300,000 gallons per forty-eight hours, giving twenty gallons per diem to each inhabitant.

During the last year the deaths of children at Warrington were 46 per cent. of the total mortality of the borough. Dr. Joseph, the local medical officer, regards this as an alarming state of matters; but the *Liverpool Post* asks, What is to be said about West Derby, with an infant mortality exceeding 50 per cent. of the deaths for the year? Dr. Joseph is in favour of the establishment of public nurseries for children.

The Manchester and Salford Sanitary Association has announced its intention of holding an Exhibition of Sanitary Appliances during the visit of the British Medical Association to Manchester in August next. It is hoped that space for this purpose may be secured adjoining Owens College, where the meetings of the Association will be held. And it may not be out of place thus early to state that all communications on the subject should be addressed to Mr. Frederick Scott, the Secretary, who will superintend all the arrangements of the contemplated Exhibition.

At the usual meeting of the Metropolitan Board of Works, held last week, Mr. Roche called attention to statements reported to have been made to the Home Secretary, by a deputation consisting of Sir Sydney Waterlow and others, as to the dwellings of the lower classes. He said the deputation had presented a memorial on the subject of the large number of persons who were excluded from their houses by public improvements under the Artisans and Labourers' Dwellings' Improvement Act, when some very severe comments were made by Sir Sydney Waterlow on this subject. Had that gentleman, however, referred to the scheme proposed by the Board, he would have found that a clause had been expressly proposed to meet the evils of which the memerialists went to Mr. Cross to complain. The Board had taken care to introduce a clause to prevent the inconvenience as far as possible to the poor people who might be disturbed, and when they got possession of the land to endeavour to provide other habitations for them. He wished to correct an impression which existed, that the Board were about to build houses for the reception of the working-classes who might be disturbed by their improvements, which was not the case. All that the Board had to do was to clear the sites of these wretched buildings with the least possible inconvenience to the occupiers, and leave the erection of the new buildings to economic laws. It was a different question whether persons could be found to erect new buildings that would prove remunerative to them. The Board had cleared several plots of land, and only two of them had been taken; and nothing could be done until Sir Sydney Waterlow, or some other persons, should come forward, take the land, and put up buildings upon it. He further stated that there never was any other intention than to deal liberally with all weekly tenants, giving each of them a sum of money to provide another home; and up to the present time he had never heard from them a single complaint as to the manner in which they had been treated by the Board. From a letter written by Sir Sydney Waterlow which subsequently appeared in the *Times*, the matter appears in a

somewhat different light from that Mr. Roche would throw upon it.

The Noxious Vapours Commission held sittings at their offices, 2, Victoria-street, Westminster, on four days last week, and received the evidence of witnesses on behalf of the alkali trade. Amongst those present were Lord Aberdare (in the chair), Viscount Midleton, Earl Percy, M.P., Hon. Wilbraham Egerton, M.P., J. C. Stevenson, M.P., F. A. Abel, F.R.S., Professor Roscoe, F.R.S., Professor Williamson, F.R.S., and G. Fitzgerald, Esq., Secretary.

On Saturday last, at the fortnightly meeting of the managers of the Metropolis Asylums Board, held at Spring-gardens (Dr. Brewer, the chairman, presiding), Mr. Barringer brought up a report as to the Homerton and new Limehouse Hospitals. During the past fortnight, 178 fresh small-pox patients had been admitted into the Homerton Hospital, thirty-nine had died, and 129 had been discharged or transferred to the Limehouse Hospital. With reference to the latter institution, the Committee regretted to report that some persons who assembled in front of the Hospital a few hours after the last Board meeting were so foolish as to break about thirty panes of glass, and the Committee considered it desirable to ask for the police force to be strengthened in the neighbourhood. Since then no further damage had been done.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE third of the Annual Scientific Lectures for 1877 was delivered in the Hall of the College, on Monday, February 5, by Dr. Alexander Macalister, Professor of Zoology in the University of Dublin. The subject of the discourse was "Researches on the Development of the Muscular System in Vertebrates," or more strictly, "The Embryogeny of the Muscular System." Having sketched the general features of the embryogeny of the higher animals, and reminded his hearers, *in limine*, of the primary stages of the development of the ovum, Professor Macalister showed that the fourfold mesoblast originates a fourfold musculature—an *episkeletal* from the muscle-plates, a *hyposkeletal* from the intermediate cell-mass, an *appendicular* and *cutaneous* from the somatopleure, and a *visceral* from the splanchnopleure. He also showed that the complex system of trunk and limb is, primarily, only the muscular wall of lateral paired diverticula from the alimentary canal, and that all the apparent segmentations of the embyro, including the protovertebral, are but returns to the most primitive of embryonic states. In unravelling these relations, embryology had proved itself to be what it alone can be—the key to unlock the secrets of morphology. But we have to be content for the present with a simple record of phenomena, and can only guess vaguely at their direct causation, for to us it is still as great a mystery as it was to the royal philosopher of old, "How the bones do grow in the womb of her that is with child." On Monday, February 12, Professor Macalister again lectured on the "Embryogeny of the Intestinal Canal in Man and in the Higher Animals." He showed the wonderful simplicity of the early stages of embryogenesis. A one-layered sphere by invagination becomes bilaminar. The central sac of this form by the outgrowth of diverticular processes —extensions of the continuous lamella—becomes surrounded by a body-cavity, and its wall becomes the muscular system. Another, folding in, forms the neural canal; and thus the whole embryo is resolvable into a unilamellar sac, folded in and out upon itself. The after-history of the alimentary canal was far too complex and wide a subject for his audience to have in detail, so he confined himself in this second discourse to three subjects—(1) the methods by which the apertures of ingress and of egress of the alimentary canal are formed; (2) the conditions which determine its after-divisions; and (3) a few considerations as to the development of its peritoneal surroundings. The lecture, which was well conceived and admirably delivered, went to show how much light a rational understanding of animal morphology throws upon descriptive anatomy. In Dr. Macalister's words—"We see in our studies of embryology that the embryo of man is a palimpsest, inscribed over and over again with inscriptions not easily decipherable; but, thanks to the guides and characters read by those who have been for Comparative Embryology what the Grotefends and Champollions have been for Palæography, these can be interpreted." The fifth and sixth lectures of the series will be delivered next Monday, and that day week, by Dr. A. W. Foot, Physician to the Meath Hospital: subject, "Tuberculosis."

VACCINATION IN IRELAND.

As considerable dissatisfaction has long existed amongst the members of the Poor-law Medical Service in Ireland on the subject of vaccination, the Council of the Irish Medical Association, having devoted much time and consideration to the subject, are strongly of opinion that some changes in the law would be most desirable. They consider that, if their suggestions be carried out, the effect would be, in the first place, to make the practice of vaccination more general; secondly, that it would be performed within a more reasonable time; and, lastly, the character of the vaccination would be of a superior nature. Accordingly, two Bills have been prepared, and submitted for approval—one being to Consolidate and Amend the Laws bearing upon Vaccination in Ireland; the other simply an Amendment Bill, in case the Consolidation Bill should be deemed inexpedient. In the Bill for Amending the Acts relating to Vaccination in Irelaud, the changes sought for are merely an assimilation, as far as possible, of the vaccination laws in Ireland to those of England. Clause 1 of the proposed "Vaccination Amendment Act" alters the period after birth within which vaccination may be performed from six months to three. Clause 2 gives public vaccinators the power to take lymph on the eighth day. Clause 3 alters the destination of the certificate of successful vaccination, from the registrar of the district in which the operation was performed, to the registrar of the district in which the child's birth was registered. Clause 4 increases the rate of payment for successful cases of vaccination from 1s. to 2s. 6d. each. Clause 5 deals with awards to dispensary medical officers for a superior class of vaccination. Clause 6 provides for extension of the time—not exceeding three months in any suitable case—within which the operation may be performed after birth. Clause 7 deals with penalties (taken from the English Act) —*i.e.*, for preventing the vaccinator taking lymph, or for non-transmission of the certificate to the registrar. Clause 8 imposes a penalty on the vaccinator and on parents neglecting to transmit the certificate; also on persons signing false certificates. Clause 9 (adopted from the English Act) is intended to prevent the parents of a child escaping a penalty for neglecting to have the same vaccinated upon the technical ground that the registrar of births cannot prove that he gave a notice at the time of registration of birth. Clause 10 provides remuneration to the medical officers of dispensary districts when called on to give evidence against defaulters. Clause 11 defines the term "public vaccinator." Clause 12 provides for the transmission by the registrar, to the medical officers of districts, of lists of births and deaths at least once a month; and Clause 13 repeals certain Acts specified in a Schedule.

THE SANITARY CONDITION OF THE WAR OFFICE.

THE Committee appointed to examine into the sanitary condition of the War Office have completed their inquiry and made their report, which is to be promptly printed. A question on the "pestilential condition" of the buildings

constituting the office was put to the First Commissioner of Works on Monday evening, but was so unfortunately framed that it was very easy to deny most of the evils implied, and to answer the rest of the query without giving any information, and without acknowledging that there is really any fault to be found with the sanitary condition of the War Office. We are glad, however, to observe that the First Commissioner assured the House that "every exertion would be made on the part of the War Office and the Office of Works to carry out stringently and effectually the recommendations of the Committee." It is said that the Committee recommend that the present buildings be improved from off the face of the earth, the foundations cleared out, and an entirely new pile of buildings erected, with perfect and new drainage, and every fitting convenience and appliance for a national office of the first importance. We can hardly imagine, indeed, that the Committee could recommend any less sweeping measure of reformation. It is contrary to common sense and experience to expect that a number of adapted dwelling-houses—houses of considerable age also—could for any length of time be safely used as crowded offices. To say nothing of the evils of old disused and badly covered cess-pools, the drains, closets, and all like appliances must inevitably prove inadequate for the greatly increased population of the buildings; and rooms are altered, and, with passages, are divided and rearranged, so as to interfere with such ventilation as may have existed before, till the whole place necessarily becomes—first stuffy and unpleasant, and then gradually reeking with tainted air, and continually more and more unwholesome. It has happened to us to visit now and then a room there, by no means large, in which six persons work for six hours daily; it opens from a dingy, not to say dark, ground-floor passage, into which, close by the door of the room, ventilates one of the closets, which communicates, as we were naïvely informed, only with the passage and the sewers. The only urinals handy are vessels contained within the room where the six clerks work, and in which also they are obliged to have their luncheons. The atmosphere of the room before the working-day is over may be "more easily imagined than described"; and we suspect that this room may be taken as a not unfair example of the "sanitary condition of the War Office." The only difficulty about the matter is, we imagine, how to dispose of the Department while the new buildings for it are being erected; and we have heard it suggested that the Westminster Palace Hotel (which was, we believe, once temporarily occupied by the India Office) might perhaps in like manner be taken for the use of the War Office.

HEALTH OF SCOTLAND FOR THE LAST DECEMBER QUARTER.

From the Quarterly Return of the Births, Deaths, and Marriages registered in Scotland during the period ending December 31 last, we gather that the births during the quarter (30,538) were unusually numerous, the death-rate far lower than that experienced in any one of the last ten years, and the marriages (7546) up to the average. The deaths registered during the quarter were 17,093, being in the proportion of 194 to every 10,000 of estimated population. The average death-rate of the fourth quarter of the ten years immediately preceding was 2·225 per cent., so that the comparative salubrity of the last quarter of 1876 is very apparent. Taking the statistics of the eight principal towns, the inhabitants of which constitute about one-third of the whole population of Scotland, it will be found that zymotic diseases caused 375 deaths in October, 379 in November, and 338 in December. The deaths due to zymotic diseases, however, did not exceed 17 per cent. of the total deaths from specified causes—a circumstance which indicates a very favourable state of the public health. Small-pox caused only two deaths during the quarter; but enteric fever, which of late has been by far the more prevalent form of fever in the principal towns, caused 37 deaths in October, 29 in November, and 43 in December. The deaths from tubercular diseases were very high, being 308 in October, 361 in November, and 321 in December. Of these, pulmonary consumption alone caused 685 deaths. Diseases of the respiratory system—always a most destructive class in the principal towns—were responsible for 363 deaths in October, 582 in November, and 638 in December. Of these deaths 1125, or fully 71 per cent., were due to bronchitis alone. Violence, privation, etc., accounted for 83 deaths in October, 100 in November, and 84 in December. Two deaths from hydrophobia were returned from Glasgow. The humidity of the climate (91) during the period under notice exceeded the average by 4. The depth of rainfall was unexampled, being 8·10 inches, or more than the average by 4·10 inches; it was most considerable in Dundee, and least in Leith. The amount of east wind was very remarkable, and the air-currents in general were of unusual strength.

DEFECTIVE SANITATION IN HOUNSLOW.

Our attention has been called by a correspondent to the very defective sanitary arrangements said to exist in the Hounslow district. In a locality there, called Inwood-road, the only water-supply is derived from an open dipping-well, common to six separate tenements. The well has only a loose iron cover, there is no paving of any kind round the top of the well, and the yard all over and up to its edge (which is kept level with the top of the ground for the convenience of walking about) is made up and levelled from time to time with the ashes, house-refuse, and filth from the adjacent cottages; and on every time of using this well the cover is put down in this loose dirt. There is no pail or dipping apparatus of any kind provided by the landlord, and the filthiest vessels—even house slop-pails—are used to procure supplies of water. Almost immediately adjoining, and within a space of less than five feet, is an open gully without either a trap or iron grating, and also a brick drain. This gully is continually choked up, and the house-drainage and refuse water overflow the yard, and saturate the earth for a considerable distance. Incessant complaints produce no alleviating result; and this state of things, according to our correspondent, is to be found in other portions of the same parish. Of course we are unable to vouch for the correctness of these details, but, even admitting that they may have been exaggerated, what are the sanitary authorities about? Is an outbreak of fever necessary to procure an amelioration of such defective arrangements? Prevention is at all times better than cure; and we recommend the consideration of this proverb to the Hounslow sanitary authorities.

SMALL-POX IN LONDON.

The tale of deaths caused in London by small-pox, after having been 79, 86, and 103 respectively in the three previous weeks, sank again in the week ending Saturday, February 10, to 90, of which 44 were certified as unvaccinated, and 23 as vaccinated; in the remaining 23 cases the medical certificates did not furnish any information as to vaccination, or contained statements that the medical practitioner was unable to certify whether the deceased had or had not been vaccinated. The 90 deaths included 32 of children under five years of age, 23 of whom were certified to be unvaccinated, 1 vaccinated, and 8 were not stated as to vaccination. Of the 90 deaths from small-pox, 42 occurred in the Metropolitan Asylum Hospitals, 2 in the St. Pancras Hospital, 2 in the North-street Infirmary (Poplar), 1 in the Mile-end Workhouse, and 1 in Guy's Hospital; the remaining 42, or 47 per cent. of the total cases, occurred in private dwellings, showing a decline from the percentage in the previous week. After distributing the hospital cases, it appears that 17 of the deceased patients had resided

in Lambeth, 10 in Southwark, 9 in Hackney, 9 in Bow, 6 in Newington, and 5 in Bethnal-green—in all, 4 belonged to the West, 12 to the North, 4 to the Central, 34 to the East, and 36 to the South groups of districts. The disease showed by far the greatest proportional fatality in East London, and there caused an annual death-rate of 2·6 per 1000 persons living. The Metropolitan Asylum Hospitals, which now have accommodation for 1077 small-pox patients, contained 814 on Saturday last, against 830 and 838 at the end of the two previous weeks; 196 cases were admitted during the week.

HYGIENE IN THE DWELLINGS OF THE POOR OF DUBLIN.

At the annual meeting of the Association for the Organisation of Lay Help in the Church of Ireland, held on Friday, January 19, Dr. J. W. Moore read a paper on "Rules of Health; or, Hygiene in the Dwellings of the Poor of Dublin." The subject of the paper naturally fell under two headings—1. Existing sanitary defects; and 2. Their remedies. The defects may be summarised as follows:—Insufficient and too infrequent scavenging of roadways; flooding of cellars, and accumulations in them; defective drainage; filthiness of latrines and ashpits; dilapidation of tenement-houses; absence of water-supply; harbouring of animals (swine, etc.) in dwelling-houses; defective ventilation and overcrowding. In nearly all the poorer parts of Dublin the roadways are, to a great extent, the common receptacles for the filth of the neighbouring houses. Cellars are now comparatively seldom used as dwelling-places; but the Public Health Committee themselves admit that there are in Dublin not less than one thousand houses unfit for human beings to live in. What are the remedies for the glaring defects that exist? They could not doubt that the deplorable conditions under which the people live were among the most energetic predisposing causes of intemperance and immorality. The missionary field of temperance was not on the platform, but in the homes of the poor. Bring to them fresh air, warm clothing, light, fire, and other home comforts—these are the arguments which will carry conviction to the hearts of thousands. It is imperative, in the interest of the public health, that the by-ways of Dublin should be scavenged daily, and not weekly or bi-weekly as at present. A still more urgent reform is the establishment of an effective system for the removal of night-soil and house-refuse. In Dublin there are no suitable conveyances for the sick, the cabs in use being utterly unfitted for the purpose. The incorporation of the Artisans' Dwellings Company must be regarded as nothing short of a national blessing. But it is to be desired that the erection of dwellings in connexion with the Company will be under direct medical sanitary supervision. The Rev. Dr. Haughton said he could endorse all Dr. Moore had said as to cellars. He was well acquainted with the dwellings of the poor in both Dublin and Liverpool, and he would gladly see every cellar in Dublin shut up. Vice and iniquity frequent and thrive in these places, where physical disease germinates. The poor people of Dublin were blind to the necessity for pure air, and this ignorance was not confined to poor people. He had made inquiry as to the state of the artisans' dwellings question in Cork and Dublin. He was not so sanguine on this point as Dr. Moore. He had a strong opinion that private enterprise could more effectually undertake this task than a public body like the corporation of a town. Whenever a corporation attempted to buy up an old street with the view of improving the houses, there was a combination of the threatened interests. He was authorised by a gentleman, who was interested in this matter himself, to state that he would laugh at anything less than 13 per cent. profit on his house property. In a district near the South Dublin Workhouse, where there are many tenement-houses, the greatest rigour was used in the collection of the weekly rents, and if the tenant failed in one week's rent he was at once turned out. That was a constitutional principle, which was followed by the Cork Artisans' Building Company also. The principle on which that Company went was that if the work was not a commercial success it was a failure. The Company found their cottage-building a perfect success, but they would not take more than a certain percentage of profit, as they were not merely a company trading for profit. It was right that he should mention a noble sacrifice that was being made by the Hon. G. Cowper-Temple, Lord Palmerston's successor, who was rearing up good houses for the poor in parts of Dublin where hovels existed before. The same process was being carried on by the Guinness family; and it would be seen how much could be achieved in this direction by the expenditure of £10,000.

M. BOUCHUT ON THE USE OF THE OPHTHALMOSCOPE IN NERVOUS DISEASES.

For fourteen years it appears that M. Bouchut has reviewed in the month of December his ophthalmoscopic work at the Children's Hospital, Paris. In a clinical lecture reported in the *Gazette des Hôpitaux*, January 4, he gives the first part of his review for 1876. The record of cases is exceedingly valuable, but we venture to doubt whether these or any other cases will justify the extraordinary pretensions which M. Bouchut makes for ophthalmoscopy in a diagnostic point of view. We do not wish to dispute M. Bouchut's claim to having at least largely helped to diffuse the knowledge and employment of this mode of research, but what can be thought of the following paragraph?—"To-day the cranial cavity is no longer closed to observation as it was in the olden time, before the first works which I published in 1862." "*That which occurs in the meninges, in the brain, and in the spinal cord, can be recognised in the fundus of the eye by alterations visible with the ophthalmoscope.*" "We can from a physical phenomenon observed in the eye draw conclusions as to a cerebro-spinal alteration, just as from a cardiac or pulmonary murmur we can deduce this or that lesion of the heart or the lungs."

To begin with, the cranial cavity was not absolutely closed to observation before the year 1862. M. Bouchut has devoted himself to children's diseases. Let us take one of the most insidious of the nervous diseases of children—viz., tubercular meningitis. A Scotch physician (Dr. Robert Whytt) had come to a very shrewd diagnosis, and written a clinical account of this disease, which has never been surpassed, more than ninety years before M. Bouchut began his ophthalmic expositions. But has M. Bouchut so completely opened up the cranial cavity to observation? Let us consider the significance of one, and that the most important, of the ophthalmoscopic appearances observed in diseases of the cerebro-spinal system—viz., optic neuritis. Surely Dr. Hughlings-Jackson's dictum ("double optic neuritis generally means 'coarse' disease within the skull") embraces all that we are justified in concluding when we find this condition in any given case. Nobody has insisted more strongly than Dr. Jackson that optic neuritis does not help us more than this. We neither learn from it the nature of the change, nor the locality of the change; and the mechanism of the connexion between optic neuritis and coarse cerebral disease is still inexplicable. There are, indeed, most important limitations to the dictum itself. Firstly, the neuritis may be idiopathic, or, at all events, unassociated with any cerebral disease to be discovered post-mortem. In a case of Mr. Brudenell Carter's there were typical choked discs, but post-mortem examination disclosed the existence of kidney disease, and no brain disease at all. Secondly, when optic neuritis and cerebral disease are associated, the latter is not always coarse—tubercular meningitis, for instance. Thirdly, there may be "coarse" cerebral

disease without optic neuritis (*vide* Dr. Hughlings-Jackson, *Ophthalmic Hospital Reports*, May, 1876). Similar remarks might be made on other ophthalmoscopic phenomena. For example, we recently saw post-mortem a well-marked case of tubercle of the choroid in a patient who, though manifesting abundant miliary tubercle in the abdomen and thorax, had none in the brain or its membranes. But if we are greatly in the dark about their interpretation in cerebral diseases, how little do ophthalmoscopic changes teach us respecting the nature of spinal-cord disease! Suppose M. Bouchut finds atrophy of the optic nerve in a case of locomotor ataxy, how much does that positively teach him as to the extent and position of the lesion? To dogmatise on the results of a method of research which is still in its infancy appears to us only calculated to discredit it altogether. But to whatever perfection ophthalmoscopy may be brought, neither the ophthalmoscope nor any other instrument will free us from the necessity of considering any given case in its clinical entirety—the symptoms and the history as well as the signs.

CRANLEY VILLAGE HOSPITAL.

In noticing the Seventeenth Annual Report of the Cranley Village Hospital, for the year 1876, which shows that the institution continues its course of usefulness in an efficient and satisfactory manner, we have been struck with the remarks which the Medical Officer of the Hospital, Mr. Albert Napper, has been induced to append to the Report as a guide to those who may have it in contemplation to open similar establishments. He states that the experience of seventeen years has shown that, to be successful, the village hospital must be restricted to the limits to which it was originally confined, viz., an institution of from four to six beds, under the management of a single nurse, who will, with occasional assistance, perform all the necessary work. One bed should be provided for every 1000 of the population of the district, and those only should be entitled to admission who cannot be adequately attended at their own homes. Mr. Napper's supplement to the Report in question contains many useful hints to those who are interested in any similar institutions, and for that reason is well worthy of consideration.

INDIAN MEDICAL DEPARTMENT.

The following is a list of Indian Medical candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley. (The first-named gentleman gained the Herbert Prize):—

	Marks.		Marks.
1. Moorhead, J.	5638	7. Eaton, G. B.	4525
2. Beatson, C. H.	5393	8. Eyre, M. S.	4505
3. Owen, C. W.	5060	9. Channer, O. H.	4490
4. Griffiths, G. S.	5000	10. Young, E. W.	4465
5. Grant, P. M.	4966	11. McCalman, H.	4350
6. Lee, W. A.	4934	12. Ross, D. R.	4308

OVARIOTOMY AT THE SAMARITAN HOSPITAL.

The year 1876 has been the most successful on record at the Free Samaritan Hospital—the operation of ovariotomy having been performed fifty-five times with only five deaths. Forty of these were performed by Mr. Spencer Wells, with four deaths; seven by Mr. Bantock, with one death; and eight by Mr. Knowsley Thornton, without a death. The fifty-five cases include many in which both ovaries were found diseased and removed; and many of the operations were most formidable from the extent and nature of the adhesions. No case in which the diagnosis of ovarian tumour was made was refused the operation, however bad the prognosis, provided the patient still wished to have the last chance when the extra danger of her case had been fully explained to her. We believe these are the best results yet published, either in hospital or private practice; and if there are any members of the profession who still have doubts as to the advisability of ovariotomy, we commend these cases to their consideration.

PRESENTATION TO DR. M. MARTIN DE BARTOLOMÉ, PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

On Friday, February 2, a large number of the local members of the above Association dined together at Sheffield, with the view of presenting to the President a piece of plate, as a memento of the Sheffield meeting of the Association, and in recognition of his generous and able services on that occasion. The present consisted of a handsome silver-covered vase, which bears the following inscription:—"Presented to M. Martin de Bartolomé, M.D., by the local members of the British Medical Association, in grateful recognition of his valuable services as President of the annual meeting held in Sheffield in August, 1876."

THE PATHOLOGICAL SOCIETY.

We understand that Mr. Godlee's communication to this Society on the organisms present in vaccinia and variola, announced by the President for the next meeting, is unavoidably postponed. The meeting will probably be taken up by further contributions on syphilis—chiefly as regards the organs of respiration and circulation.

ILLNESS OF DR. PEACOCK.

We deeply regret to hear that Dr. Peacock was seized with sudden illness on Tuesday evening, February 13. Since that time he has suffered from left hemiplegia, with more or less unconsciousness. We sincerely hope that the attack will pass away. Our profession could ill afford to lose such an able and distinguished worker and physician as Dr. Peacock.

MEDICAL PARLIAMENTARY AFFAIRS.—MORTALITY IN ORPHANAGES—SANITARY CONDITION OF THE WAR OFFICE—THE LUNACY LAW.

In the House of Commons, on Monday, February 12, an inquiry was made by Mr. Whalley relative to the high rate of mortality in the Roman Catholic Orphanage at Carlisle-place, Westminster, when Mr. Cross, having been in communication with the President of the Local Government Board, said that the ladies in charge of the Orphanage were anxious to avail themselves of any suggestions for the better protection of infant life. The Sanitary Authority of the Westminster Board of Works had sent their medical officer to make an official report on the institution, but the Government inspector's report had not yet been received. Meanwhile, it must be borne in mind that the children admitted to orphanages were received too often in the most miserable state, because unable to obtain the nourishment they ought to receive. The gathering together of children of that kind conduced to a high mortality among them, and he was considering the desirability of placing all such orphanages under proper supervision and regulations.

As many conflicting reports have been made respecting the sanitary condition of the War Office, Sir William Fraser drew attention to the mortality and sickness among the officers and clerks employed at the War Office and Horse Guards. Mr. Gerard Noel was glad to be able to state that the deaths of the officers referred to could not in any way be attributed to the unhealthy condition of the War Office. From a return issued on January 19 last, it appeared that out of 630 *employés* nine only were absent on account of sickness. One officer was ill with typhoid fever; the other nine were suffering either from bronchitis, or congestion of liver, or rheumatic gout, or sprains, or disease of the mouth, or stoppage of the bowels. The report of the Committee appointed to inquire as to the sanitary condition of the War Office would shortly be published, and every exertion would be made on the part of the War Office and the Office of Works to carry out stringently and effectually the recommendations of the Committee.

A motion by Mr. Dillwyn was agreed to by the House, and supported by the Government, for the appointment of a Select Committee to inquire into the operation of the Lunacy Law as regards the security afforded against the violation of personal liberty. Mr. Dillwyn believed that a case would be made out for the amendment of the law in respect of the conditions under which persons were detained in asylums. We have elsewhere alluded to this matter.

FROM ABROAD.

Dr. Guéneau de Mussy on Pertussis.

At one of the meetings of the Académie de Médecine last month (*Union Médicale*, January 11), Dr. Guéneau de Mussy exhibited some specimens procured from two children who had died from pertussis. In these there was present considerable tumefaction of the tracheo-bronchial glands, which compressed the pneumogastric and its laryngeal branches. He reminded the Academy that in his theory of pertussis he referred the symptoms of the disease to bronchial adenopathy; and in examples of such glandular enlargement, when due to any other cause, there may always be observed a cough resembling that of pertussis. By this theory we explain (1) why the spasmodic cough does not set in until the second or third week of the affection, after the period termed catarrhal, and which Dr. Guéneau de Mussy terms "*exanthematic*"; (2) why the characteristic cough may persist for months, and sometimes even for years; (3) why, when the glandular swellings are only incompletely dispersed, and having a great tendency to be reproduced, there may, under the influence of a cold, chills, measles, etc., be induced a return of the whooping-cough in children who are convalescent; (4) that a prolongation of the compression of the inferior laryngeal nerve may give rise to a disorganisation of its texture and abolition of its function; (5) that in whooping-cough, when the adenitis is but slightly developed, or does not affect the glands which are in direct connexion with the pneumogastric or its laryngeal branches, the spasmodic cough may be absent, even when there is every reason to believe that pertussis is present.

Dr. Guéneau de Mussy added that, in his opinion, the adenopathy in pertussis is symptomatic of an internal eruption, the pertussis being a kind of eruptive fever, with exanthematic, or rather enanthematic, manifestations on the bronchial mucous membrane. Prof. Hardy objected that if these glandular swellings were the cause of the pertussis we ought to meet with them in all cases; whereas in autopsies after this disease their existence is exceptional. Moreover, if this theory were correct, we should not meet with those instances of rapid cure from simple change of air or locality. A cure may thus take place in five or six days—a period too short for the disappearance of glandular enlargements. Prof. Hardy has also seen paroxysms of the cough disappear almost instantly under the influence of baths of compressed air, which could hardly be supposed to act thus promptly on glandular enlargements. Dr. Guéneau de Mussy observed that the glandular enlargements have not been observed in pertussis simply because they have not been sought for. During an epidemic of pertussis he found them in every autopsy. As to the prompt effect of change of air, it is not necessary that the enlargement should be entirely dispersed, it sufficing that it should be notably diminished, for the convulsive paroxysm to diminish or even to cease. M. Blot declared that he could not comprehend how a permanent lesion like enlarged glands only produced intermittent phenomena, as in the paroxysms of pertussis. In symptomatic neuralgias (as, *e.g.*, that produced by a carious tooth), the pain is, indeed, observed to manifest itself in an intermittent manner, but still it exists, and may always become aroused under the influence of the slightest causes, as a change from heat to cold, the contact of food, etc. Besides the caries, there is then also a something else; and where is this "something else" in pertussis? Dr. Guéneau de Mussy replied that intermission is in pathology the general rule, even in the most manifest and most permanent organic alterations; so that the co-existence of the glandular affection with intermitting paroxysms of cough in pertussis is in nowise opposed to the laws of pathology. As to the nature of the intimate modification, under the influence of which the convulsive phenomena of the disease are produced, he declares himself completely ignorant. There is evidently a special morbid influence which modifies the innervation and deranges it sometimes for one, two, or even three years, which seems to militate in favour of the existence of an organic cause of long duration, such as adenopathy. Dr. Woillez wished to know how, under this theory, the contagion of pertussis could be explained; and Dr. Guéneau de Mussy replied that while he admitted the contagion of the disease, he did not profess to explain it, any more than it can be explained in other contagious diseases. He repeated that, in his opinion, pertussis is a kind of eruptive fever, contagious like all the other maladies of the same genus.

In connexion with the above communication we may notice another paper read before the Academy (*Bulletin de l'Acad.*, February 6) by Dr. Delthil, on "Diphtheroid Ulceration in Pertussis," in which, from the observation of twenty-seven cases, he comes to the following conclusions:—1. This ulceration is the primary phenomenon of a general affection, as chancre is in syphilis. 2. It has been improperly termed sublingual, as its seat is variable—sometimes at the frænum, on the right or left side, the floor of the mouth, lower lip, etc. 3. It has been attributed to the irritation produced by the projection of the teeth during the paroxysms of cough; but in two of the cases it was observed prior to dentition. It always disappears before the paroxysms, and is found at all ages, in children and in adults. 4. It precedes the paroxysms of cough, appearing with the fever and vomiting, and disappears with the fever in from four to eight, or sixteen days, the vomiting and paroxysms still persisting. 5. It is observed from the twelfth to the fifteenth day after the supposed contagion. 6. It leaves cicatrices behind. 7. Of more frequent occurrence than has hitherto been acknowledged, it seems to be proportionate in its extent, duration, and depth to the gravity of the affection.

Aconitia in Tic-Douloureux.

At a meeting of the Société de Thérapeutique (*Gaz. Hebd.*, February 9), Prof. Gubler drew attention to a symptom, which is little known, consequent on the use of aconitia. A patient, a very intelligent man, who on account of an obscure nervous affection, accompanied by amblyopia, had been taking aconitia in half-milligramme doses, found, two hours after beginning a new mixture, which was probably more active than the preceding one, that he was the subject of a strange uneasy præcordial sensation, accompanied by irregular palpitations of the heart—hearing, as he said, a triple sound in it. Prof. Gubler was at first inclined to believe that there was a reduplication of the second sound, but he had not seen the patient while these cardiac disturbances continued. In a young girl suffering from disease of the heart, whom he has subsequently seen, the aconitia had to be left off in consequence of the cardiac disturbances which it caused. These cases reminded him of the observations made by Hottot and Liégeois, who found irregular action, and then paresis, of the heart were induced by aconitia; and they were of opinion that it induced paralysis of certain portions of the bulb. The conclusion to be drawn from all this is, that aconitia should not be given to persons suffering from affections of the heart.

Still, Prof. Gubler thinks that too much distrust is often exhibited with regard to aconitia, which is in nowise dangerous when used prudently. The aconitia of Hottot and Liégeois is excellent, and that of Duquesnel possesses great power, so that a quarter of a milligramme may suffice as a dose. It is a bad plan to administer it in pills or granules, for it may happen that, encouraged for a certain time by the nullity of their effects, we may thus be led to give a mischievous dose. This nullity may result from an absence of absorption; but with a solution this does not occur. We may give half a milligramme of the nitrate of aconitia for a dose, which represents about a quarter of a milligramme of aconitia. With Hottot's aconitia, Prof. Gubler has only on one occasion met with an accident, the patient having taken one milligramme and a half in sixteen hours; and in that case there was loss of consciousness. He is therefore not afraid of employing this heroic remedy, especially when he is able to say that *he has never known a neuralgia of the fifth pair, even tic douloureux, resist aconitia.* Some years since he saw a patient who had long been the victim of obstinate trifacial neuralgia, for the relief of which Nélaton had excised all the nerves affected. This only gave temporary relief, and he was about to remove the Gasserian ganglion, as the man declared he would commit suicide, when, by the advice of Debout, Hottot's aconitia was tried, and after five milligrammes had been taken the patient suffered no more. In another patient, who had suffered agonies night and day for three months, six milligrammes completely dissipated the pains. The remedy was then omitted, and the neuralgia reappeared, again to yield with the resumption of the aconitia.

We must not, however, expect such success in other forms

of neuralgia as we meet with in the trifacial. The aconitia seems to act on the nervous tissue itself, but it is especially beneficial in the congestive forms. Of course the organic lesions, which are often the cause of obstinate neuralgia, pursue their course; but although tic douloureux may be due to a lesion of a progressive nature, Prof. Gubler is of opinion that, if we can succeed in relieving for a long time the functional disturbances, a cure may be effected. In a general way, it may be stated that many diseases which at last present organic changes are at first of trifling importance; the neurosis in them engenders the lesion. Locomotor ataxy, for example, is at first a neurosis; and it is only at a later period that atrophy of the nervous tissue takes place. Nutrition is at first affected, the lesions being only secondary. It is on the section of a motor nerve that muscular atrophy supervenes, cellular tissue filling up the vacuities. M. Moutard-Martin agreed in the opinion that the progress of lesions may be arrested by acting on the pain; and in this way he has definitively cured cases of tic douloureux by repeated injections of morphia.

Prof. von Arlt on Near-Sightedness.

In the *Boston Med. and Surg. Journal* for December 21, Dr. Henry Williams, Professor of Ophthalmology at Harvard University, publishes some extracts from an important monograph on near-sightedness recently produced by Prof. von Arlt, of Vienna, the conclusions of which he justly states are deserving of the earnest attention of the profession and the public. For this reason we reproduce them here in a slightly abridged form:—

"Near-sightedness, or myopia, as a permanent condition of refraction of the eye, in which parallel rays are brought to a focus before they reach the retina, usually depends upon an elongation of the globe from before backwards, lengthening the antero-posterior axis, increasing the bulk of the latter by serous effusion, and thus crowding back and thinning the sclera, choroid, and retina. In moderate and high degrees of myopia we find a striking alteration in the sclera, which becomes distended and thinned, the thinnest portion being, as a rule, at the posterior pole in the vicinity of the macula lutea. The choroid also is pressed backwards and expanded, and at the temporal side of the optic papilla the changes take the form of a crescent, its concave border blending with the papilla, whilst its convex edge extends more or less towards the macula lutea. This change must be regarded as an atrophy of the choroid. Similar alterations in the retina have not as yet been clearly demonstrated anatomically; but my opinion that the retina is distended, and its elements thus separated from each other, has been accepted by Donders, E. Jaeger, and others. In fact, Horner and Iwanoff have observed an oblique position of the rods and cones in the sensitive layer of the retina.

"Before the manifestation of near-sightedness, which is most frequently between the ages of ten and sixteen, seldom as early as the fifth or sixth year, we may expect a predisposition to it from a general resemblance of the individual to parents or other members of the family who are short-sighted; but its development cannot be predicted with certainty before the special symptoms appear. As in many other hereditary conditions and diseases, myopia may be more readily and fully developed by external causes. Congenital near-sightedness is not as yet proven; but the myopia of new-born infants depends on the great convexity of the crystalline lens. Predisposition to myopia—but not the condition itself—is often inherited; but myopia may be often originated where no hereditary tendency existed. Among several brothers and sisters, in whose family there has been no near-sightedness, only those become myopic who tax the eyes unduly in their youth. I myself have been myopic $\frac{1}{24}$ since the age of sixteen or seventeen. Neither of my parents or grandparents were so in the slightest degree. At thirteen I had excellent vision for far and near, but after four years of close study I noticed, during the vacations, that I could no longer recognise objects which I had formerly seen at a distance of a league. Thenceforward I thought it necessary to be careful, and my myopia has remained stationary, because I began in time to avoid the injurious use of my eyes. . . . . .

"Near-sightedness is not primarily developed after about the age of sixteen. If supposed to have begun later it is probable that its real commencement had not been observed. Only those eyes become myopic which were originally normal, or, at most, slightly hypermetropic. It is possible that young eyes moderately hypermetropic may become normal by the natural processes of growth, and may afterwards undergo myopic changes. The growth of the eyes ends at about the age of puberty, or certainly as soon as the twentieth year. From this time, normal or hypermetropic eyes remain almost unchanged in form until old age; but highly myopic eyes are an exception to this rule.

"Coccius caused young near-sighted persons to look at near objects, whilst he examined by the aid of suitable glasses the venous circulation within the eye; then, suddenly relaxing the accommodation by having them look at far objects, he saw clearly that the calibre of the veins was increased—thus proving that they had been subjected to greater pressure in looking at near than at far distances. The reason why this intra-ocular pressure causes a giving way of the sclera near the posterior pole of the globe is found in the fact that the juvenile sclera is still tender and dilatable, and is supported in this region only by loose cellular and fatty tissues, and not by the ocular muscles and their tendons.

"Let us now inquire what consequences are to be expected when continuous work on small objects has given rise to congestion of the circulation, increased intra-ocular pressure, and thinning of the posterior wall of the globe. If this too continuous use of the eyes is suspended, the sclera may recover its tone; but if the resumption of work renews the distension before the dilated membranes return to their normal state, or if the stretching goes beyond certain limits, the sclera, choroid, and retina do not fully recover their normal condition, and the intra-ocular vessels continue for some time engorged. If this state of things exists for some hours daily, a serous exudation may occur, increasing the bulk of the vitreous, and lessening its consistence. If we would hinder the production, and prevent the increase, of myopia, we must not only be careful that youthful eyes are not overtaxed by work on small objects, but must also see to it that in the intervals of study, etc., opportunity is given for recreation and practice in looking at objects at a distance. The numerous expedients for averting near-sightedness are nearly all directed against over-work, insufficient light, bad print, etc., during school-hours. But when we see children four or five years old allowed, especially in their convalescence from measles, scarlatina, and other diseases, to amuse themselves for hours with objects which, on account of their small size, must be held very near the eyes, or in pencil-drawing (for which the mistaken parents delight in observing a talent), and this, too, often in badly lighted rooms, we cannot but suspect that the seeds of near-sightedness are already sown. In large cities, even during the favourable years of childhood, there is but little recreation in the open air, and there are few games that require looking at remote objects, or the estimate of distances by the eye. The eyes of the little ones thus become restricted to a limited range of vision. I would therefore repeat that I regard the practising the eyes in looking at distant things in the early years of childhood as not less important than a rational limitation of the amount of their use in reading, writing, and such occupations, and frequent interruptions of this use, or at least a systematic change in the kind of occupation. As the want in cities of opportunity for free muscular exercise is compensated by gymnastics, so the eyes should not only have time for rest, but should also be trained in both far and near seeing, and thus be symmetrically developed."

[Fortunately, this excellent advice is not so applicable to the young of this country as it is to those of Germany and the United States, where the practice of youthful sports in the open air is far less common than with ourselves. One point, however, seems to us to call for the urgent attention of all engaged in the education of children—viz., the mischief that is entailed in recent times by the substitution of small type in children's lesson and story books, for the large, bold characters formerly in use.]

At a recent meeting of the Sanitary Committee of the Local Board, Ilfracombe, Dr. Slade-King, Medical Officer of Health, presented his annual report for 1876. From this it appears that the yearly death-rate was 15 per 1000. The national death-rate of children at and under five years of age is 40·1 per cent., but in Ilfracombe this death-rate of children is rather over 23 per cent. during the last two years; so that the health of the Ilfracombe district, judged by the three crucial tests of yearly mortality, infant mortality, and mortality from zymotic disease, is in every way most satisfactory.

REVIEWS.

Principles of Human Physiology. By W. B. Carpenter, M.D., F.R.S. etc.; Registrar to the University of London. Edited by Henry Power, M.B. Lond., F.R.C.S.; Examiner in Natural Science, University of Oxford; in Natural Science and in Medicine, University of Cambridge; late Lecturer on Physiology, Westminster Hospital; Ophthalmic Surgeon to St. Bartholomew's Hospital; and Surgeon to the Westminster Ophthalmic Hospital. London: J. and A. Churchill. Pp. 1176.

"Good wine needs no bush," says the old proverb, and an old and faithful servant like the "big" Carpenter, as carefully brought down as this edition has been by Mr. Henry Power, needs little or no commendation from us. Such enormous advances have recently been made in our physiological knowledge, that what was perfectly new a year or two ago, looks now as if it had been received and established fact for years. Each new discovery has been the starting-point for others. We rejoice, above all, to see the more practical character which has of late years been given to physiological teaching—practical, we mean, that men have been taught facts instead of opinions; practical, in the sense that they have been taught from actual specimens instead of diagrams; and practical, in the sense that men have been taught by seeing and performing actual chemical experiments, instead of having long strings of useless figures repeated to them, or, in the case of an energetic teacher, fairly written down on the black-board. In this development the work before us has had its due share; but it has come, from various circumstances, to be used rather as a kind of an encyclopædia than as a text book. Its size, the multitude of facts contained in it, and the characters of certain of its chapters, have favoured this use of the book, whilst militating against its use as an ordinary text-book. But in this encyclopædic way it is unrivalled. We should hardly think ourselves justified in recommending a student, aiming at an ordinary poll degree at the College of Surgeons and subsequent practice in the country, to sit down and spend the too short time at his disposal by reading such a volume as this straight through from end to end. But, on the other hand, we can safely say that there are certain subjects which can only be satisfactorily studied, and a clear apprehension of them obtained, by reference to this work. In short, here, as it seems to us, is the great value of the book: one is safe in sending a student to it for information on almost any given subject, perfectly certain of the fulness of the information it will convey, and well satisfied of the accuracy with which it will there be found stated.

Treatment of Varicocele by Compression.—In the majority of cases this is preferable to any more violent means of treatment, and in a large proportion favourable results may be expected. The pendant parts are to be supported while moderate compression is made immediately over the external abdominal ring. To make the pressure an ordinary hernia truss may be used, with a perineal band to keep it perfectly in position. The aim is to make such an amount of pressure as will moderately compress the veins at this point, and maintain it night and day, the truss only being removed for purposes of cleanliness.—*New York Medical Record.*

Death of M. Kergaredec.—One of the nine members of the Académie de Médecine who were recently rewarded with medals for having been fifty years members of the Academy, has just died. "The venerable M. Kergaredec," in the words of M. Henri Roger, the official panegyrist of the Academy, "descending from Laennec (whose compatriot and friend he was) by a scientific line, was able to make an important gleaning in the field of auscultation after its immortal inventor had gathered in his harvest, and to apply to the diagnosis of pregnancy what at first was supposed to be applicable only to diseases of the heart and lungs. Instructed by him, the accoucheur having placed the stethoscope on the abdomen, and listening to the sound produced by the new circulation, is now able to transform the maternal aspiration into certainty and is able to deliver a certificate of life to the infant even before he is born." The son-in-law of the deceased, announcing the death to the Academy, adopts a similar flowery style, thus—"Among his children who stood around his death-bed was that beloved daughter in whom M. Kergaredec heard the beatings of the heart while she was still in the maternal womb."

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, February 6.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Adjourned Discussion on Visceral Syphilis.

5. Syphilitic Disease of the Cerebral Vessels—Syphilitic Disease of the Spleen.

Dr. Buzzard showed specimens of cerebral vessels, and of the spleen, as well as sections of the basilar artery in which thickening of its coats was very obvious. They were taken from the body of a gentleman of forty-two, who died last August. Twenty years before he had had chancre; but he continued well, without even secondary symptoms, until three years ago, when he began to suffer from diplopia. Twelve months later he had strabismus, which disappeared under iodide of potassium, again returned, and was again cured by the same drug. Till two months before his death the patient continued fairly well; then he had a slight paralytic seizure. Shortly before his death, headache and vomiting came on; and these were followed by a state of general paralysis, insensibility, coma, and death. Post-mortem the arachnoid was thickened and opaque, with excess of fluid; the basilar artery was like a knotted piece of string, and contained a thrombus. The pons Varolii was much softened; less so the crura. Other arteries contained tracts of disease. The heart and valves were normal; the aorta at its commencement was somewhat roughened. The kidneys were healthy. The spleen contained a single wedge-shaped fibrous mass, which was continuous with the tissue of the capsule. On microscopical examination the basilar artery presented the following appearance:—External to the muscular coat was a small-celled growth with large nuclei, the cells arranged parallel to the circumference of the vessel. The muscular layer was granular, and in one place broken down into an abscess. The intima also presented new growth, which with the external one diminished the calibre of the vessel, while occluding the lumen completely were thrombi of different ages, but all of ante-mortem formation.

The President remarked that this account of the histology of the diseased artery agreed in the main with that given by Dr. Greenfield.

6. Primary Chancre—Syphilitic Disease of the Cerebral Arteries.

Dr. Davidson, of Liverpool, sent these specimens for exhibition, to illustrate the histological identity of the two growths—an argument against the tertiary changes being of the nature of sequelæ. They were both taken from the body of a seaman of thirty-four, who had primary syphilis seven years previously, and was admitted finally with ecthyma and intense headache. Large doses of iodide of potassium were of no avail. In three weeks he had sudden paralysis of the left arm and leg, which did not pass off. Afterwards paralysis of the right third nerve came on; and, soon after, coma supervened, and death. Post-mortem a small hæmorrhage was found in the left crus cerebri, and the arteries at the base were thicker and firmer than normal. Microscopically the change proved to be duo to (1) moderate cellular growth in the adventitia; and (2) an organised fibrous structure lining the interior of the vessel. The former had the ordinary characters of a syphilitic growth, and its effect upon the vessel would be much the same as that of a partial ligature. The latter growth was secondary, and not specific in nature, but simply an organised thrombus.

The President said that this was a perfectly different view of the nature of the change on the intima.

Dr. Greenfield observed that the specimens of disease of the arteries which had been shown by Drs. Barlow, Buzzard, Gowers, and himself seemed all to present somewhat similar characters, although the interpretation of the facts observed might be a matter of question. As regarded the changes in the outer coat, there was but little difference of opinion. But the alterations in the inner coat had received various interpretations, both as to the nature of the new growth, and the mode of its production, and its relation to other arterial diseases. As to their specific character, it had been stated by Friedlander that a precisely similar process was produced in inflammation

of the lung artificially induced by section of the recurrent laryngeal nerve in rabbits, and he had described the process as "obliterative arteritis." This, however, did not disprove, even if the absolute identity of the histological process were admitted, the view that in man these changes occurred to the same degree, and even almost exclusively only as the result of syphilis. These changes could be claimed as *specific* only in that limited sense, the histological elements, and even their arrangement, having, in some measure, characters in common with those due to other forms of irritation. As regarded the mode of production of these changes, three views were held—one which regarded the change as similar to those in some forms of atheroma; a second which ascribed them to peripheral thrombosis; and the third which followed the description he had given, somewhat corresponding to Heubner's, regarding them as due to growth of the endothelial and interlaminar cells of the intima. The first view had not been suggested by any of those who had spoken, and might therefore be passed by with the remark that, having himself carefully compared them with various specimens of atheroma, and submitted them to others who were experienced observers, they agreed that there was no resemblance whatever in the process. The second view, of peripheral thrombosis, seemed to be contradicted by Dr. Davidson's own specimen, which appeared to be in a stage intermediate between that in the two cases which he had brought forward. In thrombosis there was no doubt a proliferation from the endothelial cells, which played an important part in the organisation of thrombus by growing into the clot. Dr. Davidson seemed to have relied on Billroth's description of the process of organisation of thrombus, which was, to a large extent, taken from Bubnoff, whose observations had not at all been confirmed by subsequent able observers. But he would point out that in Dr. Davidson's specimen there was actually proliferation of the endothelium into the lumen of the vessel, internal to the supposed clot—*i.e.*, though a process somewhat similar to that in the organisation of thrombus was seen, it occurred previous to the existence of the thrombus, and led to its formation, instead of being secondarily induced by its irritation. It appeared, therefore, that Dr. Davidson's specimen was a valuable link in the chain of evidence as to the mode of occurrence of this disease, but he thought that a comparison of a far larger number of cases was needed before any positive conclusion as to the exact history of the process would be possible.

Dr. Gowers said that he believed Heubner disclaimed any idea of the growth in the vessels in syphilis being specific, calling it similar to the result of irritation. If Heubner's description were compared with that of the cartilaginous-like change in vessels given by Wilks and Moxon, the two were found to agree even in the most minute details. If there were complete identity, then it would seem as if the influence of syphilis on the growth in the intima were marked rather in degree than in kind. Dr. Gowers considered that there was a great difference between the growths in the intima and those in the externa, the latter being nodules resembling gummata.

Dr. Edwards Crisp inquired how the patients under consideration had been treated; for the influence of mercury in producing arterial change should not be forgotten.

7. *Syphilitic Disease of Various Organs.*

Mr. Hutchinson said that he really felt, after the extremely interesting contributions to our knowledge of the minute pathology of visceral syphilis which these meetings had elicited from Dr. Greenfield, Dr. Gowers, Dr. Barlow, and others, some diffidence in bringing forward his cases. He had had but little opportunity of pursuing pathological anatomy, and what he should have to say would chiefly concern drawings made from living patients, and clinical observations unsupported by the post-mortems. A great many cases of visceral syphilis had, in a more or less fragmentary way, come under his observation; but although he had, whenever he could, followed them up, yet he had had surprisingly few opportunities for making necropsies. Most of the patients had, indeed, persisted in getting well. In point of fact, the only morbid specimen that he had to show was obtained in consequence solely of a mistake in the diagnosis. He was very sorry to say that during the life of the lady, whose brain was before him, he did not suspect that she was the subject of syphilis. If he had, he did not in the least believe that he would have been able to produce the specimen that evening. The particulars of the case were briefly these: He saw the lady only twice, with a three years' interval, and the last time three months before her death. Her family medical attendant had her under observation the whole time, and it was through his energy that they procured the post-mortem. He knew of no reason to suspect her of being syphilitic, and he had attended her two children, who were quite healthy. When Mrs. A. was first brought to Mr. Hutchinson, in 1867, she complained of a most severe headache and of dimness of sight. She alleged that her mother and sister had suffered from a similar kind of headache. She was irritable almost to the extent of insanity, and, light being annoying to her, she would scarcely let him look at her eyes. He suspected tumour on the brain. Three years later he saw her at her own house. She had in the interval been better and worse, but her sufferings from headache had often been most intense. Her friends blamed her and suspected her of exaggeration, asserting that she sometimes seemed to get well very suddenly, and would now seem almost blind, and in a few hours be able to read well. The diagnosis was still tumour, and although they gave some iodide it was not pushed with that vigour which a correct diagnosis would have produced. At the post-mortem, three months after the second consultation, the skull was found very thick and hard, its dura mater adherent in patches; and in the pia mater, indenting the convolutions, which also were implicated, were a number of dense pinkish-white lumps. These were very evidently syphilitic gummata. They now made further inquiries, and it came out that this lady, although now well married, had been kept by her husband for some years before he married her, and had, to his knowledge, occupied a similar position in another establishment before that. Still, no one knew that she had had syphilis, and they had to depend upon the character of the osteo-meningeal disease for their diagnosis. Subsequently, however, another link of evidence was obtained. Three years after her death, her second daughter was under Mr. Hutchinson's care for a prolonged and severe attack of symmetrical keratitis. Neither this girl nor her elder sister presented any definite indications of taint; the keratitis was, however, well marked and conclusive. Thus the mother's brain and the daughter's eyes afforded mutual light on the diagnosis in each. Without the one it might have been disputed whether these lumps of deposit were really syphilitic; and without the other it might have been plausibly asserted that here at length there was an instance of interstitial keratitis without any reason to believe in its syphilitic origin. In connexion with this specimen of meningeal gumma, he might be allowed to remark that it was surely time that practitioners should avail themselves of the labours of pathologists, and attempt some distinction during life between the different forms of what was called so vaguely "cerebral syphilis." The occlusion of an artery and subsequent softening of brain-substance was one thing; a gumma of the dura mater was another. They were different in their symptoms, course, and progress under treatment. If a man were hemiplegic from softening of the corpus striatum consequent on arterial occlusion, there was but little hope that he might recover, however vigorously the iodide might be pushed. It might prevent further arterial disease, but could not repair the brain. In cases of gumma the hopefulness of treatment was, on the other hand, indefinite, and the triumphs of the remedy were matters of everyday experience. In many cases, too, the differential diagnosis could be made with fair accuracy. If we were to say that we recognise three forms of cerebral disease—one in which the symptoms result from arterial occlusion, one from the irritation of gummata, and one from periosteal thickening,—we might assume that sudden attacks of paralysis denoted the one, that the second had all the symptoms common to cases of tumour, and that severe pain and headache went with the last. To each of the three conditions a group of special symptoms might easily be assigned. We were surely advanced past the stage when it was necessary to mention all the symptoms which occur severally in each, as if all were to be expected in the condition known as "cerebral syphilis." No doubt in some cases all three lesions were present together, and in many two of them; but this ought not to prevent us from trying to discriminate, when, as was the case in most instances, discrimination was practicable. He was not sure that we should not be obliged, as knowledge advanced, to admit yet a fourth group of cases—those, namely, in which the symptoms were those rather of progressive and slow atrophy than of new growth or inflammation. He suspected that there were such cases, and that they were far less amenable to treatment than any of the others. It was

of much interest to make a comparison between the pathological consequences of syphilis as observed in the coats of the eye, and those which occur in the brain and its membranes. Now, we certainly had two forms of choroiditis. In one, as illustrated by the sketch which he now exhibited, small separate gummata, each a distinct swelling, formed in various parts of the fundus and went through definite changes. After they had, under treatment, been absorbed there was not usually any tendency to relapse or to recurrence. They were for the most part easily influenced by treatment. But there was another form which occurred both in the acquired and inherited disease, which was not easily cured, and which, on the contrary, showed a tendency to slow and steady progress. In it we rarely witnessed any proof of deposit or of inflammation; but atrophy of choroid and retina ensued, with pigmentation, and frequently with involvement of large areas. This form occurred at periods long distant from the primary disease, as a late tertiary. In the inherited disease it usually happened after the keratitis had got well, and it proceeded, according to Mr. Hutchinson's experience, in spite of treatment, until sight was almost destroyed. It sometimes very closely simulated the appearances produced by retinitis pigmentosa, and had also a clinical history as regards rate of progress not very unlike. The syphilitic malady might be distinguished, he thought, by certain differences—its imperfect symmetry, constant implication of the choroid, more or less, etc.,—from the true retinitis pigmentosa; but it would be tedious for him at present to go into this question in detail. [The conditions referred to were illustrated by a number of ophthalmoscopic drawings.] His chief reason for referring to these two varieties of choroiditis was to suggest that there might be parallels in the case of the pia mater and cerebro-spinal centres. It certainly fitted with his experience in practice that these cases of obscure nerve disorder in the subjects of syphilis might be unattended by any of the violent accidents—pain, convulsions, sudden attacks of paralysis, etc.,—which usually accompany gumma and arterial disease, and which were far less easily benefited by treatment. In these the symptoms—progressive paralysis for the most part—were slowly and quietly developed, and they continued, in spite of the iodide and of mercury, steadily to progress. Sometimes it was the spine which was implicated, sometimes the cranial nerves. There was often great difficulty, notwithstanding the known history of syphilis, in deciding whether or not the disease was really syphilitic. He had been familiar for some time with a group of cases in which the curious condition of immobility of the eyes was apt to occur, all their motor muscles becoming paralysed. The levator palpebræ often escaped. These cases were not attended by any of the symptoms of severe cerebral disease. They did not begin suddenly, but progressed slowly, and in some cases at least they were not much helped by treatment. He had seen, he thought, about half a dozen such, and in all there was a remote history of syphilis. In only one had he been able to obtain a post-mortem, and in that the brain had not been sufficiently examined to permit him to report as to its state. Usually one eye was affected at first; but later on both would suffer, and both became absolutely fixed. Dr. Barlow, at the last meeting, had produced a living specimen of the enlargement of the spleen, which was not uncommon in syphilitic infants, and had said—what is supported by general observation—that this splenic swelling might wholly disappear, and leave nothing which could be recognised either during life or at the post-mortem. Mr. Hutchinson wished to support his statement on this point, and to extend the observation to the liver also. In several cases he had witnessed, in young persons the subjects of inherited taint, great enlargement of the liver, which condition had subsequently wholly disappeared. It was difficult to believe that there was any kind of gumma-growth in such cases, and they were obliged rather to fall back upon the hypothesis of mere vascular turgescence. This turgescence might possibly in its turn be due to some disease in the nervous system. He well recollected a lad whose case illustrated what he was saying. He had on more than one occasion such enlargement of the liver that it hung below his navel, and was easily visible as a swelling when he lay on his back in bed. He was under observation for years. He had nodes on almost all his long bones, and his mother and several of his brothers and sisters had suffered most severely from syphilis. At length he died. At the post-mortem, which was made by Dr. Sutton, the liver was found to be natural, and, excepting some patches of slight thickening of capsule, no changes were observed. He might just add, in reference to this case, that the lad died of albuminuria, and that his kidneys were in a state of advanced disease (contracting). Dr. Sutton did not consider their state in any way directly connected with syphilis, and he commented on the absence of hypertrophy of the heart as a special feature in the case. It occurred to Mr. Hutchinson to suspect that their disease might possibly have been induced by the very prolonged use of iodide of potassium. This was, however, mere conjecture. It seemed clear, then, that among the unexpected incidents of constitutional syphilis we meet occasionally with general enlargement of such viscera as the spleen and liver, independent of any of the conditions of new growth which we recognise as specific, and that it is capable of spontaneous resolution. He would just add that a parallel condition of temporary great enlargement of the liver was sometimes encountered in cases of xanthelasma without any syphilitic history. He had here drawings which illustrated the common conditions of gumma in the liver, but he would not intrude upon the time of the Society further than just to hand them round. One of them showing a cicatrix was valuable, because it came from a case of inherited disease. Its subject was a lad who had characteristic teeth and physiognomy, and who had also a large gumma in one testis and disease of the coats of his aorta. The autopsy was made by Dr. Sutton, and he believed that Dr. Turner would subsequently show for that gentleman a drawing of the artery. Arterial disease in inherited syphilis was probably very rare. He would like to ask the attention of surgeons and pathologists to the question of affections of the veins and of the lymphatic trunks in late constitutional syphilis. But few cases of syphilitic phlebitis had, he believed, as yet been recorded; yet, probably, most surgeons were familiar with the fact that inflammations around varices (and even about healthy veins) were not infrequent in the subjects of syphilis. He thought also that he had seen several cases in which the thrombosis and phlebitis were attended by other conditions sufficiently peculiar to justify a belief that they were of specific origin. In some there had been great excess of inflammation, a large hard mass forming in the cellular tissue and threatening to slough, much as subcutaneous gummata often did. These cases were much benefited by the iodide so far as prevention of sloughing was concerned, but the thrombotic plugging remained. He was not aware that any specimens had been produced showing syphilitic disease of the cerebral veins. As regarded the lymphatic trunks, he believed that they were liable to disease just as the arteries were, and that it resulted in similar conditions of plugging and its consequences. In a clinical lecture, published in the *Lancet* some months ago, he had detailed several cases in which one lower extremity became greatly swollen, and remained for long in a state of solid œdema, there being some reason to believe that the lymphatic trunks were inflamed, whilst in all there was a history of syphilis. In one remarkable case, he had treated the gentleman many years before for syphilitic paralysis of the fifth nerve. In him a large network of cord-like lymphatic trunks could be felt over the lower part of his abdomen, one thigh being greatly swollen. There was no gland disease—and he was not speaking now of affections of the glands, but of the trunks. It would be very interesting, should opportunity for microscopic examination occur, to ascertain how far in this condition the changes in the walls of the capillaries were similar to those seen in the arteries. Lastly, before sitting down, might he suggest that there was a part of the nervous system which had hitherto been much overlooked in reference to its suffering from syphilis—the vaso-motor ganglia? It was not improbable that certain vague forms of nerve-disturbance occurring in syphilitic subjects—the severe dyspepsia, for instance, which was sometimes so definitely relieved by the iodide—might be due to disease of the ganglia. It might, perhaps, be somewhat difficult in respect to many of these ganglia to determine what ought to be the group of symptoms which their disorganisation would be likely to produce. He had begun with the first, the least, and the easiest of investigation—the lenticular. The nerve-filaments proceeding from this ganglion supplied motor force to three different structures; and he made bold to believe that when those three structures were wholly paralysed, without implication of any other, the disease could be nowhere else than in the ganglion itself. He further asserted that such cases were met with in practice, and that in his experience their subjects were always those who had suffered from syphilis. The three motor functions referred to were dilatation

of the pupil, contraction of the pupil, and accommodation. If the pupil, without being either dilated or contracted, were absolutely motionless, and if there were absolute cycloplegia (or paralysis of the ciliary muscle), and if with these conditions there were no defect of the orbital muscles, then he thought the disease must be destruction (temporary or permanent) of the ciliary ganglion. He had seen a series of such cases, and although he was sorry to say,—no, not sorry, that was not the right word—that he had as yet had no opportunity for post-mortem dissection, yet so closely had they resembled each other, that the diagnosis was, he thought, fully justified. In most, one eye had been affected in the first instance, and the other had followed after an interval. Some had been benefited by treatment, and others not so. It would be very interesting in the future to try if we could make a plausible guess at similar disease in any other of the ganglia.

The PRESIDENT invited the members to reply as far as their experience went to Mr. Hutchinson's queries. Especially interesting would be any observation on disease of the arteria centralis retinæ.

Mr. HULKE said that in several cases he had observed thickening of the arteria centralis retinæ with the ophthalmoscope, and in one case, at least, there was certainly syphilis. The vessel was still pervious, but was reduced irregularly in calibre. Mr. Hulke then proceeded to relate the following case of visceral syphilis, which had been under his own observation:—A young man, who had had primary syphilis under circumstances unfavourable for treatment, began to suffer from affection of sight, and had several nodes and other affections of bones. The eye was found prominent, and this condition increased; the cornea was on the point of sloughing; and the ball was removed by the surgeon in attendance. Meanwhile there were no brain symptoms. Six weeks after removal of the eyeball, the orbit again became filled up; frontal headache began, and thereafter epileptic fits, which ended in death. Post-mortem a large well-marked gumma was found in the middle fossa of the skull; connected with the dura mater, and as large as a Tangerine orange. In a second case Mr. Hulke had seen a man, syphilitic, with paralysis of all the muscles of both eyeballs, and some unsteadiness of gait. Under large doses of iodide of potassium he quite recovered, and was now perfectly well.

Dr. BUZZARD spoke with reference to Mr. Hutchinson's drawing of the fundus oculi of a young lady, presenting many white spots. He had himself seen a boy with double optic neuritis, and signs of cerebral tumour, who had similar spots in the fundus of one eye. He died of tubercular meningitis, and tubercular masses in the cerebrum and cerebellum.

8. *Syphilis of the Lung.*

Dr. GOODHART showed specimens of this condition, and related the following cases with which they corresponded:—The first was a girl of nineteen, who suffered from syphilis at fifteen, and died of phthisis at the former age. Her parents had both died of phthisis. Post-mortem, double phthisis and pleurisy was found, but the change appeared to be peculiar. The second case was that of a woman of twenty-seven, who had suffered with symptoms of syphilis for ten years. Fibroid disease was found at the extreme base of both lungs. In the third case, a man of twenty-three, who had been syphilitic for some years, and had suffered with winter cough for three years, signs were found of extensive phthisis; and post-mortem a scattered fibroid change existed throughout the right lung, as well as cavities in both. The last case was in a woman of fifty-nine, who died of hæmoptysis, and in whom, besides hepatic gumma, a fibroid puckered change was found in the lungs. The microscopical appearances in all the cases of lung disease might be described together. The bronchial septa, vascular coats, and alveolar walls were thickened with new growth, and the alveoli accordingly contracted; the arteries were not specially affected; the tissue around the bronchi was notably vascular. And in two instances Dr. Goodhart had seen fatal hæmoptysis result without either aneurism or ulceration. He believed that these four cases might be called examples of syphilitic phthisis. During the last twenty-two years there had been thirty-six cases of chronic lung disease associated with visceral syphilis; they could be arranged in two groups—namely, twenty-four cases of fibroid disease, and twelve of ordinary tubercular change. It appeared fair to say that syphilis and fibrous tissue went together in the lung, as in other viscera. The question was, whether the change was simple or specific. Dr. Goodhart did not believe that there was any histological difference between syphilitic and tubercular phthisis, except that the former might be more vascular. With respect to disease of the arteries in syphilis, he considered that the majority of the specimens already brought forward exhibited a primary growth in the outer coat, and one that could not strictly be called syphilitic. To return to phthisis, he considered that the histology alone could not distinguish the syphilitic form. But syphilis did not choose the apex specially; it particularly affected the pleura, and appeared in patches. The disease was chiefly fibroid, and not tubercular; and it was associated less with a cavernous than with a gangrenous condition. In some cases of visceral syphilis the liver was very large, and diminished rapidly under treatment, though the condition was not a mere vascular turgescence. On one occasion he had met with peculiar blotching on the surface of the liver in a syphilitic subject; but no appreciable permanent histological change. With respect to symmetry, in twenty-one of the cases of lung disease both were affected; in four or five one lung only; in the testicle more than half were symmetrical.

Mr. HUTCHINSON wished to say a word or two in explanation. So far from Dr. Goodhart's facts being at issue with the speaker's views as to the nature of tertiary symptoms, they seemed to him to support them. His (Mr. Hutchinson's) opinion was not that tertiary symptoms were never symmetrical, nor that there was any reason why they should not always be so, but simply that the cause which made those of the secondary stage always symmetrical were wanting. If an infected blood were the cause of local phenomena, it was almost certain that such phenomena would be symmetrical, because the blood was equally supplied to both sides. Such was the case during the secondary stage. If, however, the symptoms resulted from tissue conditions, and the blood was at the time of outbreak free, then there was a considerable probability that local influences might take a large share in evoking them, and that they might be unsymmetrical. Such, according to Mr. Hutchinson's creed, was the state during the late tertiary periods; the blood was no longer tainted, but the tissues, which at some long prior period had been nourished by tainted blood, had retained peculiarity, and were liable to special disease. Such disease might of course be symmetrical, for the two sides had equally been affected, but experience confirmed the conjecture that it would not usually prove so, since it often waited to be evoked by some local cause. Dr. Goodhart's facts were quite in accordance with this. He admitted that a large gumma was rarely seen in the tertiary period excepting non-symmetrical; and that was what Mr. Hutchinson would have supposed. The corresponding tissue on the opposite half of the patient's body would undoubtedly have proclivities given to it during the syphilitic poisoning—that was his conjecture—but it needed something more to evoke the growth of the gumma. The gumma did not prove that there was any active virus then in the blood. If it were there, there would be a tendency to symmetrical symptoms. He wished to make a remark with respect to the lung and the testis. Dr. Goodhart had not produced any proof, as far as the speaker could see, that those diseases of the lung occurred in what would mostly be called the tertiary period. It was a question of date. But Mr. Hutchinson's argument would be that there was a tendency to disease of all parts during the second stage—the lungs amongst others. He would want to know the distance of time between the primary disease and the death of the patient, before he was prepared to admit that Dr. Goodhart's cases of double lung disease were examples of symmetrical tertiary deposit. He would also be glad if anyone could give any information as to whether anything analogous to phagedæna occurred in the lung. Everybody knew how common it was in everything syphilitic, and how rare in any other forms of inflammation. As to the period in which the testis was affected, he had rarely seen a patient with a gumma in his testis in a late tertiary period. About half the cases were symmetrical, and half non-symmetrical. He thought it stood about midway between the disappearance of what were commonly accounted as secondary symptoms, and those counted as tertiary. It was certainly not usually a late tertiary symptom.

The discussion was then adjourned.

DR. WALTER MOXON delivered the Annual Oration of the Hunterian Society on Wednesday last at the London Institution, Finsbury-circus.

OBITUARY.

SIR WILLIAM FERGUSSON, Bart., F.R.S., LL.D.,

Serjeant-Surgeon to the Queen, Etc.

It is with profound regret that we announce the death of this distinguished surgeon, which took place at his residence, 16, George-street, Hanover-square, on Saturday, the 10th inst., at 5.30 p.m. We feel sure that, in whatever quarter this sad news is received, it will be listened to with a feeling of reverence and of sincere grief.

Sir William Fergusson was born on March 20, 1808, at Preston Pans, in the county of East Lothian. He received his early education at a grammar school at Lochmaben, in Dumfriesshire, from which he was transferred in due course to the High School of Edinburgh, and subsequently he entered the University of Edinburgh. His uncle, who afterwards became General William Fergusson, of the Royal Marines, undertook the care of his education, and at the age of fifteen he was placed, by his own choice, in a lawyer's office, where he showed considerable aptitude for work; but the legal profession was evidently uncongenial to him, so, after two years, he abandoned this pursuit, and in November, 1825, at the age of seventeen, entered the medical profession, as his father originally wished. He was now certainly more in his element. Of a singularly practical turn of mind, he pursued his studies in anatomy with zeal and interest. His untiring industry and persistent devotion in this department of his medical education soon attracted the attention of his teacher, the then illustrious Dr. Robert Knox, who was at that time, and throughout life, justly proud of so distinguished a pupil. In 1826, William Fergusson became the assistant of John Turner, Professor of Surgery in the Royal College of Surgeons of Edinburgh, and in 1828 took the post of Demonstrator of Anatomy to a class numbering about 400. In this year, too, he became a Licentiate of the Royal College of Surgeons of Edinburgh, and in 1829 (when twenty-one years of age) obtained his Fellowship of that College by examination. He still, however, stuck unflinchingly to anatomy, and was never so happy as when at work in the dissecting-room—indeed, he has told the writer of this memoir that very frequently he has passed daily sixteen hours out of the twenty-four there. About 1829-30 his friendship with Knox became even more intimate, for they were closely associated as zealous colleagues. Besides taking part with his senior, conjointly with Dr. John Reid, in the teaching of General Anatomy, Fergusson himself gave special demonstrations on Surgical Anatomy, which were eminently useful, and highly appreciated by the students of the class. Mr. Fergusson's reputation was, however, not limited to the dissecting-room, for by degrees the outside world began to recognise his superior talent as a surgeon and his striking ability as an operator, and it was evident to his friends that opportunities alone were required for the further development of much innate talent. It was not long before one such opportunity presented itself, for in 1831 he was elected Surgeon to the Edinburgh Royal Dispensary, and in that year, amongst other operations of importance, he tied the subclavian artery—an operation that had then been done only twice previously in Scotland, once by Wishart, and once by Liston. Steadily plodding on until 1835, when Liston left Edinburgh to take the Chair of Surgery at University College Hospital, Mr. Fergusson rapidly rose in public estimation, and divided the surgical honours of Scotland with Syme, who was nine years his senior, and had been elected as Liston's successor at the Infirmary of Edinburgh. At the next vacancy, however, in 1839, Mr. Fergusson was appointed Surgeon to the Infirmary, and in this year he became a Fellow of the Royal Society of Edinburgh. His rapidly increasing practice and hospital duties compelled him to abandon to a great extent his visits to the dissecting-room, and he seemed to have had, so to speak, the whole surgical world before him. Yet "his bosom warmed with the brave thirst of fame," and ambition led him to seek a larger sphere where he might exercise his profession and increase his popularity and reputation as a surgeon. In the following year (1840) it happened that a vacancy occurred in the Chair of Surgery at King's College, London, and it may interest our readers if we mention, *en passant*, that the Council of King's College determined at that time to establish a hospital in connexion with the school, and thought it desirable—indeed, essential—that the Professor of Surgery in the College should be also one of the Surgeons to the Hospital. Mr. James M. Arnott (who, happily, still survives) was then Professor of Surgery at King's College, and also Surgeon to the Middlesex Hospital, and declined the Surgeoncy to King's College Hospital, as his accepting that office would have involved his resignation at the Middlesex. So Mr. Fergusson was elected to the two appointments, and came to London, not knowing one single person whom he might call a friend, excepting the late Mr. Partridge, the then and always much-esteemed Professor of Anatomy.

Mr. Fergusson's departure from Edinburgh was a cause of sincere regret to all parties, and especially to the students, who had regarded him more as a friend than as a teacher, and who, in evidence of their esteem, presented him with a handsome testimonial, in the shape of a large silver salver. That he had at this period of his life, although only thirty-two years of age, "won golden opinions," may be gathered from the expressions used towards him by his friend and colleague Professor Lizars. Referring to Mr. Fergusson's appointment at King's College, he said—"They had all, in common with himself, to regret that the honourable distinction recently conferred on Mr. Fergusson would deprive them of an esteemed and valued friend; but that consideration was comparatively trivial when they reflected on the loss which the Hospital of Edinburgh and the inhabitants at large would sustain in being deprived of the services of one so distinguished in his profession. Liston had been removed to a more extended sphere; and now Fergusson had been led to follow the example. As to Mr. Fergusson's merits, it was unnecessary for him to say anything before an audience to all of whom they must be so familiar; but, having for several years had the happiness to be a colleague of that gentleman's, as one of the Surgeons to the Royal Infirmary, he might be permitted to bear the testimony of one who perhaps had the best possible opportunity of judging. He had seen Mr. Fergusson perform all the operations of surgery, from simple blood-letting to the most trying and critical cases of amputations, excisions, lithotomy, and lithotrity, and with very signal success. He had seen John Bell operate, and he had often assisted Liston; but he would sincerely declare that he had seen no one, not even Liston himself, surpass Fergusson. If in the visitation of Providence he were doomed to undergo any of those operations which surgical science had devised for the relief of humanity, he would conscientiously say that there was no one in whose hands he would more readily place himself than in those of Mr. Fergusson."

With such credentials, and being introduced to London by Sir Charles Bell, William Fergusson came "this way sailing like a stately ship." It was too much to expect that he would, as a stranger—it may be almost said a foreigner,—be received with open arms. There were men well on in practice who must have regarded him as an intruder; and, excepting for his tenacity of purpose, and his singular gift of pleasing, he might have had, like others, to go "bock agaen."

On arriving in London he took a house in Dover-street, Piccadilly. His private patients were at first, as might be expected, few and far between, for it is stated that, during his first year, his fees amounted to less than £100. His income, however, from private practice soon increased, and in 1847 he was enabled to move to a more commodious residence in George-street, Hanover-square, which he purchased only a few years ago, and in which he passed from time to eternity.

About the time, or soon after, that Fergusson came to London, it must be confessed that there was a remarkable opening for a surgeon in the metropolis. Perhaps there was no decade in the annals of surgery in which the hand of death had been so busy as that from 1840 to 1850. Thus, Sir Astley Cooper died in 1841, and within a few years Tyrrell, Anthony White, Callaway, Liston, and Aston Key paid the debt of nature. Other surgeons of note retired; and thus Fergusson was left, as it were, "master of the situation." Moreover, Syme, of Edinburgh, came to London on the death of Liston, and after a short sojourn returned again to the North. By such circumstances Fergusson was thrown into good and active practice comparatively early in life; and, whilst admitting that he was more than ordinarily fortunate, or, as the world would say, that he had more than

his share of "luck," it is not too much to assert of him that, like most other (so-called) lucky men, he rose to eminence really more by industry, patience, foresight, skill, and determination than by mere luck. The fact is, he made the most of every opportunity that was thrown in his way. He made friends, and pleased them; and in pleasing others he pleased himself.

As soon as Mr. Fergusson arrived in London, he set about passing the examination, and became a M.R.C.S. in 1840, and subsequently he was elected, under the new charter of 1844, an Honorary Fellow. Honours and distinctions soon fell thick upon him. On the death of Mr. Aston Key, in 1849, he was appointed Surgeon-in-Ordinary to H.R.H. the Prince Consort, and the Prince selected him chiefly on account of his skill as an operator. The appointment was made principally through the intervention of Sir James Clark, who was generally consulted by her Majesty as to the posts of medical honour in connexion with the Court. The qualifications of two or three surgeons of eminence having been discussed, the Prince clinched the matter by saying, "Well, Clark, the question is—supposing I had to have my leg amputated, who is the best man to do it?" "Why, Fergusson, by all means," said Sir James. "Then," replied the Prince, "he shall be my Surgeon." In 1855 he was appointed Surgeon-Extraordinary, and in 1867, on the death of Sir William Lawrence, Serjeant-Surgeon to the Queen.

He was elected a member of the Council of the Royal College of Surgeons in 1861, and re-elected to that body in 1868. He became a member of the Court of Examiners in 1867, and was elected President of the College in 1870. As Professor of Human Anatomy and Surgery he delivered two courses of lectures in 1864 and 1865. These lectures were most popular, and attracted very large and distinguished audiences. They were afterwards published under the title of "The Progress of Anatomy and Surgery in the Nineteenth Century," and they embody his views on those departments of surgery in which he took a more than prominent part and interest, such as harelip and cleft palate, lithotomy, lithotrity, excisions of joints, operations on the jaws, conservative surgery, and, lastly, on amputation, a procedure he described, with characteristic fervour, as "one of the meanest, and yet one of the greatest operations in surgery—mean, when resorted to where better may be done; great, as the only step to give comfort and prolong life." He delivered the Hunterian Oration in 1871, and held for the usual period, with extension, the post of Examiner in Surgery at the University of London. He was President of the Pathological Society in sessions 1859-60, and of the British Medical Association in 1873. Two years ago he was elected to the honorary degree of LL.D. at the University of Edinburgh.

At the time of his death he was Clinical Professor of Surgery and Senior Surgeon to King's College Hospital, having resigned the Professorship of Surgery in 1870. He was a Fellow of the Royal society of Great Britain, and of most of the learned societies in Europe. He was Consulting Surgeon to the Hospital for Consumption at Brompton, and Surgeon to the Scottish Hospital—appointments he held ever since Liston's death. He was a Deputy-Lieutenant for Peeblesshire; a member of the Conservative Club; and was quite recently presented with the honorary freedom of the Salters' Company.

He was created a baronet January 23, 1866, the honour being conferred on account of his "distinguished merit and eminence as a surgeon."

Sir William married, on October 10, 1833, Helen Hamilton, daughter of William Ranken, of Spittlehaugh, West Linton, Peeblesshire, who died in 1860, and leaves two sons and three daughters. The heir to the baronetcy (now Sir James Ranken Fergusson) is a barrister-at-law, and was born in 1835. He married, in 1862, Mary Ann Somes, eldest daughter of the late T. Colyer, Esq., of Wombwell Hall, Kent. She died April 14, 1868. Sir James Fergusson is, therefore, a widower, and has one child, a son. Sir William's younger son, Charles Hamilton Fergusson, is a lieutenant in the 72nd Highlanders.

Such is a brief record of one of the most eminent and deservedly popular surgeons; but there remains yet more to be told, and much more than can be told in so hurried a notice as this. Sir William Fergusson was assuredly one of nature's gentlemen, and his life throughout affords a marvellous example of what is good, noble, and generous, and may be taken as an illustration that although a man may commence life without the help of money, yet that success may be honourably attained by steady, plodding industry. His career was one of uninterrupted labour, and was marked in early days by vicissitudes which only a man of determination could surmount. He was compelled to borrow money, which he raised on the strength of a policy on his life. Commencing, so to speak, as a poor lad, and having no relatives in the profession to lend a helping hand, he continued to work, in the full assurance that some day success would crown his untiring efforts. Favoured by nature with a handsome and splendid physique, his bearing was always impressive, and his public character was as dignified as his private life was spotless. With all the jealousies that surrounded him, as they surround everyone more or less if he rise superior to his neighbours, he was one of the most forgiving and the most tender-hearted of God's creatures. If on any occasion he was conscious that he had done or said anything to hurt the feelings of another, whether old or young, he never rested until he had made reparation in some form. He was as honourable as he was forgiving, and readily yielded to the opinions of others, if his conscience dictated such a course. And yet he would hold his own under certain circumstances; and this firmness on his part may at times have been misconstrued into perversity, or even obstinacy. His death will be deplored by all, from the highest Lady of the Realm to the poorest of her subjects; and well may the Council of King's College, and his colleagues at its Hospital, in which he took so conspicuous a part, join in sorrow that the cold hand of death has come so soon on him—too soon, indeed, for he was in the midst of prosperity and honour, and (to within a brief period) in the fulness of his strength.

It cannot be said that Sir William Fergusson was a fluent lecturer. With so much experience at his command he necessarily had at all times plenty of sound knowledge to impart to his class, and what he said was always over-brimming with practical interest; but his delivery was at times verbose and laboured. Yet he had the happy knack of interesting his hearers; and the introduction of an occasional anecdote further tended to rivet their attention. Thus he would, to impress on the students the importance of having every instrument in readiness during an operation, recount with quiet sarcasm how on one occasion a surgeon was performing an amputation, and, after the flaps were made, suddenly recollected that he had omitted to bring a saw with him. And, again, in referring to the manner of holding the knife in a circular operation, he would direct the attention of his class to the importance of only doing one thing at a time, and charge the student not to perform an operation for cataract on his own eye simultaneously with removing the limb of the patient.

But it was especially in the operating-theatre that he shone with unsurpassed brilliancy; and it was here (his pet arena) where any looker-on might learn so much by simply *observing* Sir William, and listening to the trite practical observations that fell from him. His skill in operating is too well known to be insisted on in this place, for his name as an operator is a household word, and will ever be cherished with the brightest memories of the healing art.

In minor matters, such as opening an abscess, or in performing some of the smaller operations in surgery, he was unsurpassed, and even the way in which he set to work to examine a tumour was in itself a perfect lesson in manipulation. This dexterity with his fingers was innate, for he had a natural genius for mechanical work. He was an excellent carpenter, and was only satisfied when he saw his workmanship equal in merit to that of a skilled artizan. When a student he made himself a brass-bound dissecting case; and soon after he completed a lithotrite, with the rack and pinion, which he originally devised. Whilst his hands were thus accustomed to rough work, yet his delicacy of touch was marvellous. He was a good musician, and could "discourse sweet music" on that most difficult of all instruments, the violin. Further, his passion for the gentle art (and in early life he was a capital fly-fisher) showed that he possessed a highly sensitive hand, and a placid composure, which were of the utmost value to him in his professional calling. His tall, handsome figure at once commanded general respect, and immediately gained the confidence of his patients. He was not in the least overbearing, nor was he spoiled by popularity; and, with all his honours, he always held a most modest estimate of himself. In him were truly combined the three essential qualities of a surgeon—"the eagle's eye, the lion's heart, and the lady's hand." Who has not watched the bright twinkle of his eye, that could discourse "with more rhetoric than all the gilded tongues of orators"? Who has not seen the lion's heart in the vigour and determi-

nation with which he has attacked a large tumour? Who has not noticed the lady's hand in his delicate, refined, and sensitive touch? Then, his moral attributes were not less marked than his physical. Witness his docile and gentle manner with children: his look, voice, smile, and kind encouragement made them feel that they were in a home where the law of kindness reigned. Then his chaste and gentlemanly bearing towards women might be taken as an example of a well-trained mind, that sympathised with their helplessness and "scorned to treat them lawlessly." With him, Science, Modesty, Humanity, and Surgery walked hand-in-hand.

In his style of operating he was said to imitate Liston; but Liston, although a bold surgeon, fell far short of Fergusson in many respects. The fact is that Sir William had a style peculiarly his own, which, as it is now so extensively adopted, might not inappropriately be termed the "Fergusson school of surgery." He always considered well beforehand what he had to do, and generally performed the operation as he originally intended. The chief point of excellence to be noticed was the design with which he set to work: there was no hesitation, no vacillation, and at the same time no hurry. Perfect method and order prevailed. With proper assistants all went smoothly; and in some operations not a word has been passed between him and those who were helping him. In illustration of this, the following somewhat amusing incident may be referred to:—Once, at a private operation for harelip, a medical practitioner who happened to be present asked a friend a few days after if Sir William and his assistant had had a quarrel, because, he said, "they did not speak one word to each other during the whole of the operation!" The precision with which he performed delicate operations, such as bringing the edges together in harelip, cleft palate, etc., was remarkable. He paid great attention to every little detail of an operation, and completed his work, from beginning to end, himself, even to the application of sutures, plaster, and bandages. But in the more important procedures involving life and limb his skill was equally consummate; in truth, as a general surgeon, he was, so to speak, "good all round," and perhaps it would not be far from the truth to say that no surgeon ever lived who had performed so many operations, taking the aggregate, as the subject of this memoir. The name of William Fergusson is prominently connected with almost every branch of surgical art. He has tied the larger vessels several times, and his operations on the jaws are well known. He revived excision of the hip and knee joints, and of some bones—as the scapula, —and has undertaken the most formidable operations: thus, in 1865 he removed successfully a part of the clavicle and the whole of the scapula and arm in a young girl.

The masterly manner in which he grappled with large tumours commanded the admiration and surprise of bystanders. But perhaps his method of operating for lithotomy created the greatest sensation. As a rule, he preferred Cheselden's lateral operation; and the rare coolness with which he set to work was something to be remembered. There was rapidity, and yet no fuss or hurry; there was just enough physical strength employed, yet no roughness. Sir William's operations of lithotomy attracted large numbers of visitors to King's College Hospital, and the following anecdote, implying his dexterity, will be read with interest:—Some practitioners were discussing the respective merits of the leading hospital surgeons of the day, and the subject of lithotomy was introduced. "I saw Mr. —— perform lithotomy to-day in half a minute," said A. "Oh," replied B, "I saw Mr. —— once extract the stone in twenty seconds." "Well," said C, "have you ever seen Fergusson perform lithotomy?" "No," said B. "Well, then, go, and look out sharp, for if you only even *wink* you'll miss the operation altogether!"

Outside his own family circle it is difficult to say who shall mourn Sir William Fergusson's death most, for he was as much beloved for his social qualities as he was revered for his professional attainments. As an amiable, liberal, kind-hearted man he was without parallel, and his hospitality extended to all classes of society. He was ever ready to help those who were so placed that they could ill help themselves; and perhaps amongst the general community no class of persons will feel his death more keenly than the poor actor or actress, the clergyman, or governess—indeed, all connected with literature, science, and art, to whom his advice was rendered gratuitously and with unsparing hand. Best of all, he was a true, staunch friend, who could at all times be depended on; and if he saw there was merit in any of his pupils just starting on the threshold of life, he would not take him up one day and drop him the next, but keep a watchful eye on him, and carry him over the stormy waves of difficulty until he felt sure that his *protégé* was independent of help. Most conspicuous amongst those who owe so much of their success in life to such timely encouragement are Henry Smith, Francis Mason, H. Royes Bell, and W. Rose; and to these must be added the names of two others who, had they been spared, would doubtless have held an honourable position in the profession—the late Peter Charles Price and A. M. Edwardes.

But there are numberless others who, although not so immediately associated with Sir William, are much indebted to him for some personal favour bestowed either directly or indirectly. It was Sir William Fergusson's boast in 1851 that he had turned out 1000 surgeons; and when it is remembered that at the time of his death he had been for nearly fifty years a teacher, some idea may be formed of the aggregate number of students who had had the benefit of his teaching. There is no doubt that his influence at King's College had much to do with the signal success of many of his more distinguished pupils.

It is a significant fact that one or more King's College men are to be found in every other hospital in London to which a medical and surgical school is attached. Thus, without including the names of many of the staff at King's College Hospital, there are—at St. Bartholomew's, Dr. Claye Shaw; at Guy's, Mr. James Salter; at Charing-cross, Dr. Julius Pollock, Mr. Bellamy, and until recently Mr. Fairlie Clarke; at St. George's, Dr. Ralfe; at the London, Drs. Sutton and Sansom; at the Middlesex, Drs. R. Liveing and Cayley, and Messrs. Nunn, Hulke, and Lawson; at St. Thomas's, Dr. John Harley and Mr. Francis Mason; at University College, Mr. Christopher Heath; at St. Mary's, Drs. Meadows and Trimen; at the Westminster, Dr. Grigg, and Messrs. Macnamara and Bond. Amongst others holding various hospital appointments, and enjoying a large share of public favour, are—Drs. Buzzard, Druitt, Easton, Wharton Hood, Lavies, Edward Liveing, Murray, Symes Thompson, and Way; Surgeon-Majors Logie and Snell; Messrs. Propert, George Parkinson, Moss, Johnson Smith, and Spencer Watson. Again, Atchley, of Bristol; Bubb, of Cheltenham; Eade, of Norwich; Fry, of Wateringbury; George, of Malvern; Goodall and Russell, of Birmingham; Huxley, of Torquay; Liddon, of Taunton; Harries, of Shrewsbury; Martland, of Blackburn; Monckton, of Rugeley; Swain, of Devonport; Terry, of Bradford; Pridgin Teale, of Leeds; John Teale, of Scarborough; Toller, of Gloucester; Walters, of Reigate; and Bridgwater and Tonge, of Harrow.

The occasion of his creation as a baronet was a period of great rejoicing amongst his friends and former pupils, especially amongst the students at King's College Hospital; and, at the instance of the late Dr. Tanner, a subscription was raised, which amounted to a sum of nearly £400, contributed by upwards of 300 of his old pupils, which was presented to Sir William in the form of a handsome silver dessert service, with an address on vellum. The presentation took place at the annual dinner of old King's College men, on June 21, 1866. Dr. Druitt took the chair, and gave a suitable address. In reply Sir William delivered, in "a round unvarnished tale," a short history of his eventful life, and confessed that he always had a spirit of ambition to rise in his profession, ever clinging to the belief that success would some day come from honest industry. He feelingly alluded to his first friend in London, Professor Partridge, and gave unreserved acknowledgment to that gentleman for his kindness.

Of all the aids to his success, perhaps the one that might be most insisted upon was his punctuality in keeping appointments. It was his pride never to be late; and in this, as in so many other matters, he set a brilliant example to the rising generation. His house-surgeons would confess that it was a pleasure to visit the wards with him, for he always arrived punctually, performed his duties in a business-like manner, and (excepting under certain circumstances) visited the wards only at the appointed hours. He placed confidence in those about him, and was correspondingly respected for so doing. His power of endurance is worthy of remark. Naturally gifted with a manly physique and a splendid constitution (for he scarcely had a day's illness until the last two years), he seemed able to undergo any amount of fatigue. Thus, he would, after a hard day's work, frequently either join some festive gathering, or entertain friends at his own house. He seemed never tired, and was always ready with a joke.

He had a wonderful recollection for faces, and some few

years ago, at a dinner of the old students, he remarked to the honorary secretary that there was but one man whom he failed to recognise. The fact was that that particular individual to whom he referred happened to be the only visitor in the room.

Moreover, Sir William was a great patron of the drama, and was often to be seen at the opera and theatres with his family. A hard worker himself, he was not slow to appreciate the vicissitudes of the stage-player, and we venture to say that many a tear will be secretly shed by the poorer votaries of the histrionic art when they read or learn that the cheerful aud encouraging voice of their friend "Dear Sir William" is silent for ever.

Sir William Fergusson not only enjoyed popularity in his own profession, but, as already indicated, he was much respected for his private and social virtues. The *réunions* at his town residence will long be remembered, for at these hospitable entertainments the *élite* of all classes were gathered together; and at his "home" at Spittlehaugh in Scotland, during his well-earned holiday, there was a constant succession of visitors, who were received with so cordial a welcome as to make them regret when the time arrived for their departure. Sir William was deeply beloved by his tenantry, and as a proof thereof it may be mentioued that on his first visit to his family seat at Spittlehaugh after her Majesty had conferred on him the well-merited honour of a baronetcy, more than ordinary care was taken to display their affectionate regard for him.

Much, however, as this testimony of regard was appreciated by Sir William, there was yet one more which must have been even more touching and gratifying to him, for it seemed to be the climax of a life full of eventful history. We allude to the excellent full-length portrait, painted (by subscription) by Mr. Rudolf Lehmann in 1874, and offered to, and unanimously accepted by, the Council of the Royal College of Surgeons of England. A replica of this picture also adorns the walls of the College of Surgeons of Ediuburgh. Such distinctions even the most sanguine man has scarcely any right to expect, and they were honours that Sir William most dearly prized.

Apart from the numberless interesting cases that have been published in the medical journals, Sir William was not a voluminous writer. In addition to the lectures at the College of Surgeons, to which we have already alluded, he published, in 1842, his "System of Practical Surgery," which thoroughly carries out its suggestive title, and in 1870 had reached its fifth editiou. The production of such a work implies no slight labour, and the wonder is that, with so many unceasing demands on his time and thoughts, he should have given even this amount of literature to the profession. His papers on Excisions, and Cleft Palate, in the *Medical and Chirurgical Society's Transactions*, and on Lithotrity in the *Edinburgh Medical and Surgical Journal*, are also marked as eminently practical contributions.

If we admit that Sir William had more than ordinary good luck, yet he richly deserved his success, for perhaps few men have made so many sacrifices and have rendered so many gratuitous services. As a successful leader in surgery he was "fair game" for the less fortunate, and often very improvident members of the profession extracted a few shillings or guineas from him, not as a favour, but, in many instances, as a right, and without even leaving their thanks behind. Sir William, with his benevolent heart, must have parted with some hundreds of pounds in this so-called charity.

The fatal disease (known as Bright's disease) which has deprived the profession of one of its most distinguished ornaments appears to have commenced about two years ago. At the beginning of 1876 Sir William consulted his friend and colleague Dr. George Johnson, who at once detected the critical nature of the sufferer's ailment. With such professional skill and careful nursing, however, he made a good rally during last summer; but within the last two or three months it had become too evident that the disease was making rapid progress. In the early part of his illness Sir William experienced at times sharp paroxysms of pain, accompanied with difficulty of breathing; but his friends and admirers will, we feel sure, learn with thankfulness and satisfaction that he passed into eternity peacefully, and apparently without the least suffering.

The grave now closes over the remains of one whose like, take him for all in all,—whether we regard him as a brilliant surgeon, as an affectionate and devoted parent, as an amiable and trusty friend, or as a great and good man,—we shall not look upon again. The self-denying solicitude of his family, with that of old and faithful servants, combined with the skilful treatment and watchful attendance of Dr. George Johnson and Sir George Burrows, have, no doubt, been the means, through God's providence, of prolonging his valuable life. We venture most respectfully to offer our heartfelt sympathy to the members of his family, in the hope and belief that the universal grief of the profession, and a nation's grief too, will give them rest and peace at first, and in the end strength and patience.

At eight o'clock on Wednesday evening the remains of Sir William Fergusson were borne from the house, No. 16, George-street, Hanover-square, in which he had lived and died. The procession to Euston Station was of great length; for not only did a large representative company of the medical profession attend, but many private carriages had been sent to follow the hearse and mourning coaches. The carriages of Sir George Burrows, Dr. George Johnsou, Mr. Prescott Hewett, Sir James Paget, Sir William Gull, Dr. Cameron, Sir William Jenner, Dr. Quain, Dr. Murchison, the Duke of Sutherland, the Baroness Burdett-Coutts, Mr. Christopher Heath, and many other private and professional friends of the deceased, followed from the house in George-street to the railway-station. The mourners were the eldest son of the late baronet, succeeding to the title as Sir James Fergusson; the second son, Lieutenant Charles Fergusson, 72nd Highlanders; Mr. William Snell, a very old and intimate friend of Sir William Fergusson; and Mr. Gadesden, the family solicitor.

There were at least 2000 persons within the station gates when the long procession passed through them, at half-past eight o'clock. Nearly the whole staff of King's College Hospital, with many of the students, aud as large a detachment of the nurses as could be spared, had assembled within the station to wait the coming of the procession; and when, at nine o'clock, the train moved from the platform, every head was uncovered, even to the outskirts of the wide station.

The remains of the lamented baronet were yesterday (Friday) gently laid in the family ground in the quiet little church-yard at West Linton, Peeblesshire, where already rests what was mortal of a beloved wife and one son.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 8:—

Goodworth, Edward Portington, Hatfield, Doncaster.
Hawkins, Cæsar Frederick, Bristol.
Watson, James Henry, Benyon-road, N.

The following gentlemen also on the same day passed their primary professional examinations:—

Collier, Thomas, Sheffield Medical School.
Todd, William, London Hospital.
Harran, James, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

AVELING, JAMES H., M.D.—Obstetric Physician to St. Marylebone General Dispensary, *vice* Dr. Hayes, resigned.

BEVAN, JOHN IRON, M.B. Edin., C.M. Edin.—Medical Officer to the Gower Union (Eastern District).

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Surgeon David James Freeman has been placed on the retired list from the 31st ult. The following qualified candidates for the Naval Medical Service have been appointed to be Surgeons in her Majesty's Fleet, with seniority of September 30, 1876:—John Davey Henwood, Henry William Duffield Walsh, Myles O'Connell McSwiny, Henry Brougham Guppy, M.B, Jephson John Connell, M.D., Thomas Crichton Mugliston, Thomas Edward Henry Williams, Francis Williamson, Robert Murdoch, M.B., William Masters Rae, George William Frederick Armstrong, M.D., Leonard Henry Kellett, M.B., James Crawford Dow, M.B., Charles Francis Newland, Penrose John Barcroft, George Despard Twigg, George Joseph Fogerty, William John Brownrigg Bookey, John Norris Browning, Laurence William Corcoran, M.B.

WAR OFFICE—MEDICAL DEPARTMENT.—Deputy Surgeon-General Thomas Crawford, M.D., to be Surgeon-General, *vice* Henry Clinton Foss, retired on half-pay; Surgeon-Major John Gibbons to be Deputy Surgeon-General, *vice* Thomas Crawford, M.D.; Surgeon George Duncan is placed on temporary half-pay.

BIRTHS.

ANDERSON.—On February 7, at Kerr's Roxburghe Hotel, Charlotte-square, Edinburgh, the wife of T. Anderson, M.B., of Shaws, Selkirkshire, prematurely of a daughter.

BRAMWELL.—On February 5, at 31, Percy-gardens, Tynemouth, the wife of J. W. Bramwell, M.B., of a daughter.

HENDERSON.—On January 10, at Rawal Pindi, Punjaub, the wife of G. Henderson, M.D., Indian Medical Service, of a daughter.

HOFFMAN.—On February 7, at Fulham, the wife of H. W. Hoffman, M.B., of a son.

SPENCER.—On February 5, at 1, Spencer Belle Vue, Lansdowne, Bath, the wife of F. R. Spencer, M.D., Army Medical Staff, prematurely of a daughter.

WAGHORN.—On February 2, at Redhill, the wife of Surgeon-Major A. R. Waghorn, M.D., Bengal Army (retired), of a daughter.

MARRIAGES.

COLLENETTE—BUCKLER.—On February 8, at the parish church, West Hackney, Frank de Beauchamp Collenette, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., son of B. Collenette, M.D., of Guernsey, to Florence, eldest daughter of Edward H. Buckler, of Colveston-crescent, West Hackney.

CONOLLY—THOMAS.—On February 10, at St. Thomas's, Portman-square, Rowley Conolly, M.R.C.S., formerly of H.M.'s 72nd Highlanders, to Emily Mary, eldest daughter of Richard Thomas, of Huddersfield, and stepdaughter of James Hadaway, L.R.C.P., M.R.C.S., of 47B, Welbeck-street, Cavendish-square.

CORBAN—BARROW.—On February 7, at Holy Trinity Church, Paddington, Laurence Corban, M.D., Surgeon-Major 21st Hussars, to Myra Frances, youngest daughter of the late Captain Barrow, late H.E.I.C.S., of Oldbury Place, Kent.

GREEN—DEVERELL.—On February 6, at St. Margaret's, Whalley Range, Manchester, William George Green, sixth son of Albert Green, M.D., late of London, to Sarah Mary Louisa Deverell, eldest daughter of the late George Thomas Deverell, Esq., of Calcutta.

MURRAY—HALSE.—On February 9, at St. Anne's, Wandsworth, George Stanley Sandys Murray, M.D., of Meadow-side, Upper Richmond-road, to Blanche Elizabeth, third daughter of the late William Halse, of Church House, Bromley, Kent.

TREVES—MASON.—On February 8, at Holy Trinity Church, Sydenham, Frederick Treves, M.R.C.S., of Wirksworth, Derbyshire, to Anne Elizabeth, younger daughter of Alfred S. Mason, of Kingston Villa, Sydenham-park, S.E.

WHITE—COLLINGS.—On February 1, at St. Paul's, Bath, Walter White, L.R.C.P., L.R.C.S., of Darton, Yorkshire, to Sarah Ann, second daughter of Edward F. Collings, of Bath.

DEATHS.

DAY, THOMAS CRIPPS, son of William Henry Day, M.D., at 10, Manchester-square, W., on February 6, in his 16th year.

DIXON, EMILY, wife of S. B. Dixon, Esq., and eldest daughter of J. Cooper Forster, F.R.C.S. Eng., M.B., of Upper Grosvenor-street, London, at Pewsey, Wilts, on February 7, aged 25.

DYSTER, FANNY, wife of Frederick D. Dyster, M.D., at Tenby, on Feb. 9.

FERGUSSON, Sir WILLIAM, Bart., F.R.S., Serjeant-Surgeon to the Queen, at 16, George-street, Hanover-square, on February 10, in his 69th year.

HARRISON, BERTHA SHAW, younger daughter of Wm. Philip Harrison, M.D., of Ilkley, Yorkshire, at Paris, on February 5.

MARSH, HENRY BRUNNING, M.D., of Upton-on-Severn, Coroner for the County of Worcester, at Kempsey, in his 70th year.

POWER, WILLIAM HENRY, M.D., at Ladywell, Lewisham, on February 7, aged 65.

REYNOLDS, WILLIAM, M.D., at Beech Lawn, Mossley-hill, Liverpool, on February 9, aged 73 years.

ROBERTS, STEWART BLACKER, M.D., F.R.C.S.E., of South Norwood, Surrey, late of Swineshead, Lincolnshire, on February 7.

ROWLANDS, ELIZABETH, wife of J. D. Rowlands, M.R.C.S., at 4, Spilman-street, Carmarthen, on February 11.

SHOLL, WILLIAM HORATIO, M.R.C.S.E., at Wallervo, South Australia, on November 29, 1866, aged 68.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House-Surgeon. Candidates must be possessed of both medical and surgical qualifications. Applications, under cover, to the Secretary on or before February 24.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to the Chairman of the Medical Staff, on or before February 20.

NEWPORT INFIRMARY AND DISPENSARY.—Resident Medical Officer and Visiting Surgeon. Candidates must be registered under the Medical Act of 1858, and possess both medical and surgical qualifications. Applications, with testimonials, addressed to the Chairman of the Infirmary and Dispensary, to Richard Mullock, Secretary, 16, Commercial-street, Newport, Mon., on or before February 20.

WESTBOURNE PROVIDENT DISPENSARY AND MATERNITY.—Resident Medical Officer. Applications, with testimonials, to 24, St. Petersburg-place, Bayswater, on or before February 17.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Crediton Union.—Mr. Charles Broom has resigned the Cheriton Fitzpaine District; area 10,980; population 1759; salary £45 per annum.

Honiton Union.—The First District is vacant; area 10,240; population 5092; salary £95 per annum. The Third (C) District is vacant; area 1450; population 103; salary £4 10s. per annum. The Tenth District is vacant; area 4730; population 650; salary £30 per annum. The Eleventh District is vacant; area 2100; population 268; salary £8 per annum. Also the Workhouse; salary £42 per annum.

Thorne Union.—Mr. John Cameron has resigned the Hatfield District; area 16,778; population 1825; salary £20 per annum.

Uckfield Union.—Mr. George Holman has resigned the Buxted District; area 8820; population 3909; salary £64 per annum. Also the Isfield District; area 4096; population 805; salary £20 per annum. Also the Workhouse; salary £65 per annum.

APPOINTMENTS.

Axbridge Union.—Reginald Wade, M.R.C.S., L.S.A., to the Tenth District.

Cookham Union.—Edwin C. Montgomery, L.R.C.S. Ire., L.S.A. Lond., to the Cookham District and the Workhouse.

Holbeach Union.—Robert R. Harper, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Holbeach North District and the Workhouse.

Kingston Union.—George Dixon, M.R.C.S. Eng., M.D. Edin., to the Thames Ditton District.

Northampton.—William L. Emmerson, M.D., as Analyst for the County.

Worcester.—Edward H. W. Swete, M.D., F.C.S., as Analyst for the County.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this Society will be held on Friday (this day) at 7.30 p.m. The Report of the Council will be read. Dr. J. Hardwicke, and F. A. Best, Esq., Medical Officers of Health for Rotherham and Walthamstow respectively, will be balloted for as extra-metropolitan members. Dr. T. O. Dudfield will read a paper on "Pleuro-pneumonia in Cattle, with especial reference to the question whether the flesh of cattle affected with this disease should be allowed to be sold and used for the food of man, or should be condemned as being either diseased, unwholesome, or unsound." Dr. C. M. Tidy will make some observations on diseased meat, which will include trichina, fluke disease, pleuro-pneumonia, characteristics of good meat, circumstances under which meat should be condemned.

THE POPULATION OF LYONS AND MARSEILLES IN 1877.—The population of Lyons, which was 323,417 in 1872, is 342,815 in 1877—*i.e.*, an increase of 18,398. Of the 342,815 inhabitants the "normal or municipal" population is 321,596, and the population "*en bloc*" (garrison, religious communities, establishments for primary instruction, etc.) is represented by 21,596 inhabitants. In 1872 the "municipal" population was 301,307, and that "*en bloc*" 22,110. So that while the former presents an excess of 20,289 since the last census, the latter presents a deficit of 514. The total population of Marseilles, which was 312,364 in 1872, has augmented to 318,742 in 1877—*i.e.*, an increase of 5878. The "municipal" population increased from 295,694 in 1872 to 303,596 in 1877—*i.e.*, an increase of 7902; but the population "*en bloc*" decreased from 17,170 in 1872 to 15,146 in 1877—*i.e.*, by 2024.—*Lyon Médical*, February 11.

THE BAD POSITION OF HOUSE-CISTERNS.—Whilst the drainage arrangements of our dwelling-houses have been a popular topic for discussion, little notice, comparatively, has been taken of another dwelling-house evil, the rectification of which is of scarcely less hygienic importance—the unprotected position, as a rule, from much preventable impurity, of our house-cisterns. The following remarks on this subject, by Major Bolton, deserve attention:—"These cisterns are frequently open, and receive the drippings from roofs and gutters; or they are often close to dust-bins and other deposits of filth, while children amuse themselves by throwing all sorts of rubbish into the water. The finest water in England would be poisoned by such a system of storage. This carelessness does not only apply to the poorer classes. In the better class of houses, and in many public buildings, the cleansing of cisterns and tanks is frequently neglected for months, and in some cases years are permitted to pass without any examination or cleansing taking place."

TREATMENT OF ENURESIS.—Dr. Hammond states that he finds the following a very efficacious plan of treatment:—The child should be made to urinate on going to bed, and should be taken up again two or three times afterwards for this purpose. It should also be prevented sleeping on its

back. The following drops should be given for at least three or four months or longer:—Zinci bromidi ℥ss., ergotæ ext. fluid. ℥iv. Of this ten drops are to be given after meals three times a day during the first month; and should nausea or vomiting be produced, the next two or three doses should be somewhat diminished. The dose should be increased by five drops every month, so that fifteen are taken three times a day during the second month, twenty during the third, and so on. Children of from four to twelve years of age can take these doses without disturbance of the general health; and they are usually suitable for adults, increasing them every two weeks instead of every month. If the bromide of zinc be not well borne, bromide of iron may be substituted, given in the form of syrup, in doses of five grains three times a day, gradually increased to fifteen or twenty. A teaspoonful of the syrup (ferri brom. ℥j., syr. simpl. ℥vj.) contains about ten grains; thus the dose to start with is half that quantity, which is to be gradually increased, so that at the end of three or four months the patient is taking one and a half or two teaspoonfuls. With each dose of the iron the fluid extract of ergot should be given separately, gradually increasing it from ten drops to a drachm three times a day. If the two medicines are mixed together for any length of time, decomposition occurs.—*Boston Medical Journal*, October 7.

Unqualified Dentists in France.—In a petition, addressed to the Chambre des Députés, Dr. Andrieu, surgeon-dentist attached to the Paris hospitals, prays for the enactment of a law prohibiting anyone in future from practising as a dentist if unprovided with the diploma of doctor, or at least of *officier de santé*. He also asks for the creation in the Paris Faculty of a special chair for "Diseases of the Mouth." In the petition he demonstrates that the dental art requires just as much study as any other branch of surgery or medicine, which can only be acquired in the dissecting-room and hospitals, while the possession of a knowledge of it can only be tested by examination. He instances several fatal accidents which have occurred in consequence of the ignorance or want of skill of impudent dentists, and quotes the opinions of celebrated practitioners in favour of legislation. The Committee to whom it was referred paid great attention to the reading of the petition, and, agreeing in its principle, recommended that it, as well as M. Andrieu's *projet de loi* (which, it seems, it is customary for French petitioners to present), should be forwarded to the Ministers of the Interior and Public Instruction.—*Union Méd.*, January 30.

The Paris Atmospheric Organisms.—The Paris Municipality recently established at the Meteorological Observatory at Montsouris a *service*, with the object of investigating the conditions of climatology in relation to hygiene in different parts of the metropolis, comprising among other things the microscopical examination of the organic dust held in suspension in the air. This service, which since January 1 has been in the hands of one of the most distinguished micrographists, M. Miquel, has already yielded some important results, which show that the atmosphere of Paris is loaded with microscopic organisms, the proportions of which vary greatly in the different quarters—the more healthy parts of the town, as the Park of Montsouris, containing the fewest. The soil of Paris also contains a notable number, and they are found to abound in houses undergoing demolition for making new streets. An epidemic of typhoid having caused the evacuation of the barracks at the Château d'Eau, M. Miquel detected in the air collected from the rooms of these multitudes of algæ, vibriones, bacteria, monads, etc.; and this organic dust mixed with the food and drink may very well have contributed to the production and extension of the epidemic.—*Union Méd.*, Feb. 1.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Received with thanks:—Dr. J. J. Chisholm; Mr. J. J. Lawrence, St. Louis.

Sylvanus.—The Apothecaries' Company's Hortus Botanicus is one of the oldest gardens in London. It was made between 1673 and 1686; the latter year being probably the date of the wall, as inscribed thereon at the east gate. The freehold of the ground was given by Sir Hans Sloane, M.D., in 1721.

Inquirer.—The contract signed by Mr. Erasmus Wilson stipulates that the obelisk ("Cleopatra's Needle") shall be brought to London, and properly erected on the site chosen, on the Thames Embankment, for the sum of £10,000.

Dr. Campbell.—The Hunterian Oration was founded by Dr. Matthew Baillie and Sir Everard Home, Bart. The last-named gentleman delivered the first Oration in 1814. The festival takes place the same evening. Members of the medical press have never been invited since Mr. South was President in 1860, when that gentleman invited the editors of this and of two other journals.

M.D. Edin.—In the biographical notice of the late Sir William Fergusson, in another page, you will find the desired information.

G. Sandys H.—Corry, in his "Life of Dr. Priestley," published in 1804, describes the doctor's personal appearance thus:—"He was about the middle stature, or five feet eight inches high. He was slender and well-proportioned, his complexion was fair, his eyes grey and sparkling with intelligence, and his whole countenance was expressive of the benignity of his heart. He often smiled, but seldom laughed. He was extremely active and agile in his movements; he walked fast and very erect, and his deportment was dignified. His common dress was a black coat without a cape, a fine linen or cambric stock, a cocked hat, a powdered wig (which, however, he laid aside in America), shoes and buckles. The whole of his dress was remarkably clean. He was an ungraceful orator: his voice was low and faltering, and he had a custom of shrugging up his shoulders.

Citizen.—There can be no doubt that the whole out-patient department, which has developed itself in late years, is something quite foreign to the intentions of the founders of our great London hospitals. The petition of Sir Richard Gresham to King Henry VIII., relative to the City hospitals, contains proof of this in the following passages:—"Most gracious lord, neere and within the citie of London be iij. hospitalls or spytells commonly called Seynt George's Spytell, Seynt Barthilmewes Spytell, and Seynt Thomas's Spytell, founded of good devotion by auncient fathers, and endowed with great possessions and rentes, only for the reliefe, comforte, and helping of the poore and impotent people lying in every street offending every clene persone passing by the way with theyr fylthy and nasty savors. Wherefore may it please your Merciful goodnesse, enclyned to pytie and compassion for the reliffe of Christ's very images, created in his own similitude, to order—that your Mayer of your citie of London and his brethren the aldermen for the time being shall have the order and governaunce of the said hospitalls, and then your Grace shall fairlie perceive that where now a small number of chanons, priests, and monks be found for theyr own profit only, and not for the common utilitie of the realm, a great number of poore, needy, syke, and indigent persons shall be *refreshed, mayntayned, and comforted*, and also healed and cured of theyr infirmities frankly and freely by physitians, surgeons, and potycaries, who shall have stipend and salary only for that purpose."

Thankfulness for Small Mercies.

Sages from all antiquity have insisted on the value of meekness, mildness, and of a thankful spirit. It is pleasing to observe that the cultivation of such virtues has not ceased in our land. The Secretary of St. John's Hospital for Skin Diseases writes to us as follows:—

"Leicester-square, W.C., February, 1877.

"Sir,—The Committee earnestly beg that you will insert the enclosed paragraph from to-day's *Standard*, with respect to an official communication from the French Government:—

"'International Courtesy.—The French Government have intimated to the Committee of St. John's Hospital for Diseases of the Skin, Leicester-square, that the authorities will afford every facility for the inspection by the Committee of the "Hospice St. Louis," Paris, which has upwards of 700 beds set apart for patients suffering from diseases of the skin, as it has become essential to increase the accommodation which St. John's Hospital possesses for the treatment of in-patients; and as far greater provision exists in Paris than in our own metropolis for the treatment of such sufferers, the Committee have resolved to avail themselves of the courtesy of the French Government early in the summer.'"

This exceedingly gratifying conduct on the part of the French Government authority ceases, however, to have that special character which the authorities of St. John's Hospital would fain give it, since the same courtesy is invariably extended to any duly authorised body seeking a like object. But can it be that this meekness of spirit covers any ulterior design? Can it be possible that this great and highly favoured Hospital seeks a gratuitous advertisement? Such things we have heard of,—but can they be true? We fear to ask ourselves the question, but we append the conclusion of the Secretary's letter, to which the attention of our readers is "earnestly" invited:—

"The Committee also pray that you will find space weekly for the brief returns of patients under treatment. This privilege is accorded by the *Telegraph*, *Daily News*, *Echo*, *Advertiser*, and several other important papers. I enclose post-card for reply, and remain,

"Yours obediently, ——, Secretary."

COMMUNICATIONS have been received from—

Dr. Dunlop, Glasgow; Mr. Metcalfe Johnson, Lancaster; Mr. Bardeht, Greenwich; Mr. Sam. J. Hutchinson, London; Mr. Scott, Manchester; Mr. George Lane, London; Mr. John Ingpen, London; Mr. Maunder, London; Mr. Mercier, London; The Military Secretary of the India Office, London; Mr. T. M. Stone, London; Mr. Wanklyn, London; Mr. James Keeling, Sheffield; Dr. J. W. Moore, Dublin; The Secretary of the Clinical Society, London; The Secretary of the Medical Society of London; Messrs. Allen and Hanbury, London; Mr. W. E. Poole, London; Dr. Bruce, London; The Secretary of the Pathological Society, London; Mr. Francis Mason, London; Dr. Francis Ogston, Aberdeen; Mr. John Chatto, London; Mr. Jonathan Hutchinson, London; Mr. B. R. Wheatley, London.

BOOKS AND PAMPHLETS RECEIVED—

George M. Schweig, M.D., The Electric Bath, its Medical Uses, Effects, and Appliances—Otto W. Thomé, Text-book of Structural and Physiological Botany, translated and edited by Alfred W. Bennett, M.A., B.Sc., F.L.S.—Cassell's Household Guide, part 1—Louis A. Duhring, M.D., A Practical Treatise on Diseases of the Skin—James R. Chadwick, M.D., The Medical Libraries of Boston—Third Report on the Sanitary Condition of St. Mary's Hospital, Paddington, W.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Enciclopedia Médico-Farmaceutica—Giornale Internazionale delle Scienze Mediche—American Journal of Microscopy and Popular Science—Edinburgh Courant—Gazeta Medica da Bahia.

APPOINTMENTS FOR THE WEEK.

February 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Mr. J. A. Symonds, "On Florence and the Medici."

19. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. J. Knowsley Thornton, "Removal of large Fibroid Uterus, and Outgrowths, with both Ovaries; Recovery." Dr. Charles Drysdale, "The Diagnosis between Syphilitic and Tubercular Phthisis."

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Specimens and Drawings of Syphilitic Disease of various Organs will be shown by Dr. Aitken and Dr. Sutton; of the Lungs, by Dr. Shepherd and Dr. Green; of the Lungs, Bronchi, and Dura Mater, by Dr. Pye-Smith; of Brain and Spinal Cord, by Dr. Gowers; of Aorta and Testes, by Dr. Mahomed, &c.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

21. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

23. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Greenfield, "Case of Hydatid of the Lung." Mr. A. T. Norton, "Ligature of the Femoral Artery; Recovery; Death subsequently from Embolism of the Basilar Artery." Mr. Godlee, "Congenital Dislocation forwards of the Knee" (a living subject).

Quekett Microscopical Club, 8 p.m. Dr. M. C. Cooke, "On Black Moulds."

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. J. F. Moulton.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 10, 1877.

BIRTHS.

Births of Boys, 1423; Girls, 1294; Total, 2717.
Average of 10 corresponding years 1867-76, 2382·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	784	720	1504
Average of the ten years 1867-76	798·3	773·2	1571·5
Average corrected to increased population ...	...	...	1682
Deaths of people aged 80 and upwards ...	...	...	62

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	2	3	...	4	...	1	1	1
North	751729	38	2	3	4	13	...	4	2	1
Central ...	334369	1	7	...	...	3	1	1	1	1
East	639111	20	4	3	1	15	...	...	2	1
South	967692	27	6	5	2	9	1	5	1	7
Total	3254260	90	21	14	7	44	2	11	7	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·979 in.
Mean temperature	46·3°
Highest point of thermometer	59·1°
Lowest point of thermometer	32·1°
Mean dew-point temperature	41·8°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·06 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 10, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Feb. 10.	Deaths Registered during the week ending Feb. 10.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2717	1504	59·1	32·1	46·3	7·95	0·06	0·15
Brighton	102264	43·4	75	41	52·2	33·3	45·7	7·61	0·35	0·89
Portsmouth ...	127144	28·3	82	43	55·0	34·0	46·9	8·28	0·08	0·20
Norwich	84023	11·2	55	32	55·0	34·8	45·3	7·39	0·10	0·25
Plymouth	72911	52·3	48	31	56·0	38·5	48·3	9·06	0·40	1·02
Bristol	202950	45·6	159	95	53·0	33·0	45·8	7·67	0·27	0·69
Wolverhampton ...	73389	21·6	63	36	53·2	30·6	42·1	5·62	0·32	0·81
Birmingham ...	377436	44·9	355	180	56·4	36·8	45·9	7·72	0·28	0·71
Leicester	117461	36·7	98	53	54·8	34·8	44·5	6·95	0·15	0·38
Nottingham ...	95025	47·6	69	35	53·6	31·9	43·4	6·33	0·10	0·25
Liverpool	527083	101·2	392	282	54·0	39·4	46·3	7·95	0·30	0·76
Manchester ...	359213	83·7	312	201	53·0	32·0	43·2	6·22	0·66	1·68
Salford	141184	27·3	127	81	53·3	31·9	44·5	6·95	0·75	1·90
Oldham	89796	19·2	74	46	...	...	...	...	...	...
Bradford	179315	24·8	143	64	51·6	36·2	44·1	6·73	0·58	1·47
Leeds	298189	13·8	247	117	54·0	36·0	45·1	7·28	0·27	0·69
Sheffield	282130	14·4	238	129	53·0	36·1	45·6	7·56	0·39	0·99
Hull	140002	38·5	110	63	52·0	34·0	43·7	6·50	0·19	0·48
Sunderland ...	110382	33·4	94	42	58·0	33·0	46·1	7·84	0·24	0·61
Newcastle-on-Tyne	142231	26·5	124	46	...	...	...	...	...	...
Edinburgh	218729	52·2	125	68	53·8	34·2	43·0	6·11	0·56	1·42
Glasgow	555933	92·1	367	284	...	...	...	...	...	...
Dublin	314666	31·3	198	193	56·8	36·5	47·5	8·61	0·17	0·43
Total of 23 Towns in United Kingdm	8144940	38·3	6272	3666	59·1	31·9	45·2	7·33	0·31	0·79

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·98 in. The highest reading was 30·18 in. on Monday morning, and the lowest 29·73 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON CASES OF EXOSTOSIS UPON THE FIRST RIB,

DELIVERED AT THE MIDDLESEX HOSPITAL

By JOHN W. HULKE, F.R.C.S.,
Surgeon to the Hospital.

THERE are, gentlemen, now in the hospital two cases of a rather rare disease—exostosis upon the first rib; one under my care in Regent ward, the other under the care of Dr. Thompson, who kindly allows me to refer to it. I shall also read to you notes of a third case under my care in 1873.

Case 1.—A plump and well-grown girl, aged fifteen, with auburn hair, and a remarkably demure, placid expression of features, living at home, was admitted on October 24 complaining of weakness and painfulness of the left arm, increased by exertion, and attributed by her to a knob in the root of the neck at the left side. This seemed to be about as large as a walnut. It was deeply placed behind the inner half of the collar-bone, which overlapped and partially hid it. It was quite fixed, not following the movements of the collar-bone, nor swayed during extreme bending of the neck. Its bony attachment was beyond doubt the outer surface of the first rib. The subclavian artery, lifted by it out of its usual position, crossed the front of the knob below its summit; the pulsations of the vessel were visible, and very slight pressure upon it backwards against the knob sufficed to stop the wrist-pulse. A couple of cords, which, from their direction and figure, as also from the pain produced by pressure upon them, were obviously part of the brachial plexus, crossed the summit of the knob from above downwards and outwards. Crossing these cords and the top of the knob from before backwards, as if coming from the third part of the subclavian artery, was a smaller pulsating vessel, presumably the arteria transversalis colli. The inner part of the knob was crossed from above downwards and forwards by a muscular band—the outer border of the musculus scalenus anticus—which hid its innermost limit, whilst its outer border reached nearly to the anterior margin of the musculus trapezius. These were the objective symptoms. The subjective were alleged numbness and painfulness, chiefly in the outer and back parts of the shoulder, arm, and forearm, in the distribution of the circumflex and external cutaneous branches of the musculo-spiral nerve. The pain was not constant, its intensity varied. The tactile sensitiveness of these parts was not found to be less than that of the corresponding parts of the right limb. She had, she said, a want of power in the left limb, but its strength, roughly tested by bidding her squeeze both my hands with her own, showed no diminution, and careful comparative measurements of the arms did not show any wasting of the left, the muscles of which certainly felt as firm as those of the right arm. Sphygmographic tracings of the two wrist-pulses did not show any difference of the left. She slept well and ate well, and her general appearance and manner were not those of a person in constant pain.

The painfulness of the arm began, she said, about eighteen months before, and some four months later she first discovered the knob in her neck. It was then as large, she thought, as at the date of her admission into the hospital.

The extreme hardness, the fixity, the nodular figure, the definite outline, the slow growth of the knob, and the age of the patient, concurred to place its nature beyond dispute; it was obviously an *exostosis*, and it sprang from the first rib.

The next case is so similar that I will read it before commenting upon the first:—

Case 2.—A well-grown, rather thin, but healthy-looking blonde, aged twenty, was admitted into Regent ward, March 6, 1873, with a knob in the right side of the root of the neck, rising visibly above the middle third of the collar-bone. Its hardness was that of bone. It was fixed to the first rib. The subclavian artery crossed the front of the knob just below its summit, lying almost subcutaneously on it, so that its pulsations were very apparent. The right radial pulse was smaller and weaker than the left. Behind the artery, rounded cords crossed the summit of the knob in a downward and outward course; their form and the tenderness felt when pressure was made upon them proved them to be part of the brachial plexus. The front border of the musculus trapezius overlapped and concealed the outer border of the knob, and the highest part of the knob was crossed from before backwards by an artery much smaller than the subclavian, from which it seemed to spring—probably the arteria transversalis colli. The outline and figure of the knob were even, smooth, nodular, and very definite.

She had, she said, first become aware of the existence of the knob two years before, happening to feel it whilst washing herself; her attention was not drawn to it by any pain or discomfort. About five months ago her arm was accidentally twisted backwards behind her with some force. From that time she had been liable to twinging pain in the right side of the chest and shoulder, and her impression was that since this accident the knob had grown a little larger.

This case had been mistaken upon a superficial examination for an aneurism of the subclavian artery.

Case 3.—The general features of the exostosis in Dr. Thompson's patient are so similar that a detailed description is scarcely necessary. She too is a girl, nineteen years old, with a pale complexion, and rather worn face. She is under treatment for a gastric ulcer. The exostosis is on the left side. It springs from the outer surface of the first rib; its lower part is hidden by the collar-bone, and the musculus scalenus anticus and musculus trapezius overlap respectively its anterior and posterior borders. The brachial artery lies upon its front, lifted well above the collar-bone, and its summit is crossed by cords of the brachial plexus. She complains of weakness and painfulness of the limb; the latter she generally, but not constantly, refers to the distribution of the circumflex and musculo-spiral nerves.

Probably the first thing, gentlemen, that will have struck you on hearing these cases is that the patients are all three women. Two others which I have seen were also women; and Mr. Hilton and Sir William Fergusson, who have each seen some three or four cases, have verbally informed me that these too were all of the female sex. No example of exostosis of the first rib in the male sex has yet come under my observation; but it may well be that with larger numbers this preponderance of women may cease. I have not seen any statistics of exostosis upon the long bones of the limbs bearing upon the liability of the two sexes; but the impression I have formed from my own experience is that here the liability is pretty evenly shared by both. Another peculiarity is that in all these cases the exostosis was single, whereas in the limbs exostoses are so often multiple. Mr. Clarke had, some time ago, in Bird ward, a young girl, about twelve years old, with some half-dozen exostoses on her legs and arms; and similar examples of this multiplicity are by no means uncommon.

With respect to their etiology, all we can say is (and this guardedly) that sex seems a favouring condition, as youthfulness is certainly, for this exostosis as for those upon the limb-bones. The three patients whose cases I have described were respectively fifteen, twenty, and nineteen years old, and the exostosis was known to have existed one and a half, two, and three years respectively when the patients first came under observation. These patients were not the subjects of any particular diathesis; they seemed, excepting the third, to be in perfect health. The third patient's health is not good; her impaired general nutrition is probably attributable to the stomach ulcer. With regard to the occurrence of any local exciting cause—*e.g.*, a mechanical injury,—the part of the rib from which the exostosis springs is so protected by the collar-bone that no blow can reach it. The last patient attributed the knob to injuries received by being thrown down and trampled on by a mob on the Thanksgiving Day for the Prince of Wales' recovery, but on questioning her it was elicited that the only part of her chest which felt sore from these bruises was the "pit of the stomach," and no bruise was visible here or elsewhere, so that I think the idea of an injury to the rib from this accident cannot be seriously entertained. I am not aware of any published descriptions of exostosis on the first rib or of operations for their removal, in the absence of which the exact point from which these exostoses usually spring is unknown to me, but it cannot be far from the tubercle at the insertion of the scalenus anticus muscle, and in this respect the costal exostosis resembles the common exostosis at the lower end of the inner femoral condyle, which is usually rooted in the neighbourhood of the insertion of the long tendon of the adductor magnus muscle. This similarity suggests that under some circumstances, yet unknown to us, excessive tensions of the bone and periosteum by inserted muscles may provoke a bony outgrowth in these situations. The formation of bony rays in

the fibrous attachments of the adductor muscles to the pelvis, which has been often observed in men who pass much of their lives in the saddle, lends support to this supposition. It must not be overlooked that, as regards the femur, the epiphysial plate of cartilage lies in the level of the root of the exostosis, and is still unossified at the age when these exostoses occur.

As regards treatment, it will generally be prudent to advise palliative measures only—as a sling, to take off the drag of the limb, and the avoidance of all unnecessary efforts. Bearing in mind the important structures in close relation to the exostosis—the subclavian artery, brachial cords, and the pleura (which, as you are all aware, rises above the level of the rib),—I have not, in any of the cases I have yet seen, felt justified in recommending excision; for I think that nothing short of very decided pain and disability of limb would warrant the patient in exposing her life to the not inconsiderable risks which even the best-conceived and best-executed operation must entail. In the case in Regent ward in March, 1873, the question of an operation was not seriously discussed, because the woman entered the hospital with a fixed determination not to be cut. In our first case the girl's statement of her pains and numbness, and of the disability of the limb, are, I am disposed to think, somewhat overdrawn; but as her assertions are very positive and unvarying, I have placed her position fairly before her and her mother, telling her that whilst I could not propose the removal of the knob, I would not decline if they desired me to undertake it. They have, as I think wisely, decided to defer an operation for the present. Were an operation undertaken, I should fear to use a bone-forceps or chisel, knowing the textural change which the parent bone often has undergone about the root of an exostosis, weakening it, and having in mind the comparative thinness of such a bone as a rib—although the first rib, especially its inner border, is comparatively strong. I should fear that the jarring, which is unavoidable in using these instruments, might splinter the rib and leave a rough surface, for smooth cutting with the chisel requires the tissue to offer a certain resistance, to be kept perfectly steady, and to have enough bulk to absorb the most of the momentum of the blow. The division of the neck of the exostosis with these implements must also necessarily be made from without inwards, by which direction the risk of injury to the pleura would be greater. My idea would be to expose the surface of the knob where it is uncovered by the large artery and nerve-cords, to divide the capsule of condensed cellular tissue which usually sheathes such tumours, and to push back with a blunt raspatory this, and with it all structures in juxtaposition with the knob, until its neck was so far exposed that a fine chain-saw could be looped round it, with which it could be cut through from within outwards, leaving a perfectly smooth bony surface without any asperities which would damage the artery and nerves, and without any dangerous jarring. I am, however, bound to tell you that, being ignorant, as we necessarily are, of the size and extent of the attachment of the exostosis—whether it reached far inwards round the inner border of the rib,—the practicability of thus sawing it off, and indeed of removing it in any way, could only be ascertained in the course of the operation.

A DISTRESSING occurrence is reported in a letter from an officer of H.M.S. *Volage*, dated Colonia la Plata, January 15. It mentions that on the previous night Mr. Lewis Edwards, surgeon of the ship, poisoned himself with cyanide of potassium, in mistake, it is supposed, for a sleeping-draught. He died within ten minutes of taking the poison. The body was interred the next day with full honours, but the sad event had caused great regret, Dr. Edwards being very popular in the ship.

THE HÔPITAL MENILMONTANT. — The works at this new Hospital are being pushed on with such activity that they will soon be completed. It will contain 550 beds, each of which will cost 16,980 fr., or 849 fr. per annum. The wards are spacious and of various sizes, ventilation being rendered more effective by the construction of a large chimney in each ward. Lifts are placed at the foot of each staircase, so that the patients may be raised in the horizontal posture to each storey of the pavilions. These pavilions are all isolated, and on the first storey of each there are galleries for exercise. Special buildings are devoted to the different diseases, and the midwifery department is detached from the rest of the Hospital. The expense of the purchase of the site and the construction of the Hospital will amount to 9,343,000 fr.—*Union Méd.*

ORIGINAL COMMUNICATIONS.

ON REDUPLICATION OF THE CARDIAC SOUNDS.

By JAMES BARR, M.B., L.R.C.S. Edin.

IN reply to Dr. Johnson's strictures in the *Medical Times and Gazette* (February 10) on my paper on the above subject, I wish to offer the following remarks.

In referring to "Dr. Patrick Black's theory of asphyxia," I did not claim originality for Dr. Buchanan or Dr. Carson, otherwise I should have placed the earlier writer first, but I merely wished to protest against a theory which had previously engaged the attention of others being designated by the name of Dr. Black. However, as Dr. Johnson now enters into the question of priority, and is "aware that the theory which attributes the arrest of the pulmonary circulation to the suspension of the respiratory movements did not originate with Dr. Black, with Professor Buchanan, or with Dr. Carson, but was originally propounded by Haller," it may not be out of place to give the following quotations from Carson:(a)—

"In the library of the Royal Medical Society of Edinburgh I found, bound up with a number of other pamphlets, the treatise of Dr. Wilson, of Newcastle, who had taken, in many respects, the same view of the causes of the motion of the blood in the veins that I had done. . . . . The name of Dr. Wilson I had never heard mentioned by any lecturer, nor seen in any publication; nor since that time (1799) and previously to 1815, though I have been constantly on the watch for it, have I discovered it to be noticed excepting by the industrious and candid Haller, who states that Dr. Wilson, an English physician, had contended that the blood in the veins was returned to the heart by atmospherical pressure—a doctrine, the celebrated German observes, not to be despised."

"But neither the hypothesis maintained by Dr. Brown Langrish (that the heart was dilated independently of the force of the returning blood), which was of a date more ancient than the time even of that philosopher, nor that of Dr. Wilson, had any reference to the mechanism of respiration. On this subject my views, so far as regards the mammiferous animals, have not, it will be admitted, been anticipated by the most distant or obscure allusions of any preceding writer."

No more than Dr. Johnson do I believe in the above theory of asphyxia, but, as stated in my paper, "I believe—and I am not one of those who adopt the extreme view held by Drs. Buchanan and Black—that there is a certain modifying influence exercised (which affects mainly and primarily the right side of the heart, and only secondarily and indirectly the left side), a relative disturbance in the balance of the blood-supply, sufficient to account for the phenomena (normal reduplication) in question."

Dr. Johnson is "quite aware that the respiratory movements have great influence on the amount and movement of blood in the large vessels, both arterial and venous"; and I think my sphygmographic tracings incontestably prove that that "great influence" extends to the periphery.

I now pass to the chief points at issue between Dr. Johnson and myself. He accuses me of having misunderstood his description of the reduplicate first sound "rat-a-tat," in supposing that he represented the first element as much louder than the second. To this I can only say that I thought he meant what he said ("rat" sounding much louder to my ear than "a"); however, as Dr. Johnson is going in future to represent the triple sound by "rat-tat-tat" (an alteration which justifies my misconception), I have nothing further to add on this point.

Dr. Johnson takes exception to my statement, that if the first element of the double first sound were due to the auricular systole, then we should expect to find the reduplication most marked at the apex (whereas, as a matter of fact, it is usually absent there), as both the auricular systolic murmur and the first sound have that as their site of maximum intensity, because he now says "that the conditions are entirely different. A presystolic or auricular systolic mitral murmur reaches the apex and is loudest there, partly through convection by the onward current of blood, but mainly by conduction through the tendinous cords and the fleshy columns connected with

(a) "An Inquiry into the Causes of the Motion of the Blood," etc., by Dr. Carson, 1833; preface, pages 13 and 15. *Vide ibid.*, pages 128, 135, 139, and 155; also the first edition, 1815, page 73. See also Dr. Barry's work, 1826, page 4.

the constricted mitral orifice; but a sound resulting from contraction of a dilated and hypertrophied auricle, as I believe the first element of the reduplicate first sound to originate, would be best heard over the auricle, just as a presystolic friction-sound is best heard over the roughened auricle." It will be here necessary to quote from Dr. Johnson's original article (*Lancet*, May 13, 1876, page 699): "There are three influences which, either separately or combined, may cause an audible sound during the auricular systole—first, the sudden muscular tension of the walls of the auricle; secondly, the impulse against the chest-wall; and, thirdly, the forcible impact of the blood driven onwards by the auricle against the stationary blood within the ventricle. This last element is similar to that which, according to the theory of Dr. Leared (a theory which if Dr. Johnson can by any means promote he will have gone some way to establish the probability of his own), is the main cause of the first sound of the heart—namely, the forcible impact of the blood from the ventricles against the stationary columns of blood in the aorta and pulmonary artery." It would seem that Dr. Johnson now ignores the last of these three causes, and the third was one on which he laid stress, as his approval of Dr. Leared's theory and the following sentence (*Lancet*, May 13, 1876, page 700) show:—"I believe, however, that in consequence of the oblique position of the heart, and the overlapping of the left cavities by the right, the sound which results from contraction of the left, and *especially the sound which may be supposed to result from the impact of the blood from the contracting auricle against that contained in the dilated ventricle, will be more or less diffused* [the italics are mine] over the overlapping right ventricle."

When Dr. Johnson speaks of the three causes producing sound either separately or combined, I presume he means that they are each capable of giving rise to sound, though they generally all do so in combined action. It has been admitted that the third element is an important one, and I think there has been no evidence or reason adduced by Dr. Johnson to show why in some cases it should take part in the production of the first element of the double first sound and not in others—those cases where the first element is absent at the apex. Therefore I still maintain that, if Dr. Leared's and Dr. Johnson's theories be correct, "we would expect the reduplication not only not to be absent at the apex, but to have that as its point of maximum intensity." Dr. Johnson's inference that "a sound resulting from the contraction of a dilated and hypertrophied auricle would be best heard over the auricle, just as a presystolic friction-sound is best heard over the roughened auricle," is an unfair one, except he is prepared to assert that the first element of a reduplicate first sound is frictional in origin. A frictional murmur is best heard over its site of production, because it is directly conveyed through solid media to the bell of the stethoscope. Not so, however, with the cardiac sounds and endocardial murmurs, which are directly associated with fluid, whatever view you take of their origin.

Dr. Johnson represents me as broadly stating that dilatation of the auricle is not an early result of peripheral obstruction; and then replies that he has "seen it occur to an extreme degree in less than two minutes." Here I must say that he misinterprets me. Like him, I have seen dilatation of the auricle take place very rapidly; but in the paragraph to which he refers I was speaking of chronic Bright's disease. And, in reference to that affection, I will now repeat my former statement: "The peripheral obstruction—which is assumed to be so potent a cause in producing dilatation and hypertrophy of the auricle—in the first place only calls forth increased power on the part of the left ventricle. And so long as the compensatory hypertrophy is sufficient to meet the demand, and the mitral valves remain competent, there is no extra strain thrown on the left auricle." In the early stage of granular kidney there is no accentuation of the pulmonic second sound.

Dr. Johnson says that my statement, that reduplication is more common in the early than the late stage of Bright's disease, is contrary to his experience. This is not a mere matter of the relative frequency of occurrence in an early or late stage, for if Dr. Johnson admits that reduplication takes place in both stages, then his theory should be sufficient to explain the phenomenon in each case; and unless he is prepared to deny the occurrence of reduplication before there is any *hypertrophy* or *dilatation* of the auricle, then I submit his theory is not sufficient to explain those cases of reduplication which, I believe, occur before there is any strain thrown on the auricle, and before there is any accentuation of the pulmonic second sound.

On the valvular theory, reduplication can be explained in all stages of Bright's disease, but the absence of that phenomenon in some cases where there is great disparity in the capacity of the ventricles would seem to some to be a potent argument against the theory. In reply to this I may say that I do not look upon differences in capacity as the sole cause of asynchronism; the relative supply of blood has a great influence in producing distension and overcoming the inhibitory action of the vagus; and, besides, the dilated ventricle often does not empty itself during systole, and thus there is perhaps no more blood required to fill it during diastole than to fill the smaller ventricle.

When I stated that I had not been so fortunate as Dr. Johnson in finding reduplication of the first sound common in emphysema and other obstructive lung diseases, I did not for a moment impugn the accuracy of Dr. Johnson's observations, but merely referred to my own extremely limited experience as compared with his.

In Dr. Johnson's paragraph on "a simultaneous equal, or nearly equal, impediment in the pulmonary and systemic vessels" he has admitted enough for my views, and has at least not strengthened his own.

Dr. Johnson says that reduplication of the first sound in cases of "simple dilatation of the heart's cavities without valvular disease or evidence of arterial obstruction, either pulmonary or systemic," is not inconsistent with his theory; and I again say that it "is not 'inconsistent with the theory of asynchronous ventricular contraction.'"

Lastly, Dr. Johnson accuses me of thinking that he says the "exact opposite of what he means," and I must confess that I did fall into that error (which arose from a slight ambiguity in his sentence); but I *did not* mistake his meaning.

If I have not wearied Dr. Johnson with detail, I certainly have not erred on the side of brevity.

CLINICAL NOTES ON PRECISION IN THE USE OF TOPICAL REMEDIES.

By S. MESSENGER BRADLEY, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary; Lecturer on Practical Surgery, Owens College.

No. II.

THERE remain for consideration the uses of Pressure, Electricity, Rest, and Motion, as topical remedies in surgical practice.

Pressure may be, and is, applied to various parts of the human body by means of bandages, made of some firm texture such as cotton, or of some elastic material, flannel bandages holding a position midway between the two; or pressure may be applied by means of some special apparatus, such as trusses. The employment of friction, too, comes under this head. The object aimed at is in all cases the same—viz., the removal by absorption of certain exuded materials—with the single exception of employing Esmarch's bandage for the cure of popliteal aneurism. You will find pressure specially valuable in effecting resolution in certain cases of gland-inflammation, such as orchitis and mastitis. The usual mode of employing pressure in orchitis is to wait until the acute inflammatory symptoms have passed away, and then, after careful shaving, to strap the affected testis. This plan succeeds well enough, but is, I think, less speedily curative than the method, which you have seen me adopt, of encircling the enlarged gland with an elastic bandage. For the employment of this means it is not necessary to shave the scrotum; and if the pressure is painfully tight, it can be loosened in a moment, and almost as quickly reapplied; but it is needful to caution your patient, and to carefully guard yourself, against the error of binding the testicle too tight, else calamitous results might follow. With care and supervision, however, I know no plan so satisfactory as this, and have over and over again succeeded by this means in reducing an enlarged testis to normal size in forty-eight hours. Again, in causing absorption of exuded lymph in cases of threatened mammary abscess, pressure is of signal value. The general custom is to effect pressure, as in the former case, by means of strapping, which alternately passes over the breast and shoulder, and round the breast horizontally. I think, however, that, if you will take the trouble, you will obtain better results by employing a form of

mammary truss. The one I use is a modification of Salmon and Ody's well-known inguinal truss; it reaches from the spine round the side, the large hollow pad holding and fitting on to the affected breast; by means of a pivot, supplied with a rack and pinion, I am able to apply pressure either equally over the whole gland, or to any special part of the organ which requires it, while a strap passing over the shoulder prevents the instrument from slipping. Of course, the inconvenience attends the adoption of this method of requiring a special apparatus, so that it may be necessary, at least in hospital practice, to resort to the more usual method of strapping. This, however, is no great cause for regret, as, if carefully applied, it secures good results.

We find pressure useful also in the treatment of certain forms of adenopathy, particularly that form of inguinal adenopathy which is sequential to the non-infecting variety of chancre. Covering the enlarged and chronically inflamed gland with Scott's dressing, and applying a spica bandage with firm pressure, will often cause the otherwise unyielding gland to disappear. If this prove unsuccessful, the gland should be injected with a few minims of tincture of iodine, and pressure reapplied. When the tissues about a joint are infiltrated with some inflammatory exudation—the acute symptoms, be it understood, having passed away,—excellent results are obtained by the judicious employment of pressure. In these cases, indeed, a combination of the douche, friction, and pressure with Scott's dressing and a good bandage constitute the best of all treatment.

Before leaving the subject of pressure, I think it well, gentlemen, to draw your attention to its employment in the cure of aneurism; and having myself had some experience in such cases, I shall best utilise your time by telling you how to apply the bandage in treating a popliteal aneurism, as practically this is the only form of aneurism amenable to this special mode of treatment. The affected limb should be tightly swathed in an Esmarch's elastic bandage from the tocs to the popliteal space; then, placing a pad of lint over the tumour, the bandage should be carried ever so lightly over the entire knee till the whole popliteal space is covered in; then, the tumour being passed, firm pressure should again be practised, and the bandage continued up to the groin. A Carte's tourniquet being adjusted to the limb, the bandage should be retained for an hour, and then, the tourniquet being previously tightened, it must be removed. If the case is curable by this method, it is probable that it will be cured by the first application. The most important point is the management of the tumour itself; if absolutely no pressure is exerted I have found this plan to fail, the period during which the circulation is arrested not being sufficient to cause coagulation of the contained blood of the requisite firmness to withstand the *vis a tergo* of the heart's action; again, if too much pressure is used, all the contents of the sac are emptied, and of course coagulation cannot proceed without something to coagulate; so that the point to be aimed at here, as in so many other cases, is the happy medium between too much and too little.

Electricity.—Although I believe that electricity has a great *rôle* to play in the future history of surgery, I shall confine myself on the present occasion to speaking of the topical use of electricity in the treatment of aneurism and of nævus. Faradising a weakened muscle, or employing a continuous current to promote absorption, comes equally under the province of the physician, and therefore need not here be further alluded to. Of the treatment of internal aneurism by electrolysis, I venture to predict that we are at present far from appreciating the wide applicability and the great value; but this even now is clear, that we have in electrolysis a new weapon of vast power in certain cases of aortic aneurisms. Nor, gentlemen, does it appear that the operation is attended with risk. Now, in applying electrolysis it is essential that we bear in mind certain differences in the action of the negative and the positive poles of the battery. The positive pole plunged into fluid blood gives us a firm clot, small in size, and slow in forming; the negative pole produces a much larger, but more frothy and less firm coagulum. Hence it is generally thought wise, in the treatment of aortic aneurism, to introduce needles connected with the positive pole only; and it appears that the best results are obtained by the introduction of but few needles, connected with a comparatively large number of cells (about thirty cells of a Foveau's battery may be taken as the average), and that the needles be retained *in situ* for a considerable time—that is, for some two hours. By this means we secure the nearest approximation to what may be considered a natural cure by the superposition of laminæ of fibrine. Under certain circumstances both poles may be used, but the negative pole should never be used alone. The needles should be insulated for some distance, so that not more than one-third of an inch projects into the interior of the aneurismal sac. There is no reason why this method should not be used when we have to deal with some cases of abdominal as well as with intra-thoracic aneurisms. In regard to the treatment of nævus by electricity, we may proceed more boldly. Thus, we insert needles connected with both poles, and we may employ a battery made up of larger elements than would be safe in dealing with internal aneurisms; for in nævi we have not the same danger from the formation of loose clots being carried into the general circulation. Still, I have generally thought it advisable to strangle the nævus so treated with a tightly drawn circumferential cord, as in this way all liability to embolism is done away with. If this precaution be taken you may fearlessly attack almost any nævus, and that too with bright hopes of thorough success.

Rest.—In a vast number of surgical affections the main object is to secure physiological rest. Thus, in all fractures and sprains in the acute stage of joint affections, in every variety of wound, the surgeon's chief care is to give rest to the injured part; and in securing this end some knowledge and much ingenuity are often requisite. To rest a joint satisfactorily it is generally necessary to lock two—that is, the joint either above or below the diseased articulation. Thus, in giving rest to an inflamed shoulder the elbow should be brought to the side, and immobilised as well as the shoulder, and the scapula steadied by a rib-bandage. In the case of the elbow, perhaps this caution is less necessary than in other joints, though even here it is better in acute arthritis to carry an L-shaped splint beyond the wrist, so as to put a stop to pronation and supination. In affections of the wrist, a good sling, in addition to a splint along the palmar aspect of the arm, is sufficient. I may mention in passing that the position of physiological rest for the wrist is one in which the hand is in a direct line with the forearm; and hence in treating Colles's fracture of the radius the hand should not be adducted, as it must be when we use the pistol-shaped splint, or abducted, as Dr. Gordon recommends, but maintained in a position midway between the two, which is very efficiently done by two straight splints. In securing rest for the hip Liston's long splints may be employed; or, with a bed properly made—that is, raised towards the feet,—extension with weight and pulley answers perfectly well. Special apparatus, such as Sayre's or Thomas's splints, are often of the greatest value to the surgeon in obtaining a position of perfect rest for this often-diseased joint. And so in the case of the knee, the splint invented by our present house-surgeon, Mr. Wartenberg, is an admirable one, because, while affording complete rest, it gives the surgeon every facility for dressing the joint as frequently as he desires. In the lower extremity, still more than in the upper, it is impossible to rest and quiet a joint without securing its neighbour. Therefore, in diseased hip, lock the knee as well as the hip; in diseased knee, secure the ankle; in diseased ankle, take care that the back-splint reaches above the knee, so that this joint is made to share the confinement.

A time comes, however, when rest is no longer of service, but becomes a source of peril to the utility of a limb—that is to say, there is a tide in the disease of a joint which, taken at the flood, may lead to perfect restoration; but which, allowed to lapse, may perhaps entail a future of irremediable mischief. It happens not unfrequently, too, that it is the lot of the bone-setter, rather than of the regular practitioner, to secure this fortunate moment; for a patient, wearied with splints and starch bandages, perhaps seeks advice of an extra-professional character, and so it comes to pass that the shrewd quack, handling the joint which has been kept in prison so long, exclaims, "Ha! I thought so! here's a bone out of place," or "The joint has slipped"; and straightway, with a few forcible movements, something gives way, the joint is put in again, and the patient is delighted and astonished to find that the quack has been as good as his word, and has loosed him and let him go. Such are their successes; of their failures we perhaps do not hear quite as much as we might if the maimed ones were always equally ready to report results to their medical attendants. Perhaps you can have no more general rules to guide you in this difficult question of when to abandon rest for action than these: as long as there is redness or heat (and heat is far more important than redness), or pain on slight

passive motion, rest must be enjoined; but when there are none of these symptoms present, then the sooner you get to work and prescribe movement the better. This, I believe, is your best monitor, whether you are dealing with a case of vertebral caries, or articular disease, or fracture.

Motion.—I spent some time lately with a gentleman who called himself a kinesipathist, or muscle-teacher, in learning his mode of procedure; and really, in the main, what he did was very sensible, having for its object the education, so to speak, of certain muscles or groups of muscles. He did not work the muscles until they were tired out, but systematically put first one set of muscles in action, and then their antagonists; and by this means I have little doubt he would achieve some good in treating—to use Paget's happy thought—a set of *stammering* muscles, and aid in bringing them into more healthy and harmonious action. It is chiefly, however, in cases of stiff joints that the surgeon has to employ motion as a means of cure. There is no doubt that a good deal of avoidable work in this direction is entailed on the surgeon by the carelessness of patients. Thus, for example, how often do we meet with stiff fingers and wrist after fracture of the humerus, though the splint has left these joints at liberty all along, and the patient has been often counselled to work them by playing an imaginary piano, or by grasping a small ball, or by various passive movements. When a joint has become stiff from any cause, the question arises whether it may be safely put in motion again by forcible flexion and extension, or whether it must be let alone; and I think the safest plan will be to very much leave the markedly strumous subjects to their own devices, to interfere with the distinctly rheumatic folk very cautiously and gently, but to play the part of the bold bone-setter where you have an unquestionably healthy patient to deal with. It must be remembered that there is a wide interval, however, between the scrofulous and the rheumatic, and therefore, though I advise caution in the latter class, I do not advise a system of *laissez faire*, but, on the contrary, am of opinion that most instances of stiff joints in rheumatic subjects may be restored to usefulness by judicious friction, shampooing, and by a long-continued but gentle course of passive movements.

The Surgical Society of Paris, at its meeting on January 10, elected Ciniselli, Longmore of Netley, and Michaux of Louvain, Associated Foreign Members; and Bryant of London, and Lister of Edinburgh, amongst others, Corresponding Members of the Society.

The funeral of the late Sir William Fergusson, Bart., took place at West Linton on the 16th inst. A large body of the tenantry and workmen on the estate attended upon the occasion, the pall-bearers being Sir James Fergusson, Bart., Lieutenant Charles H. Fergusson, Mr. Wm. R. Scott, Mr. Colin C. Hodge, Mr. Wm. Forbes (of Medwyn), Mr. J. Ord Mackenzie (of Dolphinton), Mr. John Blackwood, and Surgeon-Major Snell (of the Army Medical Department). A large number of gentlemen were also present. As a mark of respect the various places of business in West Linton were closed during the early part of the day and until the funeral ceremonies were concluded.

Excision of the Branches of the Fifth Pair in Neuralgia.—Prof. Weinlechner, in a communication to the Vienna Medical Society, stated that he had performed excision of the branches of the trigeminus in twenty cases of severe neuralgia. He had found the operation much more successful when the neuralgia was limited in extent than when it was diffused. The deeper and more central was the resection, the more certain was the relief of the neuralgia; but in very deep excisions we are deprived of the possibility of again resorting to the operation in case a relapse might render this desirable. Comparing this operation with that of tying the common carotid, we may say that in very obstinate and painful cases both modes of procedure may produce a temporary or permanent cure; but neither method is without danger, as they both are sometimes followed by pyæmia, erysipelas, etc. In general the ligature of the artery is the easier operation of the two; but in old persons there is the danger of atheromatous degeneration, while in the younger ones, if the ligature is followed by hæmorrhage, severe disturbances of the cerebral nutrition may ensue. As a general rule it may be stated that neurectomy is to be preferred in limited neuralgia, while in diffused neuralgia with vascular dilatation ligature of the carotid should be performed.—*Wien. Med. Woch.*, January 20.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ROYAL FREE HOSPITAL.

ANEURISM OF THE LOWER PORTION OF THE THORACIC AORTA, FATAL BY BURSTING INTO THE LEFT PLEURAL CAVITY—DIFFICULTY OF DIAGNOSIS.

(Under the care of Dr. COCKLE.)

[For the notes of this case we are indebted to Mr. W. J. Pickup, House-Surgeon.]

W. C., aged thirty-three, a policeman, was admitted into the hospital in the beginning of July, 1866, with the following history:—His general health had been always good. Ten years ago he had a fall from some scaffolding, which caused the formation of an abscess in the groin, from which, however, he soon recovered. Three years since he again fell in the highway and hurt his left side. He felt "sore" for some time after this last accident, and has ever since suffered from pain in the side. This pain has increased during the last year. It occurs in paroxysms, and is accompanied with a slight but teasing cough. It extends from below the left nipple round the left side to the back, and "seems to go through him and doubles him up." The only physical signs detected at this time were very extended heaving impulse of the heart, and possibly slight diminution of the respiratory murmur posteriorly, and a marked prominence of the eighth, ninth, and tenth left costal cartilages. After remaining under treatment for a month he was discharged, expressing himself much relieved. On November 6 he was readmitted, suffering from a return of the former pain. During the interval he had been almost free from this pain and able to attend regularly to his duty. With the exception of the "gnawing, burning pain," he stated that he felt quite well. The heaving impulse over the cardiac region was still very marked; but, beyond those named, no other physical signs could be detected. Almost every night he suffers from a paroxysm of pain, which occasionally lasts three or four hours. During the day he is for the most part free and feels well. Various means were employed. Bismuth (which before had relieved), and morphia administered by the mouth, and also hypodermically, now failed to afford any relief. The patient continued in this state until on November 18, at 4 p.m., while taking his tea, he was suddenly seized with a violent paroxysm of pain, followed by syncope. He was blanched and pulseless; the skin cold and moist; the heart's sounds scarcely audible. From this condition he slowly rallied, and conversed for some time afterwards. He complained only of griping pain attended with frequent eructation. At 11 p.m. he had another violent paroxysm of the pain, in which he died in half an hour.

Post-mortem, thirty-six hours after Death.—The body well nourished. Rigor mortis still marked. Entire left side of thorax dull on percussion. Upon opening the thorax, serosanguineous fluid escaped from the left pleural sac. This sac was now found filled with coagulated blood, which, when removed, was found to weigh seven pounds and a half. The superior lobe of the lung, together with the heart, were displaced to the mesian line; the inferior lobe was adherent to the diaphragm below posteriorly, also to the ribs, and slightly to the spinal column. Between the middle and inferior lobes was a considerable opening in the pleura, readily admitting two fingers. The right lung was universally adherent. The abdominal organs were now removed, and the aorta divided at its bifurcation. Upon dissecting the artery upwards, an elongated ragged opening, about one inch and a quarter in length, was seen opposite the ninth dorsal vertebra: this opening led into a large sac springing from the posterior wall of the aorta, four inches in diameter, and situated over the seventh, eighth, ninth, tenth, and eleventh dorsal vertebræ, the anterior surfaces of which were deeply eroded, quite scooped out, particularly the three middle vertebræ. The intervertebral cartilages were intact. The sac also extended to the left beyond the vertebral column; so that between the sac and the posterior chest-wall was the lower lobe of the lung, on which the sac was partially cushioned, and which it had compressed; and near that part the left pleura had been burst into. The sac was partly filled with old laminated and recent clot; its posterior

wall was formed by the eroded surfaces of the vertebræ, preventing its removal entire. The heart was slightly enlarged, but flabby, soft, and mottled (fatty). The aorta was atheromatous. The prominence of the costal cartilages above mentioned was quite unconnected with either the heart or the aneurismal sac, and probably resulted from the man's earlier occupation, which consisted in boring holes through iron plates for cabs, with a "brace and bit," the handle of which is pressed against the front of the chest.

Remarks by Dr. Cockle.—When this patient quitted the hospital in July, although expressing himself as relieved, a suspicion (but nothing more) was entertained that aneurism might exist in some portion of the course of the thoracic aorta. This suspicion was originated by the following facts:—A fall more or less serious, causing a sense of internal soreness at the time, and followed by persistent paroxysms of pain beginning at the left side and extending to the back; slight but troublesome cough, unattended by dyspnœa or any signs either of laryngeal or bronchial irritation; extended heaving impulse of the heart (as was supposed), but independent of valvular, renal, or any other ascertainable cause. But no other marked signs could be detected, while the radial pulsation and condition of the pupils furnished no evidence in support of this view. The patient was readmitted in the middle of November in consequence of a return of the former paroxysmal pain, and it is notable (though occasionally observed in such cases) that during the interval of fourteen weeks he had been nearly or altogether free from suffering, and was quite equal to the discharge of his daily duties, and even now, but for the recurring pain, stated that he felt quite well. With the exception of the heaving impulse over the cardiac region, no additional signs were noted, but the "gnawing, burning pains" were not without significance. When the sac ruptured, during a paroxysm of violent pain, a very large escape of blood into the left pleura doubtless occurred; but it cannot be supposed that the entire amount subsequently removed escaped on that occasion, as it would certainly have at once proved fatal; further escape was for the time prevented either by the state of collapse, pressure of effused blood, or plugging of the sac by clot. During the second paroxysm of pain a further and fatal escape of blood occurred. An error of diagnosis was committed with regard to the apparent heaving impulse of the heart, which was really due to one transmitted from the underlying sac. But I do not quite see how the error could have been avoided, as there was no such peculiarity in the character of the impulse as is stated at times to exist, and lead us to suspect the possible nature of such cases. The position of the sac with regard to the lung posteriorly would probably have masked the bruit if any existed. The site of the aneurism was among the less frequent of those involving the thoracic aorta. The œsophagus quite escaped pressure, for not the slightest dysphagia existed during life.

Note.—A case of aneurism in this situation came under our observation some years ago, in which we made a similar error with respect to the question of cardiac hypertrophy. Unlike Dr. Cockle's case, in the one to which we now allude, there was some bulging and expansile pulsation in the left interscapular region, which gave, of course, an easy clue to the nature of the disease. But although the pushing forwards of the heart by the aneurism was a condition definitely allowed for, and the comparative rarity of cardiac hypertrophy in cases of aneurism *without valvular disease* was considered, yet so marked was the thrashing character of the impulse that some hypertrophy was diagnosed. Post-mortem it was found that the heart was not hypertrophied, and that pushing forwards by the aneurism accounted for what was observed during life with respect to the displaced apex-beat and the character of the impulse.

THE LONDON HOSPITAL.

SECOND SERIES OF CASES OF ACUTE RHEUMATISM TREATED BY SALICYLIC ACID AND SALICIN.

(Under the care of Dr. RAMSKILL and Dr. SANSOM.)

[For the notes of these cases we are indebted to Dr. Clippingdale, House-Physician.]

Case 1.—C. D., female, aged forty-two, admitted August 23, 1876. Second attack. Admitted on fifth day of disease. Swelling and severe pain of both wrists, both knees, and both ankles; slight effusion into each knee; pain also in metacarpo-phalangeal joints of both hands; soft first-sound bruit at apex; temperature 102·4°. 24th, 8 a.m.: Pains as severe as they were yesterday; temperature 102·5°. Ordered twenty grains of salicylic acid to be given every hour for twelve hours. 8 p.m.: Pains much less; effusion less; cardiac murmur unaltered; temperature 99·4°. 26th: Slight pain in right shoulder only; temperature 99°. 29th: Pains recur; temperature 101°. Ordered twenty grains of salicylic acid every hour for six hours. 31st: Pains gone. After this, patient had occasional slight relapses of pain, which protracted convalescence, and were not materially lessened by return to salicylic acid. The cardiac murmur was present when patient left the hospital.

Case 2.—E. G., female, aged thirty, admitted September 9. First attack. Admitted on seventh day of illness. Lies in bed immovable on account of pain; large joints only affected; slight effusion into each knee; no cardiac lesion. Ordered fifteen grains of salicylic acid every three hours. 14th: Pains entirely disappeared; temperature normal. Medicine discontinued. 18th: Has had slight recurrence of pain, but is now entirely free from it and allowed to leave her bed.

Case 3.—J. T., male, aged twenty-one. Several previous attacks. Admitted October 2, on seventh day of disease. Large joints alone affected; pains moderately severe; wrists swollen; no cardiac change; temperature 101·5°. 4th: After four fifteen-grain doses of salicylic acid, patient had giddiness and noises in the ears; temperature fell to normal; joint-swellings became much less; pains ceased. 6th: The pains recurring, a return to salicylic acid was ordered. Noises in the ears and giddiness were reproduced by three doses, and the pains again almost completely ceased; temperature 99°. After this, slight pain returned, and continued for some days, but the use of the drug was not resumed, and patient was able to leave his bed on October 15.

Case 4.—G. H., male, aged thirty-three, admitted October 19, with his first attack. Had been ill for five days prior to admission. Large joints alone affected; pains severe; effusion into left ankle and right knee; no cardiac lesion; temperature 101·4°. Ordered fifteen grains of salicylic acid every two hours for twenty-four hours. 20th: Has taken the twelve doses of salicylic acid; pains almost gone. 24th: Slight pain continued until yesterday. Patient is now free from pain and all joint-swelling has disappeared; temperature normal. 26th: Patient to get up. Afterwards, as in other cases, there were slight relapses of pain, over which the drug seemed to have no influence.

Case 5.—J. G., male, aged twenty-one, admitted October 28. Second attack. Present illness commenced four days before admission. Swelling and pain of both knees; swelling, pain, and redness of small joints of left hand; lower ends of femora markedly lipped; well-marked thrill all over cardiac region; distinct friction-sound at base of heart; cardiac dulness not enlarged; temperature 101·6°. Ordered fifteen grains of salicylic acid every second hour for twenty-four hours. After twelve doses no further salicylic acid given. 30th: Pains less; the pericardial signs unchanged; temperature 101·4°. 31st: Arthralgia disappeared; præcordial pain, friction-sound, and thrill as before; temperature 100·6°. Poultice ordered to front of chest. November 2: Bulging of præcordial region; apex-beat diffused; sounds at apex indistinct; friction-sound at base still heard. Patient is taking a third of a grain of morphia in a pill three times a day. 7th: Physical signs of much fluid in the pericardium; considerable dyspnœa; no return of joint-affections; respirations 36; temperature 101°. 10th: Less dyspnœa; cardiac dulness nearly normal; friction-sound at base less distinct; sounds of apex plainer; temperature 100·5°. This patient subsequently made steady progress. There was no return of arthralgia. He was ordered up on December 7.

Case 6.—A. J. S., male, aged twenty-four, admitted November 1. First attack. Illness said to have commenced several weeks before admission. Small as well as large joints affected; synovial sac of left knee distended with fluid; no cardiac lesion; temperature 100·8°. Ordered morphia draught at bedtime, and to commence taking, on the following morning, ten grains of salicylic acid every four hours. 3rd: Since yesterday morning patient has taken the salicylic acid regularly every four hours, but the pains are no better and the temperature has risen 1°. Ordered fifteen grains of the acid every two hours—twelve doses. 4th: Pains less; temperature normal. 8th: All pain left yesterday. Patient to get up.

Case 7.—H. B., male, aged thirty, admitted November 4th. First attack; third day of disease. Large joints and metacarpo-phalangeal joints affected; a systolic murmur at heart's apex, conducted into axilla; temperature 102·4°. Ordered fifteen grains of salicin every two hours. 6th: Pains less; patient states that immediately after each dose of the medicine there are shooting pains in the affected joints; temperature 99°. Medicine stopped on account of stock of drug being exhausted. 8th: Salicin returned to yesterday; all arthralgia now absent. After this, patient had several slight relapses, which kept him in bed until November 22.

Case 8.—C. B., female, aged twelve, admitted November 7, with first attack, and on the third day of it. Large joints alone affected; effusion into ankles; no cardiac affection; temperature 102·4°. Ordered ten grains of salicylic acid every three hours. 12th: Arthralgia and effusion have gradually disappeared; temperature normal. Medicine to be discontinued. Patient was able to leave her bed three days later.

Case 9.—M. C., female, aged twenty-three, admitted with her first attack November 14, on tenth day of disease. Pains very severe, limited to the larger joints,—no effusion into any of them; heart normal; temperature 101°. 15th: This morning, at eight o'clock, patient's pains were as severe as they were last night, and her temperature was the same, viz., 101°. Patient then commenced taking salicylic acid in twenty-grain doses every two hours; she has now taken six doses. Pain left the joints after the fifth dose, but is now in the muscles. The joints can be freely moved without causing pain, but when told to move them herself patient complains of pain in the contracting muscles. The temperature has risen 1° since the morning. Medicine ordered to be given every four instead of every two hours. 17th: Pains gone; temperature normal; complains of headache and noises in the ears; vomited after the last dose of medicine. Medicine to be now discontinued. 19th: Headache and noises in ears disappeared; had sudden pain in right temple, followed immediately by epistaxis; this was not severe. 22nd: Slight recurrence of pain; temperature 100°. To return to the salicylic acid. 24th: Four doses of the medicine produced singing noises in the ears and giddiness. These symptoms, though continuous, were augmented after each dose. Medicine discontinued; symptoms relieved. 25th: All symptoms of acute rheumatism and those due to the medicine have ceased. Patient left her bed on the 26th.

Case 10.—H. C., male, aged thirteen, admitted November 23. First attack; illness commenced four days before admission. Pain of, and effusion into, both knees and right ankle; heart normal; temperature 103·4°. 24th: This morning patient commenced taking twenty-grain doses of salicylic acid every two hours; has now taken twelve doses. After the fourth dose he became entirely free from pain, and the temperature fell to normal; vomited after the fifth dose, but not since. Medicine ordered to be continued every four hours. 25th (evening): Was delirious last night, and to-day fancied he saw cats upon his bed fighting; got out of bed twice; sat up in bed and called out, "What's the matter?" Vomited after each dose of the medicine. Lies in bed as if suffering from dyspnœa; respirations 36; deafness, especially of right ear. Medicine discontinued. 26th: Wandered in the night, and vomited occasionally. 28th: Convalescent. Allowed to leave his bed on December 1.

Case 11.—M. L., female, aged forty-six, admitted December 11. Second attack; commenced ten days before admission. Large joints only; pains severe; erythema; no effusion; no cardiac symptoms. 12th (evening): This morning at eight o'clock, the pains being severe, the temperature 102°, a course of salicylic acid was commenced, twenty grains being given every two hours. After the first dose the temperature fell 2°; after the fifth dose pain had entirely disappeared, and the temperature fell to 99°. The temperature is now (11 p.m.) normal; patient has become very deaf, and complains of humming noises in the ears, and headache. 13th: The medicine has been continued inadvertently during the night. Delirium is now very severe; patient abuses everbody, but speaks incoherently, has delusions and illusions; has vomited. Medicine to be discontinued. 16th: Still delirious, but less so; says a dog has flown at her; fancied that she heard a dog barking in the night; thought she saw her husband pass the end of the bed. Chloral hydrate sensibly diminishes the delirium. 17th: Delirium has continued until to-day. Temperature remains normal; no return of pain. 20th: Slight recurrence of pain. Temperature 100°. Ordered twenty grains of salicylic acid three times a day. 22nd: Pains gone; temperature normal. Medicine ordered to be discontinued. Patient was able to leave her bed on the 23rd.

Case 12.—J. C., male, aged twenty-six, admitted January 10. Second attack; admitted on fourth day. Pain in both ankles and both knees; effusion into right knee,—this joint measures half an inch more in circumference than left knee, into which there is little or no effusion; no cardiac changes; temperature 100·5°. 11th (2 p.m.): Patient commenced this morning to take twenty grains of salicylate of soda every hour. After the second dose he was entirely free from pain, but the temperature was 100°. He is still free from pain; there is less effusion into knee,—the joint measures half an inch less in circumference; complains of drowsiness and nausea; temperature is now normal. Medicine to be continued every four hours. 12th: Drowsiness and nausea increased. Has now, in addition, noises in ears, headache, dryness of mouth and throat. Medicine to be discontinued. No effusion can be made out in right knee,which is now equal in measurement with left knee. All toxic symptoms disappeared on the 13th, and patient was allowed to leave his bed. He suffered no relapse of the rheumatism.

Summary of Cases.

No. of Case.	Sex and Age.	Number of attack.	Duration before admission, days	Duration after commencement of treatment.	Number of days in bed.	Toxic symptoms produced by drug.
1	F. 42	Second	4	7 days	7	None.
2	F. 30	First	6	5 days	9	None.
3	M. 21	Several	6	8 hours	13 (including relapse)	Giddiness; noises in ears.
4	M. 33	First	5	4 days	7	None.
5	M. 21	Second	3	2 days	40 (Pericarditis)	None.
6	M. 24	First	?	5 days	7	None.
7	M. 30	First	2	3 days	18 (relapses)	Shooting pains in the affected joints after each dose of the medicine (salicin).
8	F. 12	First	2	4 days	8	None.
9	F. 23	First	9	2 days	12 (relapses)	Giddiness; noises in ears, vomiting; headache; epistaxis.
10	M. 13	First	4	8 hours	8	Vomiting; delirium; deafness; dyspnœa.
11	F. 46	Second	10	10 hours	12 (relapse)	Noises in ears; deafness; headache; delirium; vomiting.
12	M. 26	Second	3	2 hours	3	Noises in ears; headache; drowsiness; nausea; dryness of mouth and throat.

Remarks.—From Dr. Clippingdale's cases it would appear that the following conclusions may be drawn:—1. That over the pain and pyrexia of acute rheumatism salicylic acid had a distinctly ameliorative influence; that no true relapse occurred during its administration. 2. That after the salicylic acid treatment was stopped there was liability to the occurrence of relapse. 3. That if the relapse was a true febrile relapse, salicylic acid in sufficient doses very soon controlled it; but that with respect to the recurring pains not associated with pyrexia in the convalescence from rheumatic fever, salicylic acid was not always effective. 4. That there was no proof of any beneficial effect of salicylic acid on pericarditis—that is to say, twelve fifteen-grain doses every two hours, commenced after a friction-rub was heard, did not prevent the occurrence of pericardial effusion. 5. That, with respect to dose, whilst in

Case 6 ten grains every four hours were useless, the administration of fifteen grains every two hours was followed by definite benefit to pain and pyrexia. 7. That out of twelve cases six had toxic symptoms.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 24, 1877.

ENGLISH DOCTORS IN FRANCE.

The question which has been raised by the *proposition de loi* of M. Roger Marvaise, with regard to the admission of foreign medical men into French practice, is still under discussion in France; but the idea embodied in M. Marvaise's Bill—that of the future virtual exclusion of the foreign physician from French territory—is discredited on all sides, and French public opinion is every day declaring itself more and more strongly against it. The *Journal des Débats* has recently devoted two articles from the pen of the distinguished writer John Lemoinne to the subject. The former of these articles was mainly directed to combating in vigorous terms the principle of M. Marvaise's Bill; while the latter (February 13), which is founded on a letter addressed to the *Journal* by Dr. Daremberg, a French physician practising at Mentone, deals with the practical question, "What guarantees of professional knowledge shall France exact from the foreigner who wishes to settle in a French health-resort, and practise among his countrymen?" We shall first notice Dr. Daremberg's views on the subject, and then refer to M. Lemoinne's criticisms of them. Dr. Daremberg begins by admitting that the restrictions which M. Marvaise is endeavouring to impose on foreign physicians in France "are exaggerated, vexatious, and absolutely useless;" that "the foreign colonies in the South of France require the presence of foreign physicians;" and that "if he himself were ill when travelling in England, Germany, or Italy, he would imitate their example." He further disclaims any desire on the part of the French doctors who practise in the winter health-resorts to exclude English or German physicians, and regards such a measure as "profoundly unjust." But when he passes on to say that "French physicians (as a body) have no interest in this question," that "they do not fear the rivalry of foreign medical men, or nourish any feelings of jealousy towards them," we feel it our duty to remark that his liberality of view is *not* universally held in his country, and that to this jealousy or some feeling akin to it M. Roger Marvaise's *proposition de loi* is due. The preamble of this Bill affirms that "the right of the French Government to allow a foreign physician or surgeon graduated in a foreign university to practise medicine or surgery on the territory of the French Republic *has been a source of continual complaint from the medical profession of France*"—a statement which hardly coincides with his own, that "les médecins français n'ont aucun interêt dans la question." We have not the slightest wish to recriminate in dealing with this matter, and we only adduce M. Marvaise's words in order to show how the persons most interested—the French doctors in the southern health-resorts—repudiate his assertion. But, while admitting the injustice of altogether excluding foreign medical men from French practice, Dr. Daremberg is of opinion that the only way to distinguish the true physician or surgeon from the counterfeit and quack is some sort of an examination to which all foreign practitioners shall be amenable; and, to save repetition, we may say that M. Lemoinne agrees with him in the main as to the necessity of some such *contrôle*, though less decided as to its exact form. Dr. Daremberg would require the following guarantees of the foreign doctor:—(1) The production of the diplomas which confer on him the right to practise in his native country; and (2) that he should pass a clinical examination before a French State medical faculty. And he would even allow this latter, which would involve "the examination of a patient with some medical, and of another with some surgical disease, and a reply to some question on practical obstetrics," to be passed in the language of the examinee—English, German, etc., as the case may be. This is a very enlightened view which Dr. Daremberg takes of the matter, and we feel sure that such terms would be acceptable to the profession in England. We may, however, point out that the *final* examination for the grade of *officier de santé* already fulfils Dr. Daremberg's conditions almost exactly, with the exception that it must be undergone, and we think rightly, in French. What we are unable to understand, and what, if we interpret his meaning rightly, M. Lemoinne cannot understand either, is the necessity for any *examination* at all, if there be really no desire to exclude properly qualified foreign medical men from France, and if the French law as it stands at present, or as M. Marvaise wishes it to stand in future, only aims at the exclusion of quacks with bogus diplomas from "eclectic colleges," "de la Faculté de Philadelphie ou de Tomboucktou!" All that is needed is for the French Government to decide, on information which it can readily procure through its consuls abroad, what foreign universities and other foreign examining boards which confer medical qualifications really subject their graduates and licentiates to a satisfactory examination, and hence what foreign diplomas may be considered as really trustworthy. They have then only to decide what foreign diplomas they will accept in future, and to require a legal attestation on the part of any person presenting such a recognised diploma that this document is his genuine property. The above formality is, we believe, all that is demanded in Italy of foreign doctors who intend to practise *only* among their own countrymen; and it is only to such that our remarks about the registration of diplomas are intended to apply. Englishmen or others who desire to attend *French* patients on French territory must conform to the law of the country, and qualify themselves accordingly.

We hope that before long the question we have been

discussing will be settled, as far as England is concerned, by mutual arrangement between our Government and that of France. Since our former article on this subject appeared, the expression of public opinion in this country and in France has shown conclusively that it would be impossible to exclude English medical men from the practice of southern health-resorts, and that, as a matter of fact, no sensible person in France desires to exclude them. "The real question to be decided is," says John Lemoinne, "whether men who have received the right to practise medicine from the first scientific bodies in England (*e.g.*, the Colleges of Physicians and Surgeons, the University of Oxford, and other universities), shall be compelled to pass new students' examinations (*examens d'étudians*) in order to practise in France." "We can only say," he continues, "that such a measure is one of absolute exclusion; that it would ruin the health-resorts of France, and be the making of those of Italy and Spain; and, lastly, that it would be a miserable imitation on a small scale of the Edict of Nantes."

Without going quite so far as M. Lemoinne, and implying that no Englishman would "tackle" even all five of the French university examinations if it were necessary for him to do so, or that such an attempt would probably be as futile in its results as an expedition to the North Pole, we must admit that anything much more severe than a clinical examination *à la* Dr. Daremberg would be vexatious and impracticable to the majority of English medical men. If the idea of total exclusion be abandoned, there can be no difficulty in admitting duly qualified foreign practitioners into France by adopting some such simple plan of registration as we have indicated above.

HOSPITAL STOPPAGES.

We learn from a military paper(a) that the War Office have some intention of altering the present regulations with regard to hospital stoppages. Previous to 1873 the same deductions were made from the pay of each man when under treatment, irrespective of the disease from which he might be suffering; but in that year a distinction was drawn, and the stoppages made from the pay of soldiers who had brought their diseases on themselves by indulgence in vice were largely increased. Whether this measure was intended as a punishment to the individual, as a moral lesson to his comrades, or as a mere act of justice to the community who pay the cost of the army, we think it a mistake, and we shall be glad to see this "fine" abolished for various reasons. At first sight there appears to be some justice in the regulations. It is hard that the public service should suffer from the inefficiency of a soldier who has unfitted himself for duty by his own act, and it is provoking that such a man should, while in hospital, be allowed to accumulate money which will most probably be spent in bad company. Civilian workmen meet with no such consideration, even when their diseases are not due to immorality; and any employer of labour would scout with natural indignation the request of a workman to be kept on half-pay while he was unable to work from the consequences of his own vice. But it is impossible to consider the soldier and the civil workman as fitting subjects for comparison, or to treat them as if each were subject to the same passions or temptations. Let short service in the army be as short as it can be made, still it will be long enough to affect the nature of most men. In barrack-life the home tie is nearly destroyed, and domestic life with all its moral decencies fades from the soldier's view. He does not and cannot associate freely with the respectable wives and daughters of men of his own class; and under the system of short enlistment he ought not, in the interest of the State, to be permitted to marry at all. The circumstances under which the soldier is placed form no excuse for immorality, but they do serve as a reason why the soldier and the civilian should not be similarly judged or punished. The vices or virtues of every individual in every class of life are greatly due to the society which each man keeps. We are none of us quite the same men when we are publicly gathered together as we are in our own homes. Whether the "cause" be good or bad, or the "place" sacred or profane, we all have a tendency to be carried away by the opinions of others, and are afraid or slow to rely upon our own judgments. We give our voices or our money at public meetings as we would not give them if we had time to think; and the soldier has no time to think, and in its *best* sense he has no home. What wonder is it if he become somewhat coarse and impure in his tastes, and reckless in their indulgence? All the more reason, some may argue, that fresh restrictions should be imposed, and that discipline should be stricter and sterner as licence shows a disposition to encroach. But even from this point of view we must not overlook the great consideration that our "regulations" should be just, that they should be impartial, that they should have no tendency to create new offences, and, above all, that they should be capable of being carried out. Allowing that it is just that the soldier's pay should cease while he is under treatment for contagious disease, is it quite fair that he should be protected in one garrison town, and not in another? Is it quite just that vice should be comparatively safe in one county, and dangerous in another? Soldiers are not vicious and cowardly profligates, taking liberties only when they are safe from retribution, and holding saintly discourse when society imposes its restrictions. They are only men, uneducated, and tainted with the rude heedless tone of the barrack-room, and when they give way to vice they act with very little premeditation. No one would dream of a soldier walking about with a pocket-chart of the towns protected or non-protected by the Contagious Diseases Acts; and yet, perhaps, that is the only lesson that hospital stoppages are likely to teach him. Here and there a bad-hearted man may learn another lesson: it may enter his mind that it is safer to be the seducer than the seduced; and a wretched girl may owe her ruin to the determination of a blackguard to save himself from retribution in the shape of hospital stoppages. These considerations are not without weight; but let us put them on one side as sensational, and consider whether the regulations, such as they are, *can be carried out*. A law which cannot be enforced tends only to make all law ridiculous; and we are told that the disastrous consequences of the misdemeanour have multiplied infinitely since the fine was imposed. The natural desire of even educated men is to conceal the extent of their diseases, sometimes even to conceal the disease itself for which they consult a medical man. What can we expect from uneducated men,—from poor fellows who are, after all, only taught by hospital stoppages that disease, and not vice, is shameful,—but that they will conceal their diseases? Any regulations that have this tendency condemn themselves. It is, perhaps, rather hard for a man to "report sick" when he becomes aware of disease in its earlier stages, which at first, at least, is not sufficient to prevent him from being a free man out of hospital, in the enjoyment of the little liberty which a soldier's life permits; but it is too much to expect him to put himself on the sick-list when he is to have his pay stopped as well as his liberty. A man's comrades would sometimes force him to go into hospital sooner than run the risk of catching his disease by contagion in the washhouse or barrack-room; but soldiers are not very likely to turn informers if the culprit is to be punished. Concealment of disease must end in stricter regulations, and the odious form of medical inspection be re-introduced, unless, indeed, the War Office authorities will remove one great temptation to concealment, which at present exists in the shape of "hospital stoppages."

(a) *Broad Arrow*, January 27, 1877.

VISCERAL SYPHILIS AT THE PATHOLOGICAL SOCIETY.—No. III.

The debate on visceral syphilis was brought to a close on Tuesday evening last. It has throughout been well sustained, and speakers have, for the most part, confined themselves to the subject immediately under discussion. On Tuesday last, after a prolongation of the meeting beyond the usual hour, the debate closed. In the first place some specimens from the museum of the Army Medical School were shown. Though accompanied with short descriptions, they did not add much to the knowledge of the subject, as the microscopic nature of the syphilitic deposits, and its relation to the healthy, or rather contiguous, structures could hardly be appreciated or studied in preparations that were handed round in glass jars. These remarks would apply also, in part, to the drawings shown by Dr. Turner. It would have added immensely to their value if they had been accompanied by microscopic preparations of the diseased structures. It is, we think, only by a careful study of the minute changes, their mode of evolution, and their relation to contiguous parts, that we can hope to arrive at any definite ideas as to the nature of early visceral syphilis.

Dr. Green showed a specimen of extensive syphilitic new growth in the substance of the lung. He explained how it differed from other forms of chronic fibroid disease, not only in its macroscopic, but also in its microscopic characters. He thought that the naked-eye appearances claimed more attention than the minute characters; and that if there were any means of distinguishing syphilitic disease from other chronic forms of lung disease, it would be found in the mode of onset, and perhaps also in the place of onset. Histologically, these growths very nearly resembled those of other fibroid disease—with the exception, perhaps, that the former tended to be peri-arterial rather than peri-bronchial in character. Dr. Green argued that there was no such disease as a syphilitic phthisis, or that phthisis in a syphilitic patient differed from ordinary phthisis.

Dr. Pye-Smith, after showing some remarkable examples of syphilitic lesions of various organs, proceeded to discuss the question of syphilitic phthisis. He remarked that there is a disease of the lungs in syphilitic patients which, during life, could not be distinguished from ordinary tubercular phthisis; but he thought that it ought not on that account to be called *syphilitic phthisis*, any more than we should call a psoriasis in a syphilitic patient *syphilitic psoriasis*. Either the disease is psoriasis or syphilis, and should be called by one or other name, but not by both. So too with lung disease—it is either syphilis or phthisis, but not both. It is, nevertheless, true, he argued, and a matter of common experience, that true phthisis may occur in syphilitic patients.

Dr. Wilson Fox began by urging caution in the doctrine that syphilis is any very extensive factor in the production of phthisis. He pointed out certain differences in the pathologists' reports of civil and of military hospitals with regard to the occurrence of gummata in the lung; and even among the specimens which had come from Netley were two forms of lung disease—one due to ordinary gummata, and one to new growths resembling fœtal brain. He was at a loss to explain this. In his own experience he had calculated that about 15 per cent. of his cases of chronic phthisis had occurred in syphilitic patients; but he had failed to detect any differences in the two sets of cases, and on the whole had come to the conclusion that syphilis had but little influence in modifying pulmonary disease. He argued against syphilitic phthisis, because of the small effect of anti-syphilitic remedies, as contrasted with their effects on syphilitic lesions elsewhere.

Dr. Payne, on the contrary, believed that if we collected and compared the various recorded cases of lung disease as seen in syphilis, we should find changes just as definite as those found elsewhere, as in the liver. He had himself seen cases in the post-mortem room, in which there were changes which in no way resembled tubercle, and which were found in subjects known to be syphilitic. The absence of cicatrices was no criterion; for the lung, owing to its peculiar structure, would expand after the disease had passed off, and obliterate any cicatricial depression on its surface which might just at first have been left behind.

Dr. Gowers showed a brain and spinal cord, also a testis, with syphilitic new growths. Those in the spinal cord were of quite recent origin. The patients had at first derived benefit from the use of iodide of potassium; latterly, however, this remedy seemed to lose its effect.

Dr. Mahomed showed a specimen of atheroma of the aorta. He tried to show, by statistics, that, though there is no specific aortitis, yet that syphilitic patients were more prone to atheroma than others, and hence more liable to aneurism.

After a few words from the President, Dr. Murchison, the discussion was closed.

THE WEEK.

TOPICS OF THE DAY.

His Royal Highness the Prince of Wales, after the delivery of the Hunterian Oration on Tuesday last, returned to the College of Surgeons in the evening, and was entertained at a banquet by the President, Mr. Prescott Hewett, F.R.S., and the Council. In the course of the evening the health of the Hunterian Orator, Sir James Paget, was proposed by Mr. Gladstone, and the health of the President by his Royal Highness. At the close of the banquet, the whole of the guests, among whom were the Dukes of Richmond, Manchester, and Sutherland, Admiral Lord Gilford, General Sir Wm. Knollys, and Sir Dighton Probyn, the Bishop of London, and many others, repaired to the Museum, which was brilliantly lighted for the occasion. They were conducted over the collection by the President, and the Conservator, Professor Flower, F.R.S., the latter of whom explained many of the principal objects of interest to his Royal Highness. The Prince remained in the Museum till a late hour, inspecting every part of it, and on leaving expressed the great pleasure he had derived from his first visit to this magnificent collection, and the hope that he might before long find an opportunity of repeating it.

In answer to a question put to him in the House of Commons last week, the First Lord of the Admiralty announced the appointment of a Committee to inquire into the causes of the outbreak of scurvy in the late Arctic Expedition, and stated that the Committee had already made very considerable progress in its labours. He further stated that the report, with the evidence given, would be made public as soon as it was received.

Although we are at all times anxious to uphold the position and duties of our coroners, we cannot agree that they should be permitted to assume the functions of the jury in addition to their own. These observations are dictated by the result of an inquiry which was held last week by Mr. Donaldson respecting the death of a child aged fourteen months, who had suffered in breathing. Dr. Franklin, of Clerkenwell, deposed that he was fetched to the child by its mother, but when he arrived it was dead. He could give no opinion as to the cause of death, as there had been no post-mortem examination. The Coroner said there was no necessity for it. Dr. Franklin said that to have no post-mortem examination was a very loose way of doing business, and offered a direct premium to murder. The Coroner said that inquests were not held for scientific purposes, and asked Dr. Franklin to state the cause of death. Dr. Franklin asked the Coroner not to think for one moment that it was a question of fees; he could not, nor would he, take his oath as to the cause of death in

any case where he had not had recent knowledge. The Coroner said that as Dr. Franklin would not state the cause of death, the jury could with safety assume that the child died from congestion of the lungs. The jury returned a verdict of "Death from natural causes." This verdict may, and doubtless is, a correct one; but, according to the published reports, it certainly cannot be said to have been arrived at from the weight of evidence adduced.

The trustees of the late Mr. Longmore, Writer to the Signet, Edinburgh, have presented to the Edinburgh Association for Incurables the sum of £10,000 for the erection of an hospital for incurables, and £300 a year for its maintenance. This is a worthy example which it is to be hoped will be emulated by many others, for institutions of this description are not nearly so numerous in the kingdom as they should be, when the enormous number of incurables in our population is taken into consideration.

A new difficulty seems to have fallen on the Richmond Select Vestry, already sorely pressed, in their endeavours to supply the town with water from their own wells. It is stated that some uneasiness is felt by the inhabitants with regard to the fitness for drinking purposes of the water now supplied. Dr. Rowland, the Medical Officer of Health to the Urban Sanitary Authority, reported that he had made a careful examination of the water from the main of the new supply in use in various parts of the town, and was perfectly satisfied with its purity. A sample has since been submitted by Dr. Anderson, of Richmond, to Mr. A. Nesbit, F.C.S., who reports that this sample of water contained 14 degrees of hardness, 24 grains of solids per gallon, and 3·3 grains per gallon of chlorine, and was, in his opinion, unfit to drink. Professor Attfield, it seems, has also been applied to by Mr. Henry F. Lockwood, of Heron Court, Richmond, to test a sample of water taken direct from the main; and he also is of opinion that the water in its present condition is quite unsuitable for use as a drinking-water.

A man was recently summoned at Rugby, at the instance of the Sanitary Inspector of the Rugby Board of Health, for travelling from Euston-square Terminus to Rugby in a third-class carriage on the London and North-Western Railway while suffering from small-pox. Dr. Floyer deposed that defendant called at his house and consulted him the day before he left London, and witness told him he was suffering from small-pox; but he did not take steps to prevent his travelling. For the defence it was stated that the medical man did not warn defendant against taking the journey. The Bench were unable to agree, and the case, in consequence, fell through.

At a meeting of the sanitary authorities of Sedgley, held last week, Dr. Ballard, Local Government Board Inspector, explained that it was essentially necessary that a hospital for infectious diseases be at once erected for the district, to accommodate one person in every thousand of the population. After some discussion it was decided that a building for this purpose should be erected in accordance with the requirements of the Local Government Board.

It is somewhat surprising, considering the number and fatality of the cases of typhoid fever which have recently occurred, entirely referable to the condition of milk supplied from unsanitary dairy-farms, that the Government has not announced its intention of bringing legislation to bear on the subject. Meanwhile fresh cases are very frequently reported. Last week the medical officer of health for Burnley made known that there had been fifty-seven cases of typhoid fever at Barrowford, the result of taking milk from a farmer who had the fever in his house. Eight deaths are announced to have taken place; and the medical officer adds the significant remark that the cases have been strictly confined to those families who received their milk-supply from the farmer referred to.

From the weekly return of births and deaths registered in the Punjaub for the period ending December 16 last, it is to be gathered that a more satisfactory state of the public health there has now to be recorded. The total deaths registered were 11,016, against 12,441 in the previous week. The annual death-rate of the province from all causes, which in the two previous weeks had been equal to 40 and 37 per 1000, further declined during the week under review to 33 per 1000. For the first time for many weeks no death was registered under the head of "cholera"; but, on the other hand, 100 deaths were registered from small-pox, against 92 and 81 in the two previous weeks. The death-rate of some of the principal towns, calculated for the week ending December 2 last, is rather startling, when compared with the returns for London for the same period: thus, the London rate was 23 per 1000, that of Ferozepore 127, Jullundur 121, Amritsar 97, Gujranwala 71, and Mooltan 55 per 1000.

We have great pleasure in announcing a further proof of the interest which her Majesty takes in the care and consideration of her poorer suffering subjects. A quantity of old linen, of great value for surgical purposes, has, by command of the Queen, been forwarded to the London Hospital, the Samaritan Free Hospital for Women and Children (Lower Seymour-street, Portman-square), and also to Charing-cross, St. Thomas's, University, and the Middlesex Hospitals. If wealthy noble-women and gentlewomen would follow the Royal example so thoughtfully expressed by this very acceptable donation, a great boon would be conferred on the sick poor of the metropolis, at comparatively no expense to the donors, as the old linen becomes proportionately valuable in the hospital when it is no longer worth anything in the household.

It is announced that Dr. Risdon Bennett, President of the Royal College of Physicians, and Dr. Crichton Browne, Lord Chancellor's Visitor of Lunatics, have been instructed by the Home Secretary to examine the convict, Frederick Treadaway, lately sentenced to death on the charge of murdering an old man in Pimlico, with a view of reporting on his mental condition, so as to enable Mr. Cross to judge of the expediency of granting a reprieve on the grounds of insanity. No report will be published unless a reprieve be granted on the strength of it.

The report of the trustees of the Peabody Donation Fund for last year, which has recently been issued, contains the following satisfactory facts:—The estate at Stockwell has been sold, owing to the inconvenience of the situation, realising a profit of £10,275. At the close of the year 1875 the amount of the Fund was £612,053. To this sum has been added £20,987, the net income of the past year, and the gain upon the Stockwell property; so that the total amount of the two trusts on December 31 last was £643,316. The sum of £27,428 was spent during the year in the purchase of land and in the erection of buildings. The amount of unexpended capital at the end of the year was £166,511. Twelve blocks of buildings near Ebury-bridge, Pimlico, containing 198 separate dwellings, were completed and opened last August. Owing to the applications for rooms, fourteen more blocks will be built on the same site, with accommodation for 272 families. When the buildings now in course of construction, to be completed during the present year, are finished, dwellings will have been provided for 2165 families, the average rent for each tenement being 4s. 3d. per week.

In his report on the health of the parish of St. Marylebone for the month of January last, Dr. Whitmore, the Medical Officer of Health, remarks that a very serious outbreak of small-pox, in Edward's-place, appears to have had its origin in a case which occurred there about the middle of December. A child, aged four, living at No. 17, was attacked with the disease, and died after a fortnight's illness. No medical man

was called in until very shortly before its death; nor was the existence of the disease made known to the sanitary inspector until after the child had been dead for nearly three days, when the body was immediately buried by the parish, and all necessary measures adopted for disinfecting the house and bedding. On first visiting the house the inspector saw several women in the room in which the dead body of the child was lying, and he further ascertained that during its illness persons from the other rooms in the same house, and from other houses, went in and out of the room indiscriminately, and not the slightest attempt whatever had been made to isolate the patient, or prevent the spread of the disease. In the same house six other cases have already occurred, six in No. 16, three in No. 15, two in No. 5, two in No. 1, and one in each of two or three other houses. The number of deaths that have occurred amongst small-pox patients sent to the hospital from Edward's-place is seven, and it is apprehended that others will follow. This utter disregard of all precaution is, however, surpassed by a recent discovery of the Medical Officer for Southwark, who, on visiting a house in Broadwall, Stamford-street, actually found, in one room a young woman suffering from small-pox, and her mother, a laundress, ironing and making-up linen ready for returning to the several owners. The patient was removed to the small-pox hospital, and the linen forbidden to be sent home; but when cases such as these are of daily occurrence it is not surprising that the epidemic gains ground instead of decreasing.

We give "with all reserve" the following important piece of information extracted from a provincial paper:—"The buying-up of all the water companies of the London district, and their amalgamation under one public trust, is now practically resolved upon. At a recent meeting of the Works Committee of the Metropolitan Board of Works it was agreed to promote a Bill in Parliament next year for this long-desired object. The purchase of the rights of the half-dozen water companies is roughly estimated at ten millions sterling. The City Corporation will join in promoting the Bill."

We are very pleased to hear that Dr. Peacock's condition has considerably altered for the better since last week; he still continues to improve, and there is good reason to hope that he will ultimately entirely recover. Dr. Basham, who was taken ill on the same day as Dr. Peacock, is also reported to be progressing favourably.

The fatal cases of small-pox in London last week declined to 72—the two previous returns having been 103 and 90 respectively. The general health of the metropolis continues to be very satisfactory, the total number of deaths being 238 below the average.

THE ARMY MEDICAL DEPARTMENT.

If it be especially fitting and desirable that the Secretary for War should possess some of the most characteristic qualities of the British soldier, then is Mr. Hardy surely the right man in the right place, for he has plenty of courage, and he refuses to know when he is beaten. Twice already during the present session of Parliament has he been questioned about the smallness of the number of candidates for commissions in her Majesty's service in the Army Medical Department, and he has answered courageously and cheerfully, under circumstances that might have tried the philosophy of even a Mark Tapley. On the 15th inst., in reply to Mr. Dunbar, he acknowledged simply that only twenty-three candidates had presented themselves for the fifty appointments offered in the Army Medical Department, while forty-nine had come forward for twenty-seven appointments in the same branch of the Indian Service; and on the 20th, in answer to a question from Dr. Lush, he replied, in addition, that "considering the very short time the new system has been established" he did not consider the number of candidates who have presented themselves since August last year a small one; and he said it should be remembered that "three departments are competing at the same time for medical men, and that India, being the best paid, of course monopolises the largest share." It is fortunate that a Minister's reply to a notified query cannot be commented on at the time, or some one would perhaps have asked for an explanation of the awkward fact that while thirty-four candidates presented themselves to "compete" for the first fifty appointments offered after the establishment of the new system, only twenty-three came forward for the next fifty, offered after the system had been established some months longer. And the inquisitive member might also have asked if it is also a part of the *new* system that the Naval and the Indian Medical Services, as well as the Army Medical Department, are competitors for medical men? Mr. Hardy mentioned further that "the greater number of vacancies is caused by the retirement on half-pay through ill-health of medical officers of twenty and twenty-five years' service." This may, indeed, help to explain the unwillingness of men to enter a Service of such an arduous character, and to prove the necessity of somehow making it more attractive; but we fail to see that it renders the present condition of things in any degree more satisfactory or more hopeful. To Dr. Lush's inquiry whether the Secretary for War is prepared to place medical officers upon the same footing as other officers with regard to exchanges, the answer was that each application is considered on its own merits, and that the Director-General has a discretionary power to recommend or to refuse the indulgence; and that, in fact, no application has been refused when an officer has been at home under three years. If, however, matters go on as at present, the questions as to exchange and as to leave will settle themselves, for ere long the Director-General of the Army Medical Department will have no army medical officers to reign over—not one even to take his duty when he himself wants leave.

ELECTION OF MEDICAL OFFICERS AT ST. GEORGE'S HOSPITAL.

We commend the following to the attention and consideration of the medical profession in Liverpool, who seem to be so violently opposed to the principle of election to hospital posts by a responsible committee. Here we have one of the most important hospitals in London, deliberately, and as the result of somewhat painful experience, abandoning the old plan of election by the whole body of governors, and substituting in its place a comparatively small committee; at the same time forbidding canvassing of any kind on pain of disqualification. Surely if this plan has been found necessary in London, it need not be so utterly repugnant to our brethen in Liverpool. Moreover, if we are rightly informed, the medical officers at St. George's have been mainly instrumental in originating and pushing on the measure:—

St. George's Hospital.—"*Law enacted February* 9, 1877.—The Physicians, the Surgeons, the Assistant-Physicians, the Assistant-Surgeons, the Visiting Apothecaries, the Chaplain, the Superintendent and Secretary, the Solicitor, and the Surveyor shall be elected by a committee consisting of the Vice-Presidents, Trustees, Treasurers, Consulting Physicians, Consulting Surgeons, the four Physicians, the four Surgeons, and twenty-one Governors not being officers of the Hospital, elected by ballot annually, at the Quarterly Court in May, notification of such ballot being made in the circular calling the Court. No appointment shall be made by the said Committee within fifteen days of any vacancy being declared in the daily papers; and the Committee shall appoint any such officer within thirty days of such declaration, or shall report to the Weekly Board their reason for not making the appointment within that time. No member of the Committee shall be eligible to be appointed to any office by the Committee. When a vacancy among the elected members shall occur, either by death, resignation, or otherwise, a ballot shall take place at the next Quarterly Court to fill such vacancy. Candidates canvassing, directly or in-

directly, any member of the Committee, shall be deemed ineligible for election."

PITTING IN SMALL-POX.

A LEAFLET has recently been circulated, stating that the amount of pitting in small-pox is in proportion to the amount of light falling on the part; and that small-pox patients protected from the actinic rays of the sun will not be pitted. If this were so, pits should never be found on parts that are habitually covered. But anyone who will examine a person who is more than very slightly pitted on the face, will find scars on the covered parts as well. They are more numerous on the face, and more conspicuous, because the cutaneous circulation is more active in the face than elsewhere, and the eruption comes out most copiously on the face. The idea is not new, although it may be so to the writer. An illustrious writer, Dr. Gregory, in his lectures on the cruptive fevers, mentions *masks* as one of the means by which the physicians before Sydenham's time tried to prevent pitting. That Sydenham—who must have had larger experience of small-pox than anyone nowadays (except, perhaps, Mr. Marson) —allowed free entry to light and air is proof that the masks did not seem to him to do any good. We quite agree with the writer, that pitting ought rarely to be seen in any civilised country: the remedy is vaccination. In those rare cases in which small-pox attacks persons who have been recently successfully vaccinated, the disease runs through its stages very quickly, and the pitting is almost imperceptible, if there be any. If the gentleman will spend his energy in counteracting the mischievous efforts of the anti-vaccination agitators, he will do more to prevent disfigurement than by these well-intentioned leaflets.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT the meeting of the Royal College of Physicians on Wednesday, a report was received from the Censors' Board upon the letter which had been addressed to the College by the Executive Committee of the General Medical Council, inquiring on what conditions of exemption graduates of foreign universities would be admitted to examination at the College. The Censors' Board recommend, we understand, that any candidate for the Licence of the College who possesses a degree in medicine or surgery from a foreign university recognised by the College, and after such education and examination as the College thinks satisfactory, shall be exempted from such portions of the examination as the Censors' Board may in each instance think unnecessary. We imagine that the feeling of the College is in favour of admitting foreign medical men possessing qualifications known to be of high character to examination on as easy terms as they would admit candidates already fully qualified by British licensing bodies; but the new regulation or by-law will be fully discussed at the next meeting of the College. The only other business of much interest was the formal announcement, by the President, of the discovery in the British Museum of the manuscript of lectures delivered by Harvey before the College. Dr. Sievcking had been allowed to have an autotype copy taken of a page of the manuscript in which Harvey gives the proofs of the circulation of the blood; and this copy had been presented by Dr. Sieveking to the College.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

ON Monday, the 19th inst., the fifth of the annual course of scientific lectures for 1877 was delivered in the hall of the College. The subject of the discourse was "Tuberculosis," and the lecturer was Dr. Arthur Wynne Foot, Physician to the Meath Hospital and County Dublin Infirmary. Dr. Foot had designedly selected the term "tuberculosis" as expressive of his opinion of the identity of the essential and fundamental lesions in acute tuberculosis and chronic phthisis. He dwelt on the impossibility of framing an abstract definition of tubercle, pointing out the causes of such difficulty; and also that the consequences of the inability to do so were not so disastrous as might be imagined. He indicated the necessity of an acquaintance with the various forms and phases of the tubercular granulation, in order to recognise it in the complex structure of the lungs. The true nature of tubercular pneumonia was fully discussed, also the seat and nature of the tubercular growth. He argued in favour of the unity of phthisis, as laid down by Laennec, the necessary corrections of his pathology being made. He suggested that the disposition of the lungs to tubercular growths might be explained by a consideration of the following propositions:—1. The lungs are peculiarly rich in lymphatic tissue, and are subject to the circulation of the whole mass of blood in the body. 2. The parts most apt to be affected with tubercle are those in which the lymphatic or adenoid tissue exists naturally in the greatest abundance. 3. The blood and the air (one or both of which may be highly charged with irritating or infecting impurities) have the freest access in the lungs to this tissue, morbidly susceptible in certain constitutions. 4. In no other organ of the body are the irritating and the irritable bodies liable to be brought into such frequent or such close apposition as in the lungs. The lecture abounded in referenees to, and quotations from, ancient and modern authorities, and was listened to with marked attention by a large audience.

NON-PAUPER SMALL-POX HOSPITALS.

A CIRCULAR has been addressed by the Local Government Board to the sanitary authorities in the neighbourhood of London, inquiring whether any and what provision is at hand for the isolation of cases of infectious disease that cannot be effectively isolated at the homes of the patients. The Board think it desirable to point out again that the infectious wards of union workhouses have been designed, and are maintained, to meet the requirements of the pauper class only, and cannot be regarded as available for the general population; and that other provision (which the sanitary authorities are empowered to make) is required for the large class of persons whose isolation in hospitals is necessary for the prevention of the spread of disease, but who do not stand in need of Poor-law relief, and would indeed be most reluctant to be removed to a workhouse hospital, even if it were open to them. The Board express the opinion that under proper management (especially as regards the removal of patients) no spread of infection from a hospital is likely to take place, while infectious cases scattered over a crowded neighbourhood are so many centres of disease. The Board request that if the sanitary authorities have not already exercised the beneficial powers conferred on them by the 131st Section of the Public Health Act, they will forthwith take into consideration the question of providing, either by themselves or in combination with other authorities, the necessary hospital accommodation for their districts.

HER MAJESTY'S SURGICAL HOUSEHOLD.

As was expected, the Queen has been pleased to appoint Sir James Paget, Bart., F.R.S., to be one of her Majesty's Serjeant-Surgeons in Ordinary, in the room of the late lamented Sir William Fergusson, Bart.; while Mr. Prescott G. Hewett, F.R.S., the present President of the Royal College of Surgeons, who was one of her Majesty's Surgeons Extraordinary, has been appointed Serjeant-Surgeon Extraordinary, succeeding Sir James Paget in that highly honourable distinction. The same *Gazette* contains also the appointment of Mr. John E. Erichsen, F.R.S., the well-known Surgeon to University College Hospital, and Professor of Clinical Surgery in the College, as one of her Majesty's Surgeons Extraordinary. Mr. Erichsen is a member of the Council and of the Court of Examiners of the Royal College of Surgeons.

THE JANUARY HEALTH REPORT FOR SCOTLAND.

The health report for the eight principal towns of Scotland during the month of January last must be pronounced exceedingly favourable. The number of births registered was 3902, the number of deaths 2589. Allowance being made for increase of population, this latter number shows a result of 587 below the average number for January during the last ten years. Of these 2589 deaths, 1014, or 39 per cent., were of children under five years of age, returned from the different towns as follows: —In Paisley, 29 per cent.; in Edinburgh, 30; in Aberdeen and in Perth, 35; in Dundee, 36; in Greenock, 41; in Glasgow, 44; and in Leith, 47 per cent. The zymotic (epidemic and contagious) class of diseases proved fatal to 321 persons, these constituting 12·4 per cent. of the whole mortality. This is the lowest proportion of deaths from zymotic diseases during *any* month since the Registration Act came into operation. It is somewhat remarkable that, although small-pox has prevailed in so many districts of England, and so severely in the metropolis, not a single death is recorded from it in Scotland during the period under notice, and only two deaths during the previous three months. The deaths from inflammatory affections of the respiratory organs (not including consumption, whooping-cough, or croup) amounted to 729, or 28·2 per cent. of the whole mortality. Those from consumption alone numbered 288; violent causes were responsible for 88 deaths, of which 4 were suicides; delirium tremens for 2; and intemperance for 13. Two males and 9 females had reached the age of ninety years and upwards, of whom 3 were aged respectively ninety-six years.

THE LEVÉE.

At the *levée* which was held on the 15th inst., the following presentations of members of our profession were made, viz.: —Surgeon-General Balfour, Dr. George Birdwood, Deputy Inspector-General John Duigan, M.D., Sir Charles Locock, Fleet Surgeon B. Ninnis, M.D., Surgeon C. W. Owen, Dr. W. T. Playfair, Surgeon R. V. Power, Surgeon J. Walker, M.B., and Surgeon J. B. Wilson, M.D. The following also attended the *levée*, viz.:—Sir R. Alcock, Sir A. Armstrong, Sir J. Fayrer, Sir James Paget, Sir H. Thompson; Drs. J. L. Hamilton, Priestley, Read, Fox, Sieveking, and Watson and Messrs. O. Clayton, A. Cooper, Du Pasquier, Galton, P. Hewett, and Erasmus Wilson.

MEDICAL PARLIAMENTARY AFFAIRS.—SCURVY IN THE ARCTIC EXPEDITION—ERYSIPELAS AFTER VACCINATION—SANITARY CONDITION OF THE WAR OFFICE, ETC.—CANAL BOATS—CARRIAGE OF SICK AND WOUNDED—CRUELTY TO ANIMALS—MEDICAL OFFICERS IN THE ARMY—MITCHAM COMMON—SMALL-POX HOSPITAL AT WHITECHAPEL.

In the House of Commons, on Thursday, February 15, an apparently unnecessary question was put to the First Lord of the Admiralty respecting the appointment of a Committee to investigate the cause of the outbreak of scurvy on board the *Alert* and *Discovery* during the recent Expedition to the North Pole. Mr. Hunt was able to tell Dr. Ward, what most people are now aware of, that an influential Committee had been appointed to inquire into the matter and to receive evidence. Considerable progress had already been made with the examination of witnesses; and in reply to Dr. Ward's further inquiry, which was probably the real question at issue, Mr. Hunt promised to lay the report and evidence upon the table of the House.

Mr. Sclater-Booth made some further statements about vaccination, alluding especially to the death of six children near Gainsborough from erysipelas following upon vaccination. The lymph used had been taken from a child vaccinated with points supplied by the National Vaccine Establishment. Mr. Netten Radcliffe, who personally visited the locality and inquired into the circumstances of the outbreak, did not consider that it originated through the lymph sent from the Establishment, seeing that no erysipelas appeared in the child first vaccinated. Other cases of erysipelas were reported from the same district, following other diseases quite unconnected with vaccination.

Mr. Gerard Noel promised to have printed the report of the Committee on the unhealthy condition of the Horse Guards and War Office.

Allusion was made by Mr. Heygate to the report of the Commissioners on the working of the Factory and Workshops Acts as it applied to "the residence of female young persons and of children above the age of three in canal boats." Mr. Cross said, with reference to this subject, that he was not prepared to adopt in their entirety all the suggestions of the Commissioners, but he proposed to register all boats as lodging-houses where the people sleep on board.

The surgeons attached to the Volunteer force of this country have requested authority from the Secretary of State for War to enable them to teach the men of their respective regiments the duty of carrying sick and wounded in case of war. Mr. Hardy, in reply to the question proposed to him, said that it was not at present in contemplation to offer facilities for training Volunteers as suggested, and that even in the Army no general instructions had been issued on the subject.

Mr. Mundella moved for a return of licences granted under the Act to amend the law of cruelty to animals, specifying the persons licensed as well as the nature of the experiments to be performed. Mr. Cross strongly objected to the names of persons licensed under the Act being made public. He was happy to be able to inform the public through the House that since the passing of the Act no experiment likely to cause pain had been performed to his knowledge, and that only one certificate entitling the possessor to perform experiments without anæsthetics had been granted. Mr. Cross having further modified the proposals, the motion was agreed to.

Dr. Lush drew attention in the House of Commons on Monday last to the scarcity of applications for commissions in the Medical Department of the Army, and asked that the conditions of the Service might be improved. Mr. Hardy was understood to say that thirty-three candidates had passed through the school during the present month, and twenty-three are under examination. He mentioned a fact not very encouraging to intending candidates for commissions in the Army, viz., that the greater number of vacancies is caused by retirement through ill-health of medical officers of twenty and twenty-five years' service. Dr. Lush further asked the Secretary of State for War whether he was prepared to place medical officers on the same footing as other officers with regard to exchanges; but Mr. Hardy said that he did not contemplate any alteration. Each application is considered on its own merits, and the Director-General of the Army Medical Department uses discretionary power in recommending or refusing this indulgence. No application is refused when an officer has been at home under three years.

With reference to the reported application on behalf of the Rural Sanitary Authority at Croydon for permission to convert 100 acres of Mitcham Common into a sewage-farm, Mr. Sclater-Booth said that no official communication had been made to him. It would be impossible for him to make any order on the subject without the consent of Parliament, and that of more than 100 persons possessing rights of pasturage, etc., over the common.

A child at Leeds having died, as alleged, from the effects of vaccination, Mr. Sclater-Booth had caused due inquiries to be made. At the inquest the jury decided that the child died from erysipelas. The same lymph had been used in other cases without prejudicial results. He had, as requested, laid the report of the Gainsborough case on the table; it would show how bad after-effects sometimes follow vaccination as with other operations.

Mr. Ritchie animadverted upon the proceedings of the Metropolitan Asylums District Board with reference to the establishment of a temporary hospital at Limehouse. He contended that a worse situation could not have been chosen. The Board, entering newly upon their duties in 1871, might then be excused for delay. A Select Committee of the House of Commons in 1875 had approved the Fulham and Deptford sites, but up to October last nothing whatever had been done towards building these hospitals, notwithstanding that the Local Government Board had twice written, urging the erection of temporary buildings at Fulham and Deptford, instead of waiting till large and costly permanent buildings were erected, as the epidemic of small-pox might subside before they were ready for occupation. He gave several reasons representing the unsuitability of the Limehouse site. The

building abutted on the pavement for the whole of its length of 200 feet; it was in a street only twelve yards wide, and was surrounded with large factories. He complained of the powers vested in the Asylums Board for the acquisition of land without consultation with the Local Government Board or district vestries. He proposed that a Select Committee be appointed to inquire into the constitution, powers, duties, and proceedings of the Asylums Board. Mr. Sclater-Booth explained that in the course of a week 240 beds would be at the disposal of the managers at Fulham and Deptford. If these hospitals had been finished in October last, there would have been no necessity to resort to a temporary expedient. He had advised the Asylums Board to refrain from using the temporary hospital, even though an outlay of some thousands of pounds had been incurred. The question was a local one in process of settlement, and he would therefore deprecate the appointing of a Select Committee. Mr. Walter having spoken in defence of the action of the Asylums Board after a personal inspection of the Limehouse site, Mr. Ritchie consented to withdraw the motion for the appointment of a Select Committee.

THE HUNTERIAN FESTIVAL.

After the delivery of the Hunterian Oration by Sir James Paget, on Tuesday last week, the President and Council entertained a large and distinguished number of visitors at dinner in the noble Library of the College. Mr. Prescott Hewett, the President, being in the chair, had on his right hand H.R.H. the Prince of Wales, the Duke of Manchester, Admiral Lord Gilford, the Right Hon. W. E. Gladstone, M.P., etc., and on his left the Dukes of Richmond and Sutherland, the Bishop of London, General Sir William Knollys, Sir James Hannen, etc.

In responding to the toast of "The Royal Family," his Royal Highness expressed the great pleasure he had derived from visiting the College for the first time, and said that, after what he had seen and heard, he felt some regret at not having attended before. The Oration by his friend Sir James Paget was one of the most eloquent as it was one of the finest he had ever heard. After eulogising Hunter and his grand works, as exhibited in the magnificent Museum, he expressed his great surprise that the College of Physicians had declined the acceptance of the collection when offered to that body by the Government; but added that it could not have fallen into better hands, and if Hunter had done much for the College of Surgeons it appeared to be fully reciprocated. In conclusion, he paid an eloquent tribute to the memory of Sir William Fergusson, and acknowledged his indebtedness to the medical profession. His Royal Highness, who spoke remarkably well, received quite an ovation at the conclusion of his speech.

"The memory of John Hunter," proposed by the President, was drunk in solemn silence.

"The Army, Navy, and Reserve Forces," proposed by the President, was responded to by General the Right Hon. Sir William Knollys, K.C.B., who, in regretting that his illustrious Chief, the Duke of Cambridge, who fully intended to have been present but for a rather severe cold, said that from his long connexion with a brigade of Guards he knew the sterling qualities of the British soldier, and fully recognised the great value of the services of the army surgeon, so needful to all, from the general to the drummer-boy.

Rear-Admiral Lord Gilford, in a neat and characteristic speech, thoroughly appreciated the great sacrifices made by medical men in his department of the public service, instancing the condition of a naval surgeon on the West Coast of Africa, with no books, no references, no consultations, no nothing; and yet how admirably all his duties were carried out!

"The Church" was proposed by Professor Humphry, of Cambridge, who said:—Mr. President, your Royal Highness, my Lords, and Gentlemen: I rise at the command of the President to propose a toast; and I do so with pleasure, because it is one which will be received with enthusiasm by some, and that which is better than enthusiasm—with respect—by all. There is a deeply inlaid trait in the human character, the common heritage, I believe, of all mankind, which, though dwarfed and obscured, more or less, in us all, still exists, and will vibrate in every human heart if the right chord be touched—and that is the love of good. We cherish the memory of the great man, and celebrate it to-day, because we know that his work was good, that it was done with a good spirit, that it has been a stirring influence for good ever since his day, and that, like a ferment, it will operate with ever-increasing effect for ages yet to come. We honour and admire the Orator of the day, not simply for his splendid talents, or for those επεα πτεροεντα which were lacking in the great master of facts in whose praise he has spoken, but rather on account of that genuine goodness which shines in every expression, and stimulates every act, which is the force that draws our hearts to him, and holds them firmly there. We love the throne of England, because we believe that it is fraught with good for the people of England. We are attached to this College, because we feel that it promotes the honour, and dignity, and advancement of the profession, and so plays its part in promoting the welfare of the country; and we are attached to the Church because we believe it to be an institution which has for its first and great object to further the moral and spiritual, to say nothing of the temporal, welfare of mankind. We feel that its effort is to promote goodwill among men as the only assured means of establishing peace on earth, and the best means of rendering glory to God in the highest. We feel it to be the highest and noblest of the physical sciences, forasmuch as it is concerned with the highest and noblest of physical works, the last and most perfect effort of creative power; and we are further proud of it, because its object is to tend that work, to shelter it from evil, to repair its breaches, and to prolong its existence. But we are conscious that there is a still nobler science—the science of theology,—which is concerned with the workings of man's thought in all ages, with its strugglings after truth, and with its aspirations for higher teaching and higher guidance; and which has for its object the binding up the broken-hearted, the sheltering the better part of man from evil, and the fitting him for higher purposes. That these two—the science and practice of medicine, and the science and practice of religion—are the necessary helpmates of one another, that their mutual co-operation is essential to the success of either, is undoubted. The sound body is the necessary accompaniment, not only to the sound mind, but to the sound moral. Any degeneracy of the physical in a nation is sure to be followed by a deterioration of the national morality, as any lowering of the moral is a certain prelude to the undermining of the physical. The two act and react on each other: and the two sciences must go hand in hand in their common work of advancing the moral and physical standard of mankind. We are honoured by the company of one who follows in a long line of the most able and active prelates of the Church, and who is inferior to none of his predecessors in the zeal and untiring energy with which he pursues his high vocation in this vast city, and who by his presence testifies to his sympathy with our work; I beg, therefore, to associate with the toast of the Church, the health of the Lord Bishop of the Diocese.

The Lord Bishop of London eloquently responded.

"The Bench" was ably proposed by Sir James Paget, and responded to by Sir James Hannon.

"The Universities and Medical Corporations" was proposed by Mr. Birkett, the senior Vice-President.

The Rev. Canon Barry (Principal of King's College, London), on rising to respond for the Universities, was received with great applause. He said that the constituency for which he had to answer was a formidable one, but the enthusiasm with which the toast had been received made it needless even to allude to any deficiencies in its representative. If, indeed, a university were, according to some modern theories, only an examining board, he would be puzzled to account for that enthusiasm. He should expect it to be looked upon as a necessary—possibly as a useful—agency, but certainly one to be accepted with toleration and acquiescence, rather than enthusiastic sympathy. Perhaps it might even be thought that its functions, however useful, needed nowadays to be looked upon with some slight vigilance of jealousy in the interests of true knowledge. But he took it that universities had far nobler functions. They were places of teaching and places of study, and in both their very name implied depth of learning and breadth of scope. In both lights he could easily imagine why the medical profession should honour the universities with cordial sympathy. If they were places of education over the whole range of educational influences, no profession had shown a wiser determination to secure a basis of liberal

education of man as man, on which might be raised the great superstructure of professional knowledge. If they were places of study, covering literally the whole field of science, no profession, except perhaps the profession in which he was called to serve, had a deeper interest in the conviction that all truth had an internal unity, and all its part a true harmony. For ministering to the body we must consider all the circumstances of its life, and so enter on the field of physical science; nor could we help passing the mysterious borderland between the body and soul, and so claim interest in the science of mind and spirit. As places of education, our universities had done their work nobly, and were second to none, if, as places of research and study, they did not occupy a position abreast of the universities of other lands. He trusted for correction of their shortcomings, not so much to the intervention of law, which must be rough and imperfect, but to the force of enlightened public opinion, which in an assembly like that before him, was so powerfully represented. In every light, therefore, he thanked them heartily for the interest in the universities, and for honouring him as representing them.

In replying on behalf of the Corporations, Dr. Risdon Bennett, F.R.S., President of the Royal College of Physicians, after a few prefatory observations, said: It is assuredly needless within these walls to speak of the value of our Medical Corporations, and the claims they have on our esteem and loyal attachment as a profession; nor is it necessary, after listening with delighted attention to the Oration which we heard this morning, to set forth their claims to the consideration of the Government of our country and of the public at large. Like many others of our British institutions—and these Corporations I hold to be eminently British in their character—their constitution and relation to the State on the one hand, and to the profession and public on the other, appear to be very anomalous in the eyes of our foreign friends. Nor is it always easy to convey to our fellow-citizens any very clear idea of the authority they possess and the influence they exert. Much of this authority, no doubt, is felt rather than visibly exercised, and the influence, like the air we breathe, unconsciously received. But no one who is the least acquainted with the history of the medical profession in this country, as compared with that of the Continent, can fail to admit that the influence of our Corporations, not only on the study and progress of medical science, but also on the social position and power of our profession, has been very remarkable and of the utmost value. A late brilliant French essayist said of us, as a nation, that we were "a strange people, we English; always calm; ever hurrying on, but hurrying within certain limits; patient even in our enthusiasm; and, as we do not choose to be governed, governing ourselves." These words, redolent as they are of *esprit français*, afford, I think, a not inapt description of our profession in the present day. We are, to a large degree, a self-governed body; and, though we do not pretend that our self-government is faultless, we had rather not be governed. However enthusiastic we may be in the cause of medical reform, we think it better not to hurry beyond all bounds, but patiently to strive to work out those ameliorations which, in the calm judgment of sober Englishmen, may seem to be called for. That we shall ultimately succeed in some form or other in attaining those objects which have of late occupied so much of our time and thought, cannot be doubted. But whatever changes may await us in the future, we confidently trust, for the sake of learning, science, and humanity, that our Royal Colleges of Medicine and Surgery will continue to flourish and long boast of their Harveys and Hunters; the Orator's and the presidential chairs of this College for generations to come be occupied and addressed by Pagets and Hewetts; and its marvellous Museum remain the admiration and glory of the civilised world.

"The Hunterian Orator" was proposed by the Right Hon. W. E. Gladstone, M.P., who said:—Your Royal Highness, Mr. President, my Lords, and Gentlemen: You have done much duty to-night; but I am sure you will all feel with me that there is one duty which as yet remains undone. You could not quit this room with satisfation unless you had first of all paid a tribute of grateful acknowledgment to the distinguished Orator of to-day. He supplies one with a tempting theme; and yet I hope, for reasons I will give, that I need not detain you long. I may legitimately speak of the man, or of the Oration. But as regards Sir James Paget in himself—his qualities, his powers, his character,—I cannot dwell upon them; they are the commonplaces of the profession. Then, as regards his Oration, many of you have shared with me the real delight of hearing it; some have not. For those who were hearers I could only injure the recollection they retain by attempting to describe it; for those who were not, I should labour in vain to convey any just idea of what it was. I will, however, say a word or two as to my own impressions. I listened to Sir James Paget throughout, as I have said, with delight; and I will also say, if I may, with submission. I felt, as he proceeded, like one who follows a conqueror's triumphal car, such was his mastery of the subject, and the genuine power of his discourse. Only once did I hesitate to yield him my assent, and probably through a failure to grasp his meaning aright. It was when he had spoken so forcibly of the reciprocal action between powers of thought and powers of language. It seemed to me he went on to speak of the relation between those powers in each man so as to imply that they were always in proportion to one another; and I thought that if I could beguile him from his high pursuits for an hour or two into a sphere with which I am conversant, I could soon supply him with the proof that the power of thought and the power of language do not always correspond. At least, I know that there are some of us who are supposed or admitted to have, more or less, what is called "the gift of the gab," and yet upon whose thoughts and reasonings critics of every sort and size bestow the most unsparing criticism. But, resuming my proper subject, I personally thank Sir James Paget for the living lesson he conveyed to me—a fuller lesson, given in a single hour, than I was ever fortunate enough to receive within that narrow period. I feel that in that lucid, orderly, searching, comprehensive, and vigorous discourse he made me acquainted with John Hunter in a way in which I never had been, nor had hoped to be. The poet might have said that the shade of the great man hovered about his ancient haunts, and received with satisfaction the glowing tribute that was paid him to-day. But, without the poet's aid, I may also say that in another sense, with a true dramatic power, the Orator raised him from his rest, and made him stand visibly before us in his life, his character, his very gait and figure, the habits and processes of his mind. And so accurately and largely were they given that I felt the whole instruction of to-day, the model of research and study set before us, was one not available for the members alone of his distinguished profession, but as to laws and methods, with a due modification for the variety of subject-matter, was applicable for the guidance of every student in every branch of inquiry. Gentlemen, I beg you to remember that burst of spontaneous enthusiasm which broke out as the last accents of the Orator had been heard, and with somewhat of a kindred feeling to accept the toast I have now the honour to propose to you—the health of Sir James Paget.

Sir James Paget, in reply, expressed his great obligations, saying that he would not attempt to thank Mr. Gladstone for the very flattering way in which he had proposed his health. Speech was silvern, but silence was golden, and he must ask them to accept the latter.

"The President of the Royal College of Surgeons" was proposed by his Royal Highness the Prince of Wales, and responded to in grateful terms by Mr. Hewett.

After the dinner (which was supplied by the Messrs. Willis) the whole of the guests accompanied the President and his Royal Highness to the Museum, which was brilliantly lighted for the occasion, when Professor Flower, F.R.S., the Conservator, explained many of the principal objects of interest to the Prince. A conspicuous place in the fine series of mounted skeletons is occupied by the first tiger which the Prince shot during his recent visit to India, the bones of which he had directed to be preserved and presented to the College. His Royal Highness remained in the Museum to a late hour, inspecting every part of it; and, on leaving, expressed the great pleasure he had derived from his first visit to this magnificent collection, and the hope that he might before long find an opportunity of repeating it.

Amongst those who had the honour of being invited to meet his Royal Highness were—the Dukes of Richmond and Gordon, Manchester, and Sutherland; the Bishop of London; Admiral Lord Gilford; General the Right Hon. Sir William Knollys, K.C.B.; the Right Hon. Sir James Hannen; Major-General Sir Dighton Probyn, K.C.S.I.; Sir Joseph Fayrer, K.C.S.I.; Sir Henry Thring, K.C.B.; Sir Sydney Waterlow, M.P.; Mr. Elmore, R.A.; Mr. F. Leighton, R.A.; Mr. Goldney, M.P.; Mr. W. Wheelhouse, M.P.; Mr. F. Knollys, C.B.; Professor Owen, C.B.; Professor Paget, F.R.S.; Professor Parker, F.R.S.; Professor Tyndall, F.R.S.; Professor Huxley, F.R.S.;

and, of course, nearly all the members of the Council, of the Courts, and Boards of Examiners, and the official staff. About 100 sat down to dinner.

ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

The following are the questions which were set at the recent examination of candidates for her Majesty's Army, Navy, and Indian Medical Services:—

Anatomy and Physiology.—1. Give the origin, course, and distribution of the ophthalmic division of the fifth pair of nerves, and of its branches. 2. Write a full description of the occipital bone: its development, connexions, and articulations; and enumerate the muscles attached to it and their points of attachment; the bloodvessels and nerves with which it is in immediate relation. 3. Describe the course and relations of the right subclavian artery. Name its branches in the order in which they arise; and indicate the point which should be preferred for the application of a ligature, and the reasons for the choice. 4. Describe the minute structure of a lymphatic gland. 5. When a stream of carbonic acid is passed for some time through diluted blood-serum, what is produced, and what are the properties of the product?

Surgery.—1. Describe the pathological changes which occur in the shoulder and hip joints, when affected by what is termed "chronic rheumatic arthritis," and the local and general treatment to be adopted under such conditions. 2. State the symptoms by which hydrocele may be distinguished from hæmatocele; and the treatment to be adopted in each. 3. A man fell over some timber, and injured the right side of his chest (without any external wound). State, first, the symptoms of fracture of the ribs; secondly, the external, general, and physical signs of ruptured lung; thirdly, the conditions which would influence the *physical* signs, though the lung be ruptured. 4. Describe the treatment to be adopted in a case of punctured wound of the palm of the hand, followed by recurrent arterial bleeding. What evil consequences are to be apprehended after such a wound? 5. What are the constitutional and local conditions which may arrest or prevent union of a long bone after fracture? Describe the treatment to be adopted under these circumstances. 6. Describe the most probable causes of retention of urine—first, in childhood; secondly, in old age; and the treatment under the respective conditions.

Medicine.—1. With what diseases is scurvy classified in the Nomenclature of Diseases of the Royal College of Physicians of London? Describe fully (1) the pathology of true scorbutus, including the symptoms of the disease, the circumstances under which it is developed, and its constant cause; (2) the possible coincident complications; (3) the preventive and the curative treatment. 2. What is meant by the terms pyrexia and hyperpyrexia? Mention the phenomena characteristic of the febrile process, which show that fever exists. How is the temperature of the human body best determined for clinical purposes? 3. What is meant by the terms "gravel" and "fit of the gravel"? What are the symptoms of irritation from gravel, and the treatment of the condition? 4. What are the causes, symptoms, and treatment of ascites? 5. What are the causes (primary and secondary) of hæmorrhage during or shortly after the third stage of labour? How ought cases of labour to be treated so as (1) to prevent and (2) to arrest such hæmorrhage? 6. What are the physiological properties and medicinal uses of (1) gallic acid and (2) hydrocyanic acid? What are the preparations of each as named in the British Pharmacopœia of 1867? What are the doses of each? With what substances, and in what forms, are these medicines best prescribed for internal use? What are the antidotes to poisoning with hydrocyanic acid?

Natural History and Physics.—Zoology: 1. Give an account of the organs of respiration in the different classes of animals. 2. What is the structure of the teeth in rodents, ruminants, and carnivors, and what relation does it bear to the food of each? 3. Give the characters of the common leech. 4. What are the chief modifications of the mouth of insects? 5. Give a general account of the Darwinian theory of development.—Botany: 6. Give an account of the embryogeny of *Conifers*. 7. Describe the structure of a seed, and explain the terms orthotropous, anatropous, campylotropous, hilum foramen, raphe. 8. Give the characters of the order *Ranunculaceæ*, and describe the chief modifications of the floral organs and carpels in the British genera. 9. What drugs are yielded by the order *Umbelliferæ*? State in each case their properties and the part of the plant from which they are obtained. 10. Describe the structure, development, and reproduction of mosses.—Physics, etc.: 11. Give a sketch of the present state of our knowledge of spectroscopic chemistry. 12. Describe the structure of the barometer, and explain the diminution of pressure as we ascend in the atmosphere. 13. What are the properties of iron? In what states is it found in nature? In what geological formations do its ores chiefly occur? How is the metal extracted from the ore? 14. Explain the terms axis, pole, equator, equinox, latitude, longitude. What is the position of the two tropics and of the arctic and antarctic circles? Why is the season of summer in the N. hemisphere different from that of the S.? 15. Give an account of the present state of our knowledge of the depth of the ocean and the inequalities of its bottom.

FROM ABROAD.

Excision of the Elbow.

In the *Boston Medical and Surgical Journal* for January 4, Dr. Beach contributes a paper exhibiting the results of excision of the elbow in a series of twenty-one cases which have occurred in the practice of Dr. Hodges at the Massachusetts General Hospital during a period of ten years, the object of the paper being to show—

"The ultimate and excellent results of the operation when recovery takes place, and the advantages of a single straight incision in its performance. This method, largely avoiding the cross-cutting of any tissues, allows the connexion of the triceps extensor tendon with the investing aponeurosis of the arm and forearm to be preserved almost intact. An attachment for the muscle is thus retained, which diminishes, to a certain extent, the loss of power following its unavoidable separation from the olecranon. Transverse incision of the integuments, even though the above connexion is maintained, is in itself prejudicial to the subsequent motion of the limb if the wound does not unite by the first intention, but cicatrises by granulation, as it almost invariably does. Another cardinal point in this operation is the preservation of the attachment of the brachialis anticus muscle. It is commonly stated that this muscle is inserted into the coronoid process. No method of demonstration better displays the absolute fact in regard to this anatomical point than excision of the elbow on the dead subject, which, without dissection, makes plain that the attachment is into the shaft of the ulna and *base* of the coronoid process, abundant room being left between the process and the tendon for the passage of the saw (which should always be started on this side of the bone), and the removal of this portion of the ulna. Experience shows that the extent of fracture permitting an attempt to save the limb by excision seldom reaches a degree which prevents the carrying out of these rules; and it rarely happens that so much of the radius requires removal as to cause any interference with the insertion of the triceps. The great muscles of extension and flexion are thus left in a comparatively undisturbed condition. The amount of bone excised decides to some extent the subsequent mobility. Excision of the articulating surfaces alone would probably be followed in most cases by an anchylosis. Regret might sometimes be felt at not having excised enough, but seldom at having removed too much. The sacrifice should always be at the expense of the humerus, since the limit for the radius and ulna is fixed, as has been stated, by the necessity of preserving the brachialis anticus and biceps muscles. This method of operating was taught, as Dr. Hodges informs me, twenty-six years ago by Alphonse Guérin, in his private courses at Clamart. A straight incision was proposed and practised by Park on the dead subject in 1782, and is that followed in what is known as Langenbeck's operation. A claim of originality for the procedure, by which 'the aponeurotic structures passing from the arm to the forearm' are preserved, has been made by Mr. Maunder, of London, so recently as 1873. The earliest operation of the present series was in 1866. The details above alluded to were observed then and in subsequent cases, except when modified by existing wounds. In all its steps the method has been taught in the operative courses at

the Harvard Medical School since 1855. Dr. H.T. Bigelow's plan for excising the elbow-joint has been suggested (*Boston Medical and Surgical Journal*, March 30, 1876) since these cases were operated on. The incision is similar to that described; but, in removing the articular surfaces, he preserves the internal and external condyles of the humerus. This secures additional chances of good supination, pronation, flexion, and extension, by saving the attachments of muscles having their origin at the condyles."

Of the twenty-one complete excisions reported, fourteen were performed on account of injury; and in nine of these the results were highly successful, the condition of the patients being reported on at various remote periods after the operation, varying from two to ten years (except in one instance, of nine months after). In five there was a fatal termination; in two of these this could only be expected from the nature of the accidents. In one case from tetanus, and in two from septicæmia, the deaths may be attributed rather to the injury than to the operation; and in none of these fatal cases was there reason to suppose that amputation or expectation would have been attended by more favourable results. In four cases the excision was performed for disease of the joint; and in all favourably reported upon, six years, five years, one year, and eight months after the operation. Three cases were operated upon for anchylosis, one with complete, and another with incomplete success; while the third died from unperceived secondary hæmorrhage from the wound on the fourth day after the operation.

"The treatment pursued in these excisions can be briefly stated. The wound was invariably closed with sutures. The arm was laid on a pillow, flexed at an angle of 135°, that being the most comfortable for the patient. Local inflammation, abscess, pain, etc., were met by active measures based on general surgical principles. A generous diet was always allowed and encouraged. When the arm was in a state to permit of bandaging, an internal angular splint of tin, broader than usually adopted for fracture, and fitted as regards length to each individual case, was applied, and the patient allowed to get up and walk about, the wound being dressed without removal of the splint. The time spent in the hospital was not great, one patient remaining seventeen weeks, and the others an average of about nine weeks. When discharged, the splint was usually dispensed with, and a sling substituted. Passive motion was rarely practised beyond that which came from such use of the limb as the patient could be persuaded to make; and a useful arm was seldom obtained before the end of a year from the time of the excision.

"In twenty-one cases where amputation must otherwise have been performed, the report exhibits fifteen arms preserved, several of them being useful to a remarkable degree, and all of them, except one, retaining motion of the elbow, forearm, hand, and fingers. These excellent results suggest the inquiry whether the operation is not deserving of a broader application. A successful excision always leaves an arm more serviceable than one in which anchylosis has taken place after a bad fracture unaccompanied by a wound. Prof. Busch, of Bonn, has twice excised with success the entire joint for irreducible dislocation of the head of the radius, both pronation and supination being regained. A measure which of itself, in civil practice, so seldom causes a fatal result would seem more than merely justifiable in this seemingly trivial but thoroughly disabling accident, in which reduction is often impossible, or, if possible, so rare to maintain. Excision of the elbow was first performed in the United States in 1834, by Dr. John Warren, at the Massachusetts Hospital, and although now very generally practised in certain classes of injury and disease, it may still be doubted whether the full range of usefulness has been reached which belongs to this invaluable operation."

Epidemic of Mumps.

Surgeon-Major Laurens furnishes (*Recueil de Mémoires de Médecine Militaire*, December) a note on one of the epidemics of mumps which appear so frequently in the French army. This one occurred in the 83rd Regiment of the line, stationed at Albi, and prevailed from December, 1875, to April, 1876, during which period 118 men were attacked. No cause whatever could be assigned; for although the temperature was exceptionally low and the moisture excessive, yet the same conditions have existed on former occasions without a single case of mumps having been observed. With the exception of this epidemic the health of the regiment has been excellent. There was nothing peculiar in the course of the disease, the parotidean swelling disappearing sometimes slowly, and at others rapidly, a return to a state of health in five or six days being the usual rule. Still, as many as 32 out of the 118 patients were affected with metastasis of the testicle. Of these 32 orchites, 26 were single, 17 occupying the left side, and 9 the right side, and 6 were double. Examined two months after the cessation of the epidemic, it was found that in 16 out of the 32 cases there was more or less atrophy of the testicles, this amounting to three-fourths of the volume of the healthy testis in 2, to one-half in 7, and to one-fourth in 7. In 9 of these cases there was also more or less diminution of virile fever and venereal desire. In these 16 cases the tissue of the testis was manifestly softer than in the normal state. All the subjects of this metastatic orchitis, whether there was consecutive atrophy or not, complained of an abnormal sensibility of the affected testis, and declared that they suffered more or less severe pains in the organ as a consequence of fatigue or a simple change of weather. When these 16 men were examined again, six months after the epidemic, no appreciable progress of the atrophy could be perceived. Yet when the men were questioned themselves, they almost all affirmed that their testicles were becoming gradually smaller. It follows from these observations, which are indeed in agreement with those made by other army medical officers, that mumps, which is an affection so benign in appearance, may be followed by serious consequences.

Paralysis of the Ulnar Nerve.

M. Panas, of the Lariboisière Hospital, and a candidate for the vacant place in the Section for Surgery in the Academy of Medicine, read a paper before that body (*Gaz. des Hôp.*, Feb. 15) "On a Little-known Cause of Paralysis of the Ulnar Nerve." He believes that the observations which he brings forward which refer to compression of the ulnar nerve are entirely new, and they relate to an important subject in pathological anatomy—viz., paralytic neuritis of local origin. He furnishes a brief summary of the four cases that have occurred in his practice:—

1. A man, aged nineteen, entered the hospital on account of a progressive paralysis of the ulnar nerve, owing to compression and a changed condition of its nutrition induced by a sesamoid bone, the size of a kidney-bean, developed within the substance of the internal lateral ligament of the elbow-joint. The bone, by increasing in size, had rendered the portion of the ulnar nerve in its vicinity large, indurated, and painful, and had thus induced paralysis of the muscles situated below. On the sesamoid—which was mistaken for an exostosis, so intimate did it seem—being removed, suppuration of the joint and death ensued. At the autopsy there was found a neuromatous swelling of the nerve at this point, there being present a chronic neuritis, characterised by proliferation of the conjunctive tissue, with hyperæmia, the strongly compressed nervous tubules having undergone a notable diminution in size. 2. The lesion of the nerve was the same as in the preceding case, but the cause of the paralysis was referable to a fracture of the elbow dating back twelve years. Consequent upon the formation of a large callus, the groove between the trochlea and olecranon became filled up, placing the nerve in a more superficial position, so that it was exposed to the action of external violence. A hyperplasic neuritis was established, the nerve becoming knotty at this point, and a slowly increasing but progressive paralysis ensued. In this man, forty years of age, and of robust constitution, the paralysis and muscular atrophy had reached a very high degree; but, in spite of this, electrisation effected a complete cure of the paralysis. 3. This was also a case of progressive and very considerable paralysis of the ulnar, consequent on a chronic neuritis, the trunk of the nerve feeling knotty below the elbow. The cause of these accidents was compression, with violent friction of the nerve continued for some hours while the man was rowing a boat caught in a tempest. The paralysis commenced a month afterwards, and when the patient was seen it had lasted two years, the limb appearing fleshless. Six months of electrisation and cold douches entirely restored the use of the limb. 4. This was an example of incomplete paralysis produced by an increase of the volume of the trochlea and the filling up of the groove which the nerve traverses. The cause of this deformity was dry arthritis of the elbow-joint.

As the general result of these observations, it is seen that the ulnar nerve under the influence of various causes is placed in a too superficial position, and thus exposed to external injuries. It thus becomes the subject of chronic inflamma-

tion resembling neuroma, and paralysis of all the muscles of the forearm and hand may be the result. Electricity is the means *par excellence* by which this form of paralytic neuritis should be treated; and, under its influence, not only will the paralysed muscles return to their normal condition, but the swelling and induration of the nerve may also diminish. When a cure has been thus effected, we should endeavour to prevent a return of the affection by protecting the too superficial nerve by a metallic shield.

REVIEWS.

Lectures on Orthopædic Surgery and Diseases of the Joints, delivered at Bellevue Hospital Medical College during the Winter Session 1874-75. By Lewis A. Sayre, M.D., Professor of Orthopædic Surgery, Fractures and Dislocations, and Clinical Surgery in Bellevue Hospital Medical College; Surgeon to Bellevue Hospital; Consulting Surgeon to Charity Hospital, etc., etc. Illustrated by 274 wood-engravings. London: J. and A. Churchill, New Burlington-street. 1876. Pp. 476.

A work on diseases and deformities of the joints by Professor Sayre was sure to attract the notice and consideration of the profession. It is well known in this country, as well as in America, that he has for many years devoted a great deal of attention to joint affections, and his splints for the hip, knee, and ankle have been pretty extensively tried by London surgeons—a great many of whom have become personally known to the Professor since his visit to this country some six years ago. No one who is acquainted with the author will be surprised to learn that these lectures show abundant evidence of quick and careful observation and shrewd common sense. They are, too, eminently practical, and Dr. Sayre loses no opportunity of stating that, in his opinion, clinical cases and the lessons they teach are of more value than the lecturer's theories. Consequently, we find, on reading through the lectures, that the rules for practice therein laid down are abundantly illustrated by the reports of cases, while little or no space is given to what Dr. Sayre calls "unproductive speculation and hypothesis." The book is, in fact, a very practical treatise on a subject in which the author has had large experience and is thoroughly at home. It must not, however, be supposed that it is nothing but a *résumé* of cases, and no one, however well informed in this branch of surgery, will be able to take it up without finding in it much which is instructive, as well as many suggestive hints for thought.

The work consists of twenty-nine lectures. The first gives a history of "orthopedy," a word which the author employs, as Andry did, to embrace "the study of all deformities of the human frame." The second chapter is also introductory, being devoted to the definitions and divisions of the various kinds of deformities. It should not be lightly passed over by either the teacher or the student, as it gives a very good bird's-eye view of this by no means diminutive field of surgery. Next follow four chapters on the etiology and treatment of deformities as a whole; then six chapters on special kinds of deformities, and as those of the foot are more numerous than of any other part of the body, the various forms of talipes of course occupy the greater part of them. Diseases of joints occupy the succeeding twelve chapters, while diseases of the spine and deformities of the spine are severally dealt with in separate chapters. Two lectures are given up to anchylosis; and the last is devoted to various deformities not described in any of the previous lectures, such as facial paralysis, torticollis, and drop-wrist.

Passing now from this general survey of the book to the consideration of some of its details, we are first arrested at Chapter III. by the important statement that the reflex muscular contractions caused by "congenital phimosis and adherent prepuce" are sometimes the cause of acquired deformity, especially in children. The first step in the process is continued local excitement, next some partial paralysis, ending after a time in deformity. The author says it has fallen to his lot to see several such cases, and he gives the history of three—in one the extensor muscles of the thigh were paralysed, and the knees bent to about half a right angle; in another there was double paralytic talipes equino-varus; and in the third prolapsus of the rectum was associated with partial paralysis of both lower extremities. All three patients completely recovered after circumcision had been performed. This observation is a valuable one, for we must admit the truth of Professor Sayre's remark that as a cause of such deformities these abnormal conditions of the prepuce have been very generally overlooked by the profession.

In answer to the question, How are we to determine in any given case whether tenotomy should be performed?—it is laid down as a law having universal application that if, after the contracted structures have been gradually made tense, and when the deformed part is held as nearly as possible in its normal position, pressure made with the finger-tip produces *reflex contractions*, the tendon, fascia, or muscle must be divided at the point at which the pressure excites the spasm; whereas, on the other hand, if the "point-pressure does *not* produce reflex contractions, the deformity can be permanently overcome by means of constant elastic tension, and the more you cut the greater will be the amount of damage done." Upon this law the author lays great stress, repeating it once or twice, and he goes on to enforce it by saying "even when the parts can be completely restored to their normal position, by means of manual force gradually applied, if this additional point-pressure produces pain or spasm the contractured tissue must be cut before a complete cure can be effected."

Another important practical question upon which Dr. Sayre is no less explicit is as to whether the parts, after section of the contractured tissues, should be restored to their normal position at once, or not until after a few hours or days. At the present time his practice is to restore to the natural position at once when the operation has been done for deformities dependent upon abnormal muscular action alone, whether paralytic or spastic; but in cases of acquired deformity due to previous joint disease which has terminated in fibrous anchylosis, he waits until the external wound is healed before attempting to rectify the anchylosis.

All the various modes of treatment of talipes without operation are fully discussed, and the principles upon which each is adopted are pointed out. His remarks on mechanical appliances will meet with the approval of all sensible surgeons: elaborate and complicated instruments are condemned; and simplicity, facility of application, and lightness are shown to be the requisites of a good apparatus. The apparatus should in the first place be adapted to the deformity, and not the deformity to the instrument, as is too frequently attempted; and it should as far as possible permit, especially in paralytic cases, of the natural motion of the parts involved in the deformity.

Of elastic tension in orthopædic practice Professor Sayre speaks in terms of unqualified praise. Extension of a contracted muscle by the *constant* application of an elastic force, moderately but persistently applied, will, in the majority of instances, accomplish the object in view fully as efficiently as tenotomy if the muscles have not become *contractured*, while it is infinitely better for the future usefulness of the limb. It should be stated that by the term "contractured" the author implies a condition of change of structure as well as of contraction. The rules to be observed in the application of elastic extension, and the diagnostic differences between the cases where it, on the one hand, and the knife on the other, are suitable, are stated in the lectures on special deformities.

We are glad to find the author maintaining against his countryman, and so great a surgical authority as Professor S. D. Gross, the opinion that there is no lateral motion at the ankle-joint. This, we are quite sure, is an anatomical fact, and one we have satisfied ourselves upon repeatedly in the normal joint; but we do not find that Professor Sayre has proved that there is the same limitation of movements in the ankle-joints of persons deformed by talipes, or that he has disproved what was long ago asserted in this country—that in talipes varus at least, both in the infant and in the adult, there is considerable alteration in the articular surfaces of the astragalus. This is, however, a point of some importance with regard to Prof. Sayre's deductions as to treatment. The author insists, and no doubt rightly, upon the necessity of paying greater attention to the medio-tarsal joint in the mechanical management of talipes than has hitherto been done. At this joint a great variety of movements (to a limited extent) take place, such as adduction, abduction, and rotation, as well as flexion and extension; and it follows necessarily that if simple flexion and extension are the only possible movements at the astragalo-tibial articulation, the only kinds of talipes that can concern it are those in which the heel is raised or dropped—*i.e.*, equinus and calcaneus. But the examination of cases of so-called equinus will satisfy anyone that in them (except when due to injury to the muscles of the calf) the

heel is scarcely, if at all, altered, and that the condition is due to a dropping forward of the foot at the medio-tarsal joint. In varus and valgus the seat of the deformity is the same, so that the only variety of talipes which ordinarily has its seat at the ankle is calcaneus, dependent upon paralysis of the soleus and gastrocnemius. Now, in the treatment of deformities, the author considers that the natural movements ought to be stimulated and strengthened, and any apparatus which places the part in a rigidly fixed position is, he thinks, to be condemned. In the case of talipes he argues that, as the distortion involves the medio-tarsal joint, no mechanical treatment by shoes should be employed unless there is a joint in the sole of the shoe opposite to this joint in the foot. None of the shoes ordinarily made allow of the varied natural movements of the foot being imitated, and it is by his invention of one having a ball-and-socket joint which does, that Dr. Sayre has made a great improvement in the treatment of these deformities. Excellent illustrations of this shoe are given at pages 89 and 91 of his book.

Diseases of the tarso-metatarsal, ankle, knee, and hip joints are described systematically and clearly, if not fully. The joint-structure in which the disease most frequently commences is, Dr. Sayre believes, in the articular lamella of bone immediately beneath the articular cartilage. A blow or fall or sprain produces an extravasation of blood into the bone-cells beneath the articular cartilages, and a condition analogous to a "blood blister" in the soft parts results. As no swelling is to be seen, and perhaps little or no pain is at first felt, the case is neglected until the slight injury developes itself into a serious disease, ending in necrosis, and perhaps absolute destruction of all the tissues of the articulation. Such being his view of the origin and seat of the mischief, he is quite consistent in his treatment by apparatus, for the principle of all his splints is to keep the articular surfaces apart by extension. His object is to obtain permanent extension of the joint diseased without a damaging amount of confinement, or, in other words, extension in such a manner as to permit motion, and thereby to obviate the evil consequence of fixed extension—viz., anchylosis. We are not quite prepared to go the length that Dr. Sayre does in the advocacy of *extension without fixation*, being disposed in some cases to prefer a treatment the very opposite, and one whereby we have obtained good results—viz., fixation without extension.

In the way of mechanical contrivances Professor Sayre is very ingenious; and many useful hints in bandaging and strapping may be gleaned from his pages.

A very instructive chapter is devoted to the diseases and injuries which may be mistaken for hip disease. According to the author they are numerous; but we think he includes some which only the very careless or the very uninitiated are likely to mistake for it. However, as both these classes of individuals exist, he has set himself to impress upon them the points they ought to attend to in diagnosis.

Hitherto we have spoken only in praise of the work; but now we must point out what we deem to be some of its defects. Exception may be occasionally taken to the writer's diction; his style is sometimes aggressively egotistic; and he is not always quite fair, we think, towards other workers in his own field. In illustration of the first point we will give three instances. In describing the treatment of corns he remarks that after paring and rubbing on nitrate of silver "the corn is ready to 'collar' with adhesive plaster. This is done most conveniently by taking narrow strips and building a 'cob-house' around the corn." Again, in describing the symptoms of sacro-iliac disease, he says that "crowding" upon the great trochanter causes pain. We think by this word "pressure" is meant; but we do not vouch for the correctness of our interpretation. Lastly, when speaking of dislocations of the tendons behind the ankle, he says, "Where such an accident happens the patient can no longer stand, and will shut up suddenly like a jack-knife." No doubt such term are idiomatic, possibly they are expressive when understood; but they are not refined.

The following quotation will serve without comment to illustrate the second defect in taste to which we have alluded. Speaking of the advantages of rest in the treatment of joint disease—a doctrine in which, as we supposed, most of the present race of surgeons had been brought up—Professor Sayre says, "The local treatment which has grown into favour during *the past few years, but which I have advocated earnestly for the past twenty-five years. . . .*' The italics are ours, the self-assertion the Professor's.

Want of fairness to others, we think, is shown in the omission of the names and the labours of others. Whilst the credit of a ball-and-socket-jointed shoe for talipes and of the insistance on the medio-tarsal joint as being the great seat of the deformity belongs to Dr. Sayre, the latter idea is not altogether so new as the author would lead his readers to suppose. Certainly Mr. Adams expressed the same opinion years ago. In teaching that morbus coxarius is most frequently traumatic, and not strumous, in origin, he must, we think, be aware that this has been for years the view held by many English authorities, and that nearly seventeen years ago Mr. Hilton, in his lectures at the College of Surgeons, said, "I believe that the diseases of joints are almost invariably the result of local injury, and that if they were recognised early and treated by appropriate rest, nearly all of them would get well."(a) Again, the criticisms on the opinions which have been held respecting the changes of symptoms during the course of hip-joint disease are somewhat laboured and unnecessary. It is not implied, we think, by all the authors quoted that the "*luxation consecutif*" of the French, and the "luxation from an internal cause" of the old surgeons, is a "real luxation," such as follows injury. John Bell, who it must be admitted thought and taught much that is erroneous about the joints, writing in 1815 on the changes which take place in the transit from what Professor Sayre would call the second to the third stage of the disease, is careful to say, "The matter which had distended the capsule is evacuated, and the swelling of the parts within the acetabulum, which had in some degree extruded the head of the bone from its socket, subsides, the head of the bone falls down again within its acetabulum, and the limb, remarkably elongated at first, is shortened in the second or suppurative stage of the disease."

In conclusion, we will refer to one or two deficiencies which have struck us. There is too little said, we think, about the morbid anatomy of the parts in talipes. We should like to see the author's opinions more fully stated, and his observations on this subject described more in detail. It is not obvious why there is no description at all of synovitis of the ankle, as there is of the knee- and hip-joints. A simple inflammation of the synovial membrane of the ankle does occasionally occur, and produces symptoms as characteristic and distinct as when happening to either of the other joints. The author is very careful to impress upon his hearers that, though disease of the joints commences in one structure, it soon involves all the others. This, of course, is in a sense undeniable; but the statement is hardly sufficiently guarded or qualified, for doubtless he would admit that inflammation of the synovial membrane or of the ligaments alone may be very severe without the other tissues being at all affected. Then we should like to see the question of the origin of hip disease in the ligamentum teres a little more fully considered. Professor Sayre seems to have read Mr. Key's original paper on this subject, although he does not allude to it. He makes no reference to more recent observations, nor does he add to our present stock of arguments or facts for or against the ligament being the primary seat of disease. We are sorry to see that the author has fallen into the common error with regard to the ilio-femoral band of the capsule of the hip, by speaking of it as one of the five "proper" ligaments, and spelling it ileo-femoral. Nor can we agree with Professor Sayre in the statement that flat-foot is due to overstrain of the "tibialis anticus muscle, which supports the arch of the foot," as neither the transverse nor the long arch is materially sustained by this muscle. These are, however, but shortcomings in an otherwise excellent book, and may all be readily corrected in a second edition.

Hip-joint Disease at the Sea-Bathing Hospital at Berck.—This Hospital has proved of eminent utility to the sick indigent children sent to it by the Paris Assistance Publique. It seems to have been especially useful in hip-joint disease when advanced to suppuration. Eighty such children have been treated by immobilisation of the diseased joint by apparatus which permits of the children being bathed; and by allowing them to be on the shore, and to have frequent baths within the walls of the establishment. Of the eighty, forty are returned as cured, six as ameliorated, twenty-four as continuing stationary, and ten as dead. MM. Cazin and Perrochaud, the physicians of the Hospital, believe that the adoption of this mode of treatment will, in the majority of cases, prevent the necessity of practising excision.—*Journ. de Thérap.*, February.

(a) "Rest and Pain," p. 297. Edition 1863.

GENERAL CORRESPONDENCE.

CARBONATE OF LIME IN DRINKING-WATER. THE TAUNUS WATER.

Letter from Mr. J. A. Wanklyn.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am glad to see Mr. Ledeboer's letter in your impression of last week, because, although that gentleman's letter makes but a very trifling contribution to our knowledge on the subject, still it sets forth certain statements which will, if discussed, no doubt conduce to a better knowledge of the subject. Mr. Ledeboer, as the manager of the Taunus Company, seems to rely for his scientific opinion as to the probable effects of a water such as the Taunus (which contains 100 grains of carbonate of lime in the gallon) upon the statement of the *Vienna Medical Press*, that hard waters are, as a beverage, more wholesome than soft waters, and that the water of the Taunus Brunnen may be classed as "a hard water," and therefore be recommended as a wholesome beverage.

Now, hard water is, in my opinion, as in that of the *Vienna Medical Press*, wholesome water. But then we come to the definition of hard water; and here I would refer to one of the best English authorities—the late Dr. Parkes—as to what can be properly described as a wholesome hard drinking-water.

Dr. Parkes, in his well-known and valuable treatise "On Hygiene," says on page 21 that the carbonate of lime should not exceed fourteen grains per gallon; and again at page 23, under the head of "Chalk-Waters," he gives seven to twenty grains per gallon of carbonate of lime as the typical hard water, adding, "this is hard, but softens gradually by boiling." Again, speaking of the affections of the alimentary mucous membrane due to mineral impurities of water, he says, under the head of "Affections of the Stomach, Dyspepsia,"—"Dr. Sutherland found the hard water of the red sandstone rocks, which was formerly much used in Liverpool, to have a decided effect in producing constipation, lessening the secretions, and causing visceral obstruction; and in Glasgow, substitution of soft for hard water lessened, according to Dr. Leech, the prevalence of dyspeptic complaints. It is a well-known fact that grooms object to give hard water to their horses, on the ground that it makes the coat staring and rough—a result which has been attributed to some derangement of the organs of digestion. The exact amount which produces these symptoms has not been determined; but water containing more than eight grains of each substance, individually or collectively, appears to be injurious to many persons. This corresponds to about ten degrees of permanent hardness. A much less degree than this would affect some persons."

It will be observed here that there is only a question of hardness ranging between seven to twenty grains of carbonate of lime per gallon. A water containing (as the Taunus water does) 100 grains of carbonate of lime per gallon has never, so far as I know, been considered by anyone as a possible drink for human beings. Certainly, if in my own practice a water should be submitted to me containing anything like this amount of carbonate of lime, I should unhesitatingly pronounce it totally unfit for use as a drinking-water.

As to the evidence which Mr. Ledeboer alleges, that Taunus water has been drunk by a good many persons without their recognising any particular harm as accruing to themselves, I shall simply observe (again quoting Dr. Parkes, when speaking of the allegation that waters of one-fourth or one-fifth of this degree of hardness have sometimes been said to produce no bad effects):—"In some of these cases, however, very little careful inquiry has been made into the state of health of those using the water; and that most fallacious of all evidence, a general impression, without a careful calculation of facts, has often been the only ground on which the opinion has been come to." The results of drinking an improper table-water, as Dr. Parkes observes, are indeed often gradual, and not such as strike an ordinary observer, and yet they are not the less real and appreciable by close inquiry.

When my attention was directed to this subject by observing that the analysis of the Taunus water revealed the presence of so enormous a quantity of carbonate of lime, I pointed out, in my paper read to the British Association, that the use of such a water could not fail to be followed by pathological symptoms, and that physicians whose patients used such a table-water would have unprecedented opportunities of observing the effects of an excessive quantity of lime in their daily drink. Referring to Braun, I find that, in his standard work on the "Curative Effects of Baths and Waters," recently translated and edited by Dr. H. Weber, F.R.C.P., Dr. Braun, whilst rejecting medicinal mineral waters containing even a smaller proportion of lime than this as being useless for the medical purposes for which they are sometimes recommended (namely, the treatment of rickets), adds that "carbonate of lime is most difficult of absorption; it easily clings to the mucous membrane and disturbs its secretion, and hence it easily overloads the stomach and intestines as a precipitated powder."

In the presence of these accumulated facts, I think Mr. Ledeboer will find it very difficult to maintain the position that the Taunus water is one which can be drunk, except with considerable caution, and only upon the special prescription of such physicians (if any there be) who still think that a water heavily charged with carbonate of lime may sometimes be useful in the treatment of rickets.

I am, &c.,

February 13. J. Alfred Wanklyn.

DISLOCATIONS OF THE THIGH.

Letter from Mr. Henry Morris.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you give me an opportunity of stating in your columns, with reference to Mr. Willett's remarks upon my paper which was read before the Royal Medical and Chirurgical Society on the 13th inst., that—1. Professor Busch's views, referred to by Mr. Willett as being similar to mine, are almost exactly opposed to them. 2. The surgeon to whose opinions and experiments Mr. Willett must have alluded is Professor Fabri, from whom, in a short article in the *British Medical Journal* of January 11, 1868, Mr. Holmes Coote states that he learnt the views which he (Mr. Coote) afterwards taught at St. Bartholomew's Hospital. I have never seen Professor Fabri's paper, which has not been translated into English from the Italian; but, from what I can gather, his mode of experimenting was not the same as my own, although his results and conclusions were similar. 3. So far from these views having been "generally accepted," even at St. Bartholomew's, one at least of the present surgeons of that Hospital has distinctly opposed them. 4. The teaching of the last edition of Holmes's "System of Surgery" is the same as that of Professor Busch, to whose writing reference is made; while the directions therein given for the reduction by manipulation are insufficient for the purpose. 5. With the exception of Professor Fabri and Mr. Holmes Coote, no writer, so far as I at present know, has taught what my paper is intended to prove—that dorsal dislocations, when unaccompanied by fracture, are always secondary; and that all simple dislocations of the thigh at the hip are primarily downwards, *i.e.*, into the thyroid foramen. 6. Opinions up to the present time have varied widely as to the principle upon which the reduction by manipulation is carried out; so much so that Hamilton, one of the chief authorities of the day, after enumerating some of the dangers of manipulation, owing to the great power which may be brought to bear upon the parts by it, says, "It is not certain in our mind but that, when the principles which control the reduction are more completely understood, these evils may be lessened; yet we can scarcely persuade ourselves that by any future observations the state of the question will ever be greatly changed."

I am, &c.,

2, Mansfield-street, W. Henry Morris.

Académie de Médecine.—At its last meeting the Academy elected M. Luys into the Section of Pathological Anatomy by the votes of fifty-four of the seventy-seven Academicians who were present.

Treatment of Chaps of the Nipple.—Dr. Charrior recommends the employment of perfectly pure picric acid in the following formulas:—*a*. One and a half parts to 100 parts of distilled water; *b*. one part to the 100 parts. After thoroughly cleansing the nipple with tepid water, the solution *a* is to be applied every morning with a pencil to the cracks; and immediately after suckling the nipple is to be held for four minutes in a glass containing the solution *b*. The infants do not notice the bitterness of the medicine, and willingly take the breast.—*Journ. de Thérap.*, February.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, JANUARY 24.

Mr. S. CARTWRIGHT, F.R.C.S., President, in the Chair.

MR. T. EDGELOW described a case of maxillary disease, presenting remarkable if not unique features, which had recently come under his care. A circumscribed swelling occurred in connexion with the right superior maxillary bone. It was situated on its outer side, and was connected with a sinus opening by the side of the second bicuspid tooth. This fistula was about an inch in depth, healthy pus escaping from it on pressure. At its extremity a hard substance could be distinctly felt. The patient was sixteen years of age, and all the permanent teeth being present with the exception of the wisdom tooth, it was supposed to be an impacted supernumerary tooth; but, on cutting down upon it, it proved to be the second temporary molar which not only showed that it had been decayed, but was actually stopped with an amalgam filling, proving that it had not only descended with the other temporary teeth, but that it had subsequently been driven beyond the range of the permanent teeth, giving no more trouble beyond the disfigurement occasioned by the and a slight discharge which had lasted five years.

Mr. SALTER said that in the only case of dentigerous cyst yet recorded (and that was by Mr. Salter), in which a temporary tooth was the dental element concerned, the tooth was also a second upper molar. However, Mr. Edgelow's case was not really a cyst of this character. He considered that the tooth, having once been in normal position, had seceded or been forced into the locality it afterwards occupied. The apparent cyst might have been the sac of an alveolar abscess associated with this tooth. As regarded Mr. Edgelow's second case, Mr. Salter said he had seen such a condition repeatedly, in which the second temporary molar tooth was pushed back into the substance of the jaw by the conveyance and continued approximation of the crowns of the first bicuspid and first permanent molar. Mr. Salter remarked that he had never seen the like effect produced upon any other temporary tooth than the second molar.

The PRESIDENT asked whether a bicuspid tooth had not been unnecessarily sacrificed in the operation. He thought that the tooth could have been removed without the extraction of this said tooth.

Mr. COLEMAN thought Mr. Edgelow's very interesting and unique case could be best explained by regarding the second temporary molar as placed in a double inclined place, viz., between the advancing crowns of the first bicuspid and first molar, which, in their progress, pressed or squeezed it up into the alveolus, as teeth are sometimes so pressed up under very undue pressure.

Mr. HAMILTON CARTWRIGHT said that if Mr. Edgelow was correct in his assumption that this temporary tooth was encapsuled with an osseous envelope, he thought that the case might be explained by the process of maxillary development. On the eruption of the second teeth, absorption would take place, and this tooth would have been wedged up by the action of the descending second bicuspid and first molar. Eruption completed deposition of bone would be so active that it might have encased this foreign body like a sequestrum in necrosis. The process ceasing, the tooth acted as an irritant, and set up reabsorption, chronic mischief, and discharge. Mr. H. Cartwright then showed, as an antithesis to the preceding case, a patient the subject of caries of the right superior maxillary bone, in exemplification of the irritation sometimes set up by a slight cause. The patient came to him with a tumour of the periosteum covering a large portion of the palate; this being in connexion with two sinuses, one of which was at least an inch in depth, running parallel with the floor of the nares. Laying these open, he found the bone extensively diseased, and, on removing it with a gouge, he came upon the apex of a bicuspid root, not much larger than a hempseed, from whence the mischief had evidently primarily proceeded. The wound was now healing from the bottom, and all discharge had ceased.

Mr. NATHANIEL STEVENSON exhibited some plaster casts showing the result of his treatment of a case of hypertrophy of the intermaxillary bone. The patient, being a lady of much personal attraction, was anxious to have the deformity removed, the protrusion of the tumour preventing her lips from completely closing; whilst the absence of the lateral, and the wide separation of the central incisors, and a mass of indurated gum exuding between them and embedding the canines on either side, added much to the unsightliness of the defect. Seeing that no mechanical contrivance could be of avail without operative interference, the incisors were extracted, and the indurated gum being removed and the soft tissues dissected away, the hypertrophied bone was excised under the influence of nitrous oxide gas and ether. The wound soon healed, and he then supplied the vacancy by a suction plate in the way shown in the accompanying model.

The PRESIDENT congratulated Mr. Stevenson upon the success of his treatment, the adoption of which was much approved by other speakers—Mr. Coleman, Mr. Edgelow, Mr. Parkinson, Mr. Lyons, etc.

Mr. H. COLEMAN then showed an invention designed by Dr. Orphoot for keeping the mouth dry during dental operations. Its ingenious character was commented upon by Mr. Coleman, Mr. Morley, and Mr. Napier, though a general opinion seemed to prevail that it could only be used under exceptional circumstances.

Mr. SALTER exhibited an odontome of the kind called by M. Broca "radiculaire," but which Mr. Salter names "hernia of the fang." He remarked upon the extreme rarity of this tumour, there being only four recorded cases and two unrecorded of which he knew. The specimen was shown in its entirety previous to its dissection for microscopic scrutiny, after which it will be again exhibited, and the results of the investigation given to the Association.

Mr. HAMILTON CARTWRIGHT then read notes of a remarkable case of alveolar hæmorrhage occurring in a patient the subject of jaundice. A loose stump was removed from the gum, whence uncontrollable bleeding ensued, not only from the wound, but from the whole surface of the mucous membrane. The case was considered well-nigh hopeless; whilst it also transpired that the patient, though a healthy man before he became the subject of icterus, had subsequently to that period had hæmorrhage not only from the gums, but also from other parts. When he saw the patient after two days' bleeding, hæmorrhage was taking place from the whole surface of the gum, and the patient was much exhausted. Perchloride of iron had been extensively used; and although it had checked the bleeding on the first application, it utterly failed to arrest it afterwards. With the consent of the gentleman attending the patient, Mr. Cartwright took a model of the plaintiff's mouth, and made a guttapercha compress adapted to the teeth of both jaws, into either side of which strips of lint were placed over some solid perchloride of iron, the use of which was suggested by Sir James Paget, whilst space was left for the administration of food, thereby avoiding the necessity of giving it per rectum. Opium was also given freely. Bleeding was thus arrested for nearly twenty hours, but subsequently recurred, when the compress was reapplied, with the result of arresting the hæmorrhage. The attention of the Society was drawn to the not unfrequent occurrence of epistaxis in jaundiced patients, whilst its members were asked to give their experience of the effects of other constitutional lesions in inducing a hæmorrhagic tendency; whilst the use of the liquid perchloride was reprobated, on account of the sloughing it caused if unsuccessful in its use, thereby creating a larger surface from which bleeding could take place, whilst he extolled the use of opium in such cases, though, as a rule, internal remedies were not of much avail. In the present case he believed that the unremitting attention of his medical attendant, and the careful adjustment of the compress, and the means adopted for feeding the patient, in combination with the opium, saved the patient's life. Mr. Cartwright also remarked that in cases of this kind, those around the patient would frequently misjudge the amount of hæmorrhage taking place. It was of course a matter of great importance not to remove the compresses frequently in obedience to others' fears; and he thought that a good criterion of the amount of blood being lost was to observe the frequency of swallowing by the movements of the larynx.

The hour being late, after a few remarks from the President, Mr. Salter, Mr. Coleman, and Mr. Napier, the meeting adjourned until the 28th inst.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 26.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

PRESIDENT'S ADDRESS.

MR. CALLENDER (the President) delivered the annual address, which we recently published.

A vote of thanks for the President's address, and request for permission to print it, was moved by Dr. Burdon-Sanderson, and seconded by Dr. Greenhow. This was unanimously adopted.

SUBCUTANEOUS SECTION OF THE NECK OF THE THIGH-BONE.

Mr. B. E. BRODHURST contributed a paper in which two cases were fully reported, and seven others also operated upon by himself were referred to. In each of the two cases the right thigh was flexed upon the pelvis, and the knee was crossed over the opposite thigh in such a manner as to close the vagina and to interfere with the evacuation of the bladder. As a consequence of this position, excoriation of the thighs with considerable discomfort constantly occurred; whilst the shortening of the limb, in one instance to the extent of seven inches, and in the other to the extent of four inches, rendered it necessary that artificial support, such as sticks or a crutch, should be used in walking. In the first case the patient's age was eighteen when she came under Mr. Brodhurst's care in 1864. As the result of an accident at eight years of age, hip-joint disease had been established, followed by suppuration, and eventually by bouy anchylosis, with the thigh flexed and adducted. Mr. Brodhurst divided the neck of the femur subcutaneously. The external wound was an inch and a quarter in length, and the knife was then passed down to and over the neck of the femur; it was then withdrawn, a small strong saw was introduced, and the bone divided immediately above the trochanter. The saw was then reapplied, and a small portion of bone removed. The wound healed by first intention. The limb was placed, semiflexed, on an interrupted splint. In six weeks the patient walked with help, and bore some weight on the foot. Fair motion of the limb in all directions resulted, and still remained twelve years after the operation. In the second case the girl was aged sixteen, and had bony anchylosis at the hip-joint, with great flexion and inversion of the thigh. Inflammation had commenced nine years previously, and was followed by abscess. Mr. Brodhurst in this case made the external wound only just large enough to admit the small saw with which the neck of the femur was divided. The bone was exceedingly solidified and thickened, felt like ivory, and twenty minutes were occupied in completing the section. There was some hæmorrhage. After section the limb could be fully extended, but extension was painful, and consequently for several days the thigh was kept slightly flexed. Suppuration took place, and an abscess formed at the junction of the upper with the middle third of the thigh. The splint was removed, and extension was then made by means of weights. In about three months the patient could walk and bear her weight on the limb. Mr. Brodhurst had done eight similar operations, some with the smallest possible opening, others with an opening about an inch in length, and he "had always found that where the opening was small, and there was, in consequence, stretching and bruising of the adjacent soft structures, suppuration followed; but that where more room was allowed for the necessary movements in dividing the bone, healing took place very rapidly." A large opening was, therefore, desirable to prevent injury to the soft structures, but it need not be placed so as to correspond, when the operation was complete, with the section of the bone. "The subcutaneous character of the operation did not depend so much on the size as on the position of the wound." In some cases which had been recorded, after operation the deformity had remained. The wound should then have been enlarged, and either a wedge-shaped or circular piece of bone removed, or the operation of Mr. Gant of division below the trochanter should have been chosen. Where the bone was very hard it should be divided with the saw; the chisel of Volkmann, as used by Mr. Maunder, should be reserved for cases where the bone was tolerably soft. Where the anchylosis was fibrous, the bone was soft and divisible with the chisel; but it was undesirable to resort to a cutting operation when deformity might be removed without the use of a knife.

ANCHYLOSIS OF HIP-JOINT—SUBCUTANEOUS SECTION OF SHAFT OF FEMUR.

Mr. CROFT exhibited a patient whose case, he said, bore upon the question of the respective merits of dividing the femur above or below the trochanter. The man was a clerk, aged twenty-two. In June, 1875, he first felt pain at the hip. Until then he had felt quite well, except that three months previously he had contracted gonorrhœa. The discharge ceased soon after the pain at the hip began, and never reappeared. Two months before the pain commenced he fell from a height of about five feet on to his hip. There was swelling about the hip and thigh at the end of June; and in the groin at the end of July. In August there was great pain on moving the hip, but no starting pain at night; at the end of that month there was a large abscess. In October the abscess was punctured, and a large quantity of greenish pus let out. The discharge lasted until February, 1876; it then ceased, and a sound scar formed. In March he walked about with the help of a chair. On May 29 he was admitted into St. Thomas's Hospital. He had never had rigors nor cough. On admission he was thin and perspired easily; his appetite and secretions were natural. The thigh was rotated outwards, so that the neck of the thigh-bone touched the rim of the acetabulum. On June 23 the angle formed by the thigh and the middle line of the trunk was one of 140°. On July 3 the patient was examined under chloroform by Mr. Croft and Mr. Mac Cormac. No motion could be produced, and it was concluded there was bony anchylosis. On July 12 the shaft of the femur was divided below the trochanter by Mr. Croft, in the presence amongst others of Messrs. Adams and Gant. This operation was chosen because, had section of the neck of the femur been adopted, the incision must have been made through old scar-tissue, whilst there were also adhesions in front of the bone which would have formed obstacles to the use of the saw at that spot. Further, Mr. Croft did not wish to obtain any movement of the limb. The operation was an antiseptic one; the opening in the skin was as small as possible, and the wound was dressed antiseptically. A good deal of suppuration at first occurred at the site of operation, but a free drainage was established, and the patient then continued to improve. Now there was firm bony union at the line of section. The case was interesting from the nature of the operation. It was unique in being an operation done with the saw below the trochanters in an adult. Probably, if the wound had been closed hermetically directly after the operation, there would have been no suppuration. The saw and knife which were used were both dipped in carbolic solution before the operation; the spray was used during, and antiseptic gauze applied after, the operation.

Mr. BARWELL spoke generally as to the many questions raised by the paper. He on the whole preferred the use of the chisel, which he had used in two cases, inasmuch as with the saw, however fine, sawdust must be left behind. All the operations undertaken in these regions were not for saving life, some were for remedying deformity. Hence care should be exercised in selecting the operation which was least dangerous for the latter purpose. In his opinion the best chance of safety was afforded by the chisel and the antiseptic method. He could not, however, call a wound an inch in length, or one out of which a piece of bone could be taken, a subcutaneous wound. With the use of antiseptics, the admission of air did not greatly matter. The operation below the trochanters was American in its origin. He considered that the presence or absence of deep suppuration was the great thing to be considered in such operations. Deep suppuration was altogether, and always, dangerous. He did not consider hardness of the bone to be any objection or obstacle to the use of the chisel.

Mr. GANT thought Mr. Adams's operation was not eligible when the neck of the thigh-bone had disappeared, and where there was much deposit round about the remains of the joint. These two considerations induced him to try the operation below the trochanters, which succeeded well. He thought that the question as to *débris* from sawing was quite mythical. The operations undertaken in America prior to his were not subcutaneous, no more were Mr. Brodhurst's.

Mr. MAUNDER said the subject under consideration had great interest for him, he having devoted much attention to it during the last few months. He would remark first upon Mr. Brodhurst's two cases now before them, and must take exception to the title of the paper, because an operation performed through a wound an inch and a quarter in length did

not come under the common acceptation of the term "subcutaneous." At the present moment a rivalry existed between the saw and the chisel—a rivalry which might, however, be a wholesome one provided our object was, as the President had suggested it should be, "to establish facts." One chief question is, when to use the saw and when the chisel; and his opinion was that the saw would be generally employed for the section of the neck of the thigh-bone when it was proposed to attempt to establish a false joint by a simple linear section of the bone in this locality. Under all other conditions he believed the chisel would be the safest instrument. He expressed surprise that Mr. Gant should speak of the evidence then before them as favourable to the use of the saw. Of Mr. Brodhurst's two cases one had suppurated freely, while in Mr. Croft's case the man's life had been seriously endangered by suppuration. He believed that while the saw might in the majority of instances be used at the neck of the bone without suppuration resulting, still the necessary *débris* could not be other than a source of anxiety and occasionally of suppuration. He had himself divided the femur nine times with the chisel at different points—below the lesser trochanter, above the condyles, through the shaft; and in two of the earlier cases only was there slight suppuration (from causes preventable in the future, as detailed in the *Transactions* of the Society, 1876), while in seven the wound healed absolutely by primary union as after the operation of tenotomy.

Mr. Furneaux Jordan said he had been one of the first to operate subcutaneously. The patient had recovered, but with some deformity. He then used a saw, and cut through the neck of the bone. In performing such an operation, however, the wound made was of that dangerous kind—the punctured wound. They produced, in fact, what might be described as an artificial compound fracture. He would now, on the whole, prefer to operate below the trochanter.

Mr. Bryant insisted on the point that Mr. Brodhurst's operation was not subcutaneous. In point of fact, the removal of bone precluded such an idea. The other cases alluded to in the paper were not given at all fully. It was desirable to know whether the operations were performed like the first or second detailed, or betwixt and between. The first operation was really Reay Barton's. The second appeared to be subcutaneous. He had operated four times by the saw. No suppuration had followed, and he had used no antiseptics, yet all had done well. In one case there was no neck of the bone to divide, though where that was present he deemed it better to divide it. In this last case both legs were bad. He used the chisel first on one and then on the other, and the wounds thus made healed. Unfortunately the patient contracted a bedsore, and died of pyæmia as a result of this.

Mr. Brodhurst maintained that the character of the operation was not altered by the size of the wound, if of small size. With a small wound there was more risk of suppuration than with a larger one, from the bruising of the parts. He had brought these two cases before the Society because the patients were available, though he had operated on nine in all. In three cases the opening was very small, not more than an inch; but they did not do so well as the others where the wound was larger. He considered all of them subcutaneous. If the bone was hard, the saw was easier to use than the chisel; the latter was better if the bone were soft. The sawdust made no difference.

The President considered that the term "valvular" might be applied to those forms of wounds where the word "subcutaneous" seemed to be in doubt.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 13.

Charles Brooke, F.R.S., Vice-President, in the Chair.

Dislocation of the Thigh.

Mr. Morris read a paper detailing the mode of occurrence of dislocations of the thigh, as indicated by experiments and the anatomy of the hip-joint. He endeavoured to show that dislocations of the thigh on to the dorsum of the ilium never occurred, as was usually stated, while the limb was adducted unless the dislocation were complicated with fracture; that all kinds of dislocation took place while the limb was abducted; and that it depended upon the degree of extension or flexion, and of external or internal rotation, associated with the abduction at the moment of accident, whether the head of the femur would be thrown forwards or backwards. The anatomy of the hip-joint, the results of experimental dislocations in the cadaver, and the position of the body at the time when dislocation had actually occurred in the living, were adduced in support of this view. The conclusions arrived at by the author are the following:—1. That the ilio-femoral ligament is a thickened triangular or fan-shaped area of the capsule of the hip-joint, and not a Y-shaped ligament; that besides the ilio-femoral band there is a large portion of the capsule very thick and strong; and that if two lines be drawn—one from the tuber ischii to the top of the trochanter major, and the other from the anterior inferior iliac spine to the trochanter minor—all the capsule between them above is thick and strong, whereas all below and between is thin and weak. 2. That the thickened portion of the capsule determines the kind of manipulation necessary for reduction, and should be relaxed by flexion and abduction during any attempt to reduce a dislocation of the thigh. 3. That the degree of extension or flexion, and of external or internal rotation of the thigh at the time of luxation determines whether the dislocation will be pubic, thyroid, sciatic, or dorsal; and that subsequently the "bridling" effect of the thickened portion of the capsule fixes and gives character to the dislocation. 4. That all dislocations of the thigh, uncomplicated with fracture, occur while the limb is abducted. 5. That *posterior* dislocations result when flexion and inward rotation accompany abduction, and the *anterior* when extension and outward rotation accompany abduction; while the downward or thyroid variety occurs during extension and abduction. 6. That of the movements of the usually successful methods of manipulation, the head of the femur is brought (by flexion, abduction, and *reverse* rotation) to the part of the capsule through which it was displaced—viz., to the lower and inner side of it. 7. That the new position of the head of the femur in the sciatic, as in the dorsal dislocations, is *above* the obturator internus muscle, though in both varieties the bone leaves the acetabulum through a rent in the capsule below that muscle; and that for these reasons the classification of the posterior dislocations into "dorsal above" and "dorsal below" the obturator internus, as made by Bigelow, and followed by others, is misleading, if not invariably incorrect. 8. That dislocation through a "button hole" is not possible, owing to the inelasticity of the capsule and the large size of the head of the femur compared with the width of the capsule from pelvis to femur; and that in the reputed cases of unsuccessful efforts at reduction of this sort, the real obstacle has been either a portion of muscle or of the capsule itself carried before the head of the femur into the acetabulum, or of a fragment of the head of the femur left in the acetabulum. 9. That the rim of the acetabulum of itself offers no real resistance to reduction. 10. That in the exceptional case of a direct dorsal dislocation the untorn muscles and capsule would resist reduction by ordinary manipulation, and that this resistance would be appreciable by the surgeon. 11. That direct dorsal dislocations, or those which are said to occur during adduction, are always the result of immense violence, and are invariably associated with fracture of the acetabulum, or of the head of the bone, or of both. 12. That violent pain in dislocations at the hip is caused by the sciatic nerve being pressed upon, or looped up, by the femur, and that pain or paralysis after reduction is due to a dragging forward of the nerve upon the neck of the bone, or to its rupture in the act of reduction. 13. That in reducing dislocations associated with great pain it would be well to draw the head of the bone away from the side of the innominate bone during the movements of flexion and abduction, so as to disengage the sciatic nerve, and thus prevent either of the accidents above mentioned.

Mr. Willett could hardly admit that Mr. Morris's views were novel. A German gentleman—Professor Busch, of Bonn, he thought—had some years ago demonstrated in nearly all of the London hospitals that dislocations of the thigh always occurred during abduction, and that the subsequent position of the head of the bone depended on different conditions. This doctrine Mr. Willett had since regularly taught in his class at St. Bartholomew's. It had, moreover, for many years now been the custom to reduce dislocations of the hip by manipulation, the principle of which depended on the site of the rupture of the capsule being almost invariably in the same point.

Mr. Maunder thought the author of the paper had devoted

much attention to the subject, and that his observations had been quite independent of those of Professor Busch. Malgaigne, however, who had carefully studied the subject, had failed to find that the dislocations were produced in the manner described. Malgaigne thought rupture of the lower part of the capsule the exception rather than the rule.

Mr. Barwell had no doubt dislocations were produced in the manner described. In the case of a man on whose back a mass of coal fell from the roof of a mine, the head of the bone was dislocated forwards into the anterior inferior spine of the ilium. The ligamentum teres was of little service in the prevention of dislocation; it might even be absent congenitally without any special liability to dislocation.

Mr. Mac Cormac had never been able to drive the head of the femur out of the acetabulum except at the lower part. Was there any note of the head of the bone being embraced by the obturator internus?

Mr. Morris, in reply, stated that he was not aware that the views indicated had been already taught. It was stated in the most recent surgical books that dislocation of the thigh-bone occurred during adduction. Whilst as regards restorative manipulation, American authorities explained its utility by supposing that any obstacle on the part of the capsule in the way of reduction was broken down. Experiments were not so often tried in olden days as now, and post-mortem examinations were rare. He was not aware of any case where the head of the bone was embraced by the obturator internus.

OBITUARY.

EDWARD WILLIAM MURPHY, A.M., M.D.

The late Dr. E. W. Murphy, who died on January 4, aged seventy-four, was born in Dublin in the year 1802. He became a pupil of the Royal College of Surgeons in Ireland in 1818, and soon after entered Trinity College, Dublin, where he graduated as B.A. in 1825, as M.B. in 1832, and as A.M. and M.D. in 1853. In 1832 he became Fellow of the Royal College of Surgeons in Ireland. Having devoted himself to the practice of midwifery, he was, about 1840, appointed Assistant-Physician to the Rotunda Lying-in Hospital during the Mastership of Dr. Robert Collins, and gained considerable celebrity in Dublin as a practitioner and teacher; but in 1840 he came to London, and in 1842 was appointed Professor of Midwifery in University College, which post he held till 1865, when he resigned it, after having been eminently successful as a teacher.

Dr. Murphy filled at various times several important public offices. He was President of the Medical Society of London in 1852-53; he was Honorary President of the Dublin Obstetrical Society; and the position he had obtained in the profession was likewise recognised by our professional brethren abroad—he was an Honorary Member of the Medical Society of Paris, a Corresponding Member of the Society of Natural and Medical Sciences at Dresden, and of the Academy of Surgery of Madrid, and a Foreign Member of the Obstetrical Society of Berlin.

His contributions to medical literature were—"Lectures on the Principles and Practice of Midwifery," of which a second edition was published in 1862; "Lectures on Natural and Difficult Parturition," 1845; "Lectures on Preternatural and Complex Parturition, and on Lactation," 1852. He also contributed a paper on "Rupture of the Uterus" to the *Dublin Medical Journal* in 1835; and papers on "Chloroform in Midwifery" to the same journal in 1848, and to the *Edinburgh Medical Journal* in 1849. And in 1853 he was Lettsomian Lecturer of the Medical Society of London; and his course of lectures "On the Uses of the Forceps in Difficult Labours" were published the same year in the *Association Medical Journal*.

A well-known and valued contributor to this journal, in writing to us about Dr. Murphy, says—"The leading traits of his life during the active period of his professional career were his devotion to his work, his readiness in imparting knowledge, and his unfailing courtesy. He struggled earnestly to be at all times in the first rank of the most learned in his art. He successfully held his own for a long span of years. In not a few instances he advanced the pursuits in which he took so indefatigable and leading a part. When anæsthesia became the prominent subject of discussion, Dr. Murphy was amongst the earliest who cultivated that beneficent department of the science and art of healing.

"In addition to his practical acumen he was a scholar. He wrote with ease, correctness, and conciseness, in good English style, about which there was no mistake, and which indicated that the best masters, old as well as new, had been the sources of his mind's wealth.

"For some years past Dr. Murphy has taken little part in medical affairs, owing to the steady decline of his bodily powers. But his mind remained clear; and at the latest interview the writer of this short notice had with him, he was as intent in his desire to grasp some new topic of medical research that by chance came up into the conversation, as he might have been in the midday of his career.

"To the older generation of medical men of London—the generation that has passed its middle time of life—few figures will remain on the mind more distinctly or affectionately than the figure of the late Professor."

ROBERT LEE, M.D., F.R.C.P., F.R.S.

Dr. Robert Lee, whose death occurred on the 6th inst., at his residence at Surbiton, at the age of eighty-four, was born at Whitelee, near Galashiels, in 1793. He was the son of John Lee, long an extensive farmer in that district. He was at first intended for the ministry, and studied under the celebrated Dr. Lawson at Selkirk for one or two sessions. He, however, changed his views, and resolved to prosecute the study of medicine.

The professors whose lectures he attended with most attention were Drs. Gregory Hamilton and John Thompson. He was prevented from joining the medical service of the army just before the battle of Waterloo by an attack of typhus fever. In the same year he graduated as M.D. along with Professor Grant, Dr. John Davy, and others who afterwards became eminent.

He left Edinburgh to commence practice in the neighbourhood, but returned to fill the office of Physician's Assistant in the Royal Infirmary, where he remained till 1817, when he left Scotland to join the family of the Hon. W. Lamb, afterwards Prime Minister to William IV., and better known as Lord Melbourne.

After spending two winters in Paris, studying all branches of his profession, and particularly that in which he afterwards became distinguished, he travelled on the Continent with the family of the Hon. W. Ponsonby, and remained with them till he commenced practice in London in 1824. His health failed, however, in consequence of the dangerous investigations he pursued in pathology, and he availed himself of the offer of an appointment as physician to one of the most distinguished men in Russia—the Prince Worowzow, who was the Governor-General of the Crimea, and from whom he received many marks of kindness. During this time he closely observed the habits of the people, and collected many interesting details, which were subsequently published at the time of the Crimean War, under the title of "The Last Days of the Emperor Alexander, and the First of Nicholas." Among other facts of historical interest we may mention his account of the death of the Emperor Alexander, which was clearly proved to have been due to Crimean fever, and not, as was suspected in this country, to some unnatural cause.

While in the Crimea, Dr. Lee was the first to introduce the use of quinine in the treatment of the very prevalent fever of the country, from which he suffered.

The Emperor, whom he met in the Crimea, pressed him to remain as physician to the Empress, but he preferred to return to England; so at the end of 1826 he came back to London, and again began practice in 1827.

He combined in a remarkable degree a love for scientific investigation with great practical skill in the treatment of the difficult cases on which he was so widely consulted. His mind was peculiarly adapted to such a subject as that with which his name will always be associated—the anatomy and physiology of that part of the nervous system on which the movements of the heart and other vital functions depend.

For many years every moment that Dr. Lee could spare from the incessant labours of practice was devoted to anatomical dissection, first of the uterus, and then of the heart. He considered he had discovered that both of these organs were supplied with an extensive system of nerves and ganglia previously unknown. These dissections were the subject of much discussion in the profession; but it is, of

course, not our province to express an opinion on such questions. Suffice it to say that the whole of Dr. Lee's collection is now in the museum of the University of Cambridge.

He held a number of important appointments in London, amongst others that of Obstetric Physician at St. George's Hospital, where for many years he instructed a number of pupils, who became greatly attached to him, and appreciated very highly his practical method of teaching.

In 1834, Dr. Lee was appointed Regius Professor of Midwifery in the University of Glasgow, but resigned the appointment almost immediately. Some years later, when the Chair of Midwifery in the University of Edinburgh became vacant by the death of Dr. Hamilton, he was persuaded by his friend Professor Syme to apply for the office; and it was believed that he would have received the appointment if he had continued his candidature, but, from extreme reluctance to leave London and break up his connexion there, he withdrew his application previous to the election.

Dr. Lee was elected a Fellow of the Royal Society in 1830, and of the College of Physicians in 1841.

Dr. Lee continued in the vigorous prosecution of his practice until a few years since, and retained quite to the last an unusual degree of mental and bodily vigour.

It is a curious fact that his eyesight, which he had severely taxed in his anatomical researches for many years, remained so perfect that he could read with perfect ease without the use of spectacles.

He removed from London about two years ago to a suburban residence, where, in perfect freedom from suffering, he calmly prepared himself for the change which he felt could not be far distant.

MEDICAL NEWS.

University of Dublin.—Hilary Term, 1877.—At the Spring Commencements held on Shrove Tuesday, February 13, in the Examination Hall of Trinity College, the following Degrees in Medicine and Surgery were conferred:—

Bacclaureus in Chirurgiâ: Ricardus Edmondus Biddulph. *Baccalaurei in Medicinâ:* Robertus Bryan Beatty, Johannes Vincentius Joseph Conolly, Johannes Walton. *Magistri in Chirurgiâ:* Johannes S. George Browne, David Wilson Orr. *Doctores in Medicinâ:* Johannes Eduardus Barker, Dudleius Loftus Fitzgerald, Samuel Gordon, Ricardus Henricus Quill, Sidney Hamilton Taylor.

Royal College of Physicians of London.—The following gentlemen were admitted Licentiates on February 21:—

Bevan, Richard, New Romney, Kent.
Byam, Samuel Henry, 14, Milner-street, S.W.
Cameron, Charles Hamilton Hone, Bethlem Hospital, S.E.
Clubbe, Charles Percy Barlee, St. Bartholomew's Hospital, E.C.
Cooper, Peter, 3, Tavistock-street, Bedford-square, W.C.
Dawson, Cautley, Leeds.
Edwards, Frederick Swinford, St. Mark's Hospital, E.C.
Gorst, Henry, Royal Infirmary, Liverpool.
Goulder, Frank Samuel, Woodbastwick, Norwich.
Irvine, Delaware Lewis, Newcastle-on-Tyne.
McDonagh, George Raymond, M.B., 139, Kennington-road, S.E.
Rees, Alfred, Maesteg, Glamorganshire.
Roughton, James Woolley, 1, Birkbeck-street, Norwood, S.W.
Rudduck, John Burton, London Hospital, E.
Stevenson, Leader Henry, Guy's Hospital, S.E.
Symonds, Edmond, Thaxted.
Turner, Edward Beadon, 9, Sussex-gardens, W.
Tyrrell, Robert Shaw, M.B., 139, Kennington-road, S.E.
Webb, John Rheece Wynn, St. George's Hospital, S.W.
White, Charles Haydon, Brathay House, Tufnell-park, N.

King and Queen's College of Physicians in Ireland.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, February 13, 14, and 15, the following candidates were successful for the licence to practise Medicine:—

Hoggan, Mrs. Frances Elizabeth.
McClung, John. | Roe, Charles.

For the licence to practise Midwifery:—

Hoggan, Mrs. Frances Elizabeth.
McClung, John. | Roe, Charles.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 15:—

Horrocks, Peter, Over Darwen, Lancashire.
Scott, John William, Dunfield, Sheffield.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Andrew, Edwyn, M.D., F.R.C.S.E., etc.—Honorary Consulting Surgeon to the Montgomeryshire Infirmary, Newton.

Prichard, R. Moreton, M.B., C.M. Edin.—House-Surgeon to the Denbighhire Infirmary.

Startin, James, M.R.C.S.E.—Surgeon to the St. John's Hospital for Diseases of the Skin, Leicester-square.

Turner, Alfred Moxon, M.R.C.S.E., L.S.A., etc.—House-Surgeon to the Liverpool Infirmary for Children.

NAVAL, MILITARY, &c., APPOINTMENTS.

St. James's Palace.—The Queen has been pleased to appoint Sir James Paget, Bart., to be one of her Majesty's Serjeant-Surgeons in Ordinary, in the room of Sir William Fergusson, Bart., deceased; Prescott Gardner Hewett, Esq., F.R.S., to be Serjeant-Surgeon Extraordinary to her Majesty; and John Eric Erichsen, Esq., F.R.S., to be Surgeon Extraordinary to her Majesty.

Admiralty.—Thomas Beswick Purchas, M.D., has been authorised to assume the rank of Deputy Inspector-General of Hospitals and Fleets in her Majesty's Fleet from November 30, 1876, the date upon which he was placed on the Retired List.

BIRTHS.

Carter.—On February 17, at Lichfield, the wife of Graham Atherley Carter, M.D., of a daughter.

Reid.—On February 19, at 29, Canonbury-park, N., the wife of Alex. Reid, M.D., of a daughter.

Thayer.—On February 20, at 8, Northumberland-terrace, Regent's-park, N.W., the wife of L. O. Thayer, C.D., M.D., of a son.

MARRIAGES.

Aitkens—Gill.—On February 13, at Christ Church, Tunbridge Wells, Louis Edwardes Aitkens, M.R.C.S.E., of Stonedene, Hawkhurst, Kent, to Lizzie, widow of the late Robert Newton Gill, of Knaresboro', Yorks.

Falcon—Payne.—On February 15, at Christ Church, Clifden, Connemara, Tom H. Falcon, Lieutenant Royal Navy, to Lucy, eldest daughter of C. J. Payne, M.D., of Clifden.

Grieve—Crawford.—On February 20, at St. George's Presbyterian Church, Croydon, W. Weir Grieve, solicitor, of Glasgow, son of J. Grieve, L.R.C.P.E., of Port Glasgow, to Marion Hardie, daughter of the late William Crawford, Esq., of Greenock.

Powell—Seymour.—On February 20, at Walcot Church, Bath, Scudamore R. Powell, M.R.C.S., youngest son of Lieut.-Colonel Powell, of Banlahan, co. Cork, to Ada Jane Pritchard, daughter of the late George Hicks Seymour, Esq., of Clifton Manor, near York.

Rendall—Collins.—On February 8, at St. Mary's, Ilminster, William Rendall, M.R.C.S.E., L.S.A., of Maiden-Newton, to Anna Maria, eldest daughter of S. H. Collins, Esq., solicitor, of Ilminster.

DEATHS.

Duke, A., M.D., F.R.C.S.E., M.R.C.P., at Rugby, on February 15, in his 68th year.

Edwardes, Lewis, M.B., of H.M.S. *Volage*, at Colonia Rio de la Plata, aged 29.

Fegan, Edmond Henry Parratt, son of Richard Fegan, M.D., at 1, Charlton-park-terrace, Old Charlton, on February 20, aged 14 months.

Godden, Joseph, L.K.Q.C.P.I., M.R.C.S.E., formerly of Birkenhead, at Claverton House, Eastbourne, on February 15, aged 54.

Wood, Peter, M.D., J.P., at Woodbank, Southport, Lancashire, on February 15, aged 65.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Coventry and Warwickshire Hospital.—House-Surgeon. Candidates must be possessed of both medical and surgical qualifications. Applications, under cover, to the Secretary on or before February 24.

Sussex Lunatic Asylum, Hayward's-heath.—Senior Assistant Medical Officer. Candidates must be duly registered in medicine and surgery, and unmarried. Applications, stating age, previous experience, etc., to Dr. Williams, the Medical Superintendent, not later than February 27.

Wolverhampton and Staffordshire General Hospital.—Physician's Assistant and Pathologist. The qualifications of candidates must be such as shall be satisfactory to the Medical Committee. Applications to be sent to the Hospital, addressed to the Chairman of the Medical Committee, not later than March 6.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Crediton Union.—Mr. Harry May has resigned the Bow District; area 8630; population 1936; salary £36 15s. per annum. Also the Colebrook District; area 4200; population 787; salary £15 per annum.

Croydon Union.—The Ninth District is vacant; area 1438; population 7851; salary £90 per annum.

Martley Union.—Mr. L. G. Blyth has resigned the Martley District; area 10,816; population 2308; salary £60 per annum. Also the Workhouse; salary £30 per annum.

Royston Union.—Mr. Henry M. Madden has resigned the Fifth District area 14,219; population 2931; remuneration per case.

West Bromwich Union.—Mr. John Downes has resigned the Handsworth District; area 7680; population 16,041; salary £60 per annum.

APPOINTMENTS.

Bridgend and Cowbridge Union.—John Jenkins, M.R.C.S. Eng., L.S.A., to the Western District.

Cheltenham Union.—Charles Broom, M.R.C.S. Eng., L.S.A., to the Third District.

Huntingdon.—Mr. Richard Apjohn reappointed as Analyst for the County for one year.

Kingsclere Union.—Herbert Taylor, M.D. Edin., M.R.C.S. Eng., to the Kingsclere District and the Workhouse.

Middlesex.—Dr. Theophilus Redwood reappointed for one year as Analyst for the County beyond the limits of the metropolis.

Nantwich Union.—John Lyon, M.B., C.M. Aber., to the Audlem District.

Portsea Island Union.—Wm. K. B. Welsh, M.R.C.S. Eng., L.R.C.P. Edin., to the Southsea District.

Thame Union.—Wm. J. Bond, B.M. Glasg., L.R.C.S. Edin., to the Brill District.

Uttoxeter Union.—George Greenslade, L.R.C.P. Edin., M.R.C.S. Eng., to the Rocester District.

SOCIETY OF ARTS: CHEMICAL SECTION.—In consequence of an unfortunate accident to Mr. Charles W. Vincent, F.R.S.E., F.C.S., his lecture on Spontaneous Combustion in Factories and Ships is postponed.

THE LATE SIR CHARLES BELL.—The very interesting sketches of this great anatomist were sold last week by Messrs. Christie, Manson, and Wood, by order of the executors of the late Lady Bell. When we state that they were sold in lots of five or six, at prices ranging from two to six guineas, we are afraid they were not sufficiently appreciated.

ERGOT IN ATONY OF THE BLADDER.—Prof. von Langenbeck, at a meeting of the Berlin Medical Society, stated that in atony of the bladder, associated with enlarged prostate, in elderly men, in which the organ is never completely emptied of urine, he has lately tried the hypodermic injection of ergotine with most surprising results. In three cases the contractile power of the bladder was at once increased so as to enable the patient to discharge additional urine, and in a few days it had so augmented that very little urine was left behind. After one or two injections the improvement was considerable, and even a diminution in the size of the prostate seemed to have ensued. Dr. Israel said that he had derived the same benefit from the employment of the ergotine, and referred to the case of a patient who was thus enabled to hold his water for three hours, whereas before he voided it every ten minutes.—*Berlin Klin. Woch.*, January 22.

DANGER OF RAW MEAT DIET FOR CHILDREN.—Dr. Brochard, who has done so much in France for improvement in the hygienic treatment of infants, in his *Almanach Illustré de la jeune Mère* cautions mothers against the great abuse of raw meat which now takes place in France in the treatment of the ailments of infancy; and to which he attributes the great increase of verminous disease, and especially of tænia. He acknowledges that it may be of use in some difficult instances of weaning; but these cases are very rare. He has opportunities of seeing an immense number of infants suffering from diarrhœa when weaned prematurely or without any precautions being taken; but he has never had recourse to raw meat for its relief, finding that weak broths, mixed with milk and light fecular food, are sufficient. As long as the child has no teeth, good cow's milk, mixed or alternating with broth, forms the best diet; and when meat is commenced, it should always be well cooked. If good milk is not procurable, the Swiss condensed milk, diluted with tepid water, will succeed well.—*Révue Méd.*, February 5.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** We have received a letter dating from Isleworth, and signed Henry Bullock, F.R.C.S., Medical Officer of Health, in which the writer denies the accuracy of the statements made in a former number of the *Medical Times and Gazette* as to the sanitary condition of Hounslow. Our information was derived from local sources, but we are quite as willing to publish Mr. Bullock's denial of its accuracy as we were to publish the statement originally. It may not be amiss, however, to hint to Mr. Bullock that his letter would not have been spoiled by a slightly more courteous tone.

S. B.—Strong acetic acid. Try Tilbury Fox's book.

In Extenuation.—In publishing Mr. Bernard Holt's report on the Carlisle Orphanage, the *Morning Post* says—"We need only add one significant fact to this statement: that when the small-pox epidemic broke out in London, a few weeks ago, the workhouse authorities could find none but these very sisters of charity to undertake the nursing of their small-pox hospitals."

An Absentee.—You will see the subject discussed in another page. We believe the Prince of Wales has paid two or three visits to the sister College in Pall-mall.

A Fellow and Dr. W.—You are not the only correspondents expressing surprise at the very few members of the Council of the College who attended the funeral of Sir William Fergusson.

A Pupil.—At the present time the University of Geneva possesses sixty-four professors and tutors, and 325 students. Of the latter 152 are foreigners. There are fifty-seven female students, two of whom are Russians.

Dexterous.—Lord Robertson said of the hand of the great surgeon Liston that "if hard as iron and true as steel in the theatre of operation, it was soft as thistledown when applied to the throbbing pulse or aching brow."

W. Layton F.—Mr. W. Sands-Cox, F.R.S., was the founder of the Queen's College and the Queen's College Hospital, Birmingham. To Mr. Sands-Cox is due also the credit of originating the Queen's Hospital, Birmingham. The foundation-stone of the Hospital was laid in 1840, and in the following year the wards were opened without a single debt, the whole of the funds having been obtained by Mr. Sands-Cox. In 1845 the building was enlarged, and made capable of accommodating 180 patients; the whole sum, nearly £1700, received for the new wards was raised solely in public contributions of penny postage-stamps, involving, necessarily, immense industry and perseverance of benevolence.

L.S.A.—The combining the inunction of cod-liver oil with its internal administration was first recommended by Professor Simpson, of Edinburgh, and Sir Henry Holland advocated the practice of anointing the harsh, dry skin of dyspeptic patients with warm oils. For much curious information on the subject, refer to an interesting paper by Mr. Hunter, "On the External Application of Oils," in the second volume of the *Edinburgh Medical and Surgical Journal.*

Alcoholism Years Ago.—It was the famous Lord Hermand, according to Lord Cockburn, who considered "drinking a virtue. He had a sincere respect for drinking—indeed, a high moral approbation; and a serious compassion for the poor wretches who *could* not indulge in it, as well as a due contempt for those who could, but did not." It is related that when a counsel pleaded before him, in extenuation for his client, that he was drunk when he committed the offence, Lord Hermand exclaimed, in virtuous indignation, "Drunk, was he! If he could do such a thing when he was drunk, what might he not have done when he was sober?"

"WASTE OF DISINFECTANTS."

Messrs. F. C. Calvert and Co. have written to the *Times*, February 13, objecting to the conclusion arrived at in Messrs. R. Rawlinson and C. S. Read's report on the modes of treating town sewage regarding the enormous cost of its disinfection. That conclusion is based on experiments by the late Dr. Parkes; but Messrs. Calvert say, first, that "the real object of Dr. Parkes' experiments was evidently to ascertain what percentage of each disinfectant employed by him would suffice to destroy the germinative or fertilising power of partially decomposed fæcal matter"; and secondly they say, "This is evidently quite a different affair to 'disinfection,' or destruction of disease germs actually existing in town sewage, which, in our opinion (based on numerous experiments by unbiased persons), may be effected at a small cost by sending down drains and sewers a very weak water-solution of genuine carbolic acid, which is thus brought into actual contact with a much greater surface than can be reached by undiluted carbolic acid." The calculation of cost, they remark, was made probably on the retail prices for small quantities, and they quote Dr. Parkes' opinion that "carbolic acids and their preparations prevent the putrefaction of sewage to a great extent, and, measure for measure, are decidedly superior to the other substances noted." A notice of Messrs. Rawlinson and Read's report will be found in our number for February 10.

A TIMELY INQUIRY.

Are the ladies, asks a contemporary, about to get into the Royal Society, as well as into Parliament? The name of Mrs. Frances Elizabeth Hoggan, M.D., appears on one of the papers read at the meeting of the Society last week, jointly with that of her husband, she having helped him in working out the subject—"Lymphatics, and their Origins on Muscular Tissues."

"NO PAY, NO CURE."

A provincial newspaper states that the medical men of Ghent have formed a union for the purpose of printing a black-book, containing in alphabetical order the names of the residents in the town who habitually neglect to pay their accounts for medical attendance. The members of the union have also taken a pledge not to attend those whose names are in the black-list except in cases of extreme urgency. The British public could not complain if their long-suffering medical attendants were to follow the example of their Belgian *confrères*, for there is a numerous class in almost every town in the kingdom who appear to have no notion of paying their doctor, and who should only receive medical attendance on the terms of "No pay, no cure."

BOOKS AND PAMPHLETS RECEIVED—

My Lady-Help and What she Taught me, by Mrs. Warren—G. Phillips Bevan, F.G.S., The Industrial Classes and Industrial Statistics, 2 vols.—Clinical Lectures on Subjects connected with Medicine, Surgery, and Obstetrics (New Sydenham Society), vol. lxxi.—J. Russell Reynolds, M.D., F.R.S., A System of Medicine; vol. iv., containing Diseases of the Heart—Alfred Hill, The History of the Reform Movement in the Dental Profession in Great Britain—Alfred Hill, M.D., Report on the Health of the Borough of Birmingham for the Quarter ending December 30, 1876—The late Henry Reeve, M.D., Journal of a Residence at Vienna and Berlin in the Eventful Winter of 1805-6—William Thomson, F.R.C.S. Edin., A Third Analysis of the Statistics of Phthisis in Victoria—Delancy Fever Hospital Reports for 1875-76.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Dublin Journal of Medical Science—New York Medical Journal—The Australian Medical Journal—Dairyman—Transactions of the Medical Society of the District of Columbia—Students' Journal and Hospital Gazette—Edinburgh Courant.

COMMUNICATIONS have been received from—

Mr. Richard Davy, London; Mr. B. R. Wheatley, London; Mr. John Chatto, London; Mr. J. A. Wanklyn, London; Mr. T. M. Stone, London; Mr. C. J. Cullinoworth, Manchester; Mr. T. M. Dolan, Halifax; Dr. Barlow, London; Mr. Jonathan Hutchinson, London; Mr. L. L. Hussey, Oxford; The Registrar of the Apothecaries' Hall, London; Mr. Rivington, London; Dr. Herman, London; Mr. George Biller, London; Mr. Thos. Borcheth, Netley; "Dr. Bright," Dublin; The Secretary of the Harveian Society, London; Mr. Joseph, London; "Medicus," Plymouth; Dr. R. J. Lee, London; Dr. Dupuis, New York; Dr. Burdon-Sanderson, London; Dr. Bruce, London; Countess Ebersburg, London; Mr. Henry Morris, London; Mr. Becher, London; Dr. Jas. Barr, Liverpool; Messrs. Cassell, Petter, and Galpin, London; Dr. Burrows, Witheridge; Mr. Hy. Bullock, Isleworth; Messrs. Calvert and Co., London; Messrs. Arnold and Sons, London; The Local Government Board, London; Secretary of the Obstetrical Society, London; L.R.C.S., London; Mr. S. Hamilton Cartwright, London; The Registrar of the Royal College of Physicians of London.

APPOINTMENTS FOR THE WEEK.

February 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Prof. Henry Morley, "On the Effects of the French Revolution upon English Literature."

26. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Thomas Churton (of Leeds), "On the Desirability of Formally Naming any Existing Diathesis in Cases of Acute Disease." Dr. Robert J. Lee, "On a Method of Treatment of Cases of Empyema, with a description of a proper instrument for the same."

27. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Morrant Baker, "On Necrosis without Suppuration, with a Case of Intra-osseous Necrosis of the Femur without Suppuration, for which Amputation at the Hip-Joint was performed." Mr. Spencer Wells, "Three Hundred additional Cases of Ovariotomy, with Remarks on Drainage of the Peritoneal Cavity."

28. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery, 8½ p.m. Ethical Meeting. Mr. S. J. A. Salter, "On certain Ethical Questions involved in the Practice of Dental Surgery." Other Communications.

March 1. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Harveian Society, 8 p.m. Dr. Wynn Williams, "Cases of Hydatids of the Liver." Dr. Mahomed, "A Contribution to the Accurate Diagnosis of Aortic Aneurism."

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

Royal Medical and Chirurgical Society, 8 p.m. Annual Meeting; Report, Election of Officers, and Address of the President.

2. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. Huxley, "On the History of Birds."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 17, 1877.

BIRTHS.

Births of Boys, 1299; Girls, 1177; Total, 2476.
Average of 10 corresponding years 1867-76, 2398·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	721	741	1462
Average of the ten years 1867-76	813·6	775·4	1589·0
Average corrected to increased population ...	...	...	1700
Deaths of people aged 80 and upwards ...	...	...	64

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	3	1	1	3	1	3	1	2
North... ...	751729	27	1	5	1	10	2	...	...	5
Central ...	334369	...	1	1	1	5	...	...	1	1
East	639111	17	3	6	...	12	...	1	...	2
South... ...	967692	24	10	6	3	8	4	5	...	5
Total	3254260	72	18	19	6	38	7	9	2	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·697 in.
Mean temperature	46·4°
Highest point of thermometer	54·6°
Lowest point of thermometer	36·9°
Mean dew-point temperature	41·2°
General direction of wind	W.S.W.
Whole amount of rain in the week...	0·78 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 17, 1877, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Feb. 17.	Deaths Registered during the week ending Feb. 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533184	46·9	2476	1462	54·6	36·9	46·4	8·00	0·78	1·98
Brighton	102264	43·4	55	31	54·4	35·4	47·0	8·33	0·60	1·52
Portsmouth ...	127144	28·3	88	36	54·5	39·0	48·0	8·89	0·60	1·52
Norwich	84023	11·2	53	28	54·5	38·5	46·0	7·78	0·33	0·84
Plymouth	72911	52·3	50	30	57·5	39·5	50·0	10·00	0·72	1·83
Bristol	202950	45·6	157	73	54·3	36·9	47·9	8·83	0·70	1·78
Wolverhampton ...	73389	21·6	68	32	54·6	30·9	45·0	7·22	0·61	1·55
Birmingham ...	377436	44·9	308	167	56·0	37·0	47·3	8·50	0·54	1·37
Leicester	117461	36·7	101	50	55·8	37·0	46·5	8·06	0·44	1·12
Nottingham ...	95025	47·6	67	42	58·7	34·2	45·7	7·61	0·62	1·57
Liverpool	527083	101·2	436	282	54·9	38·4	46·4	8·00	0·70	1·78
Manchester ...	359213	83·7	299	184	55·0	35·0	45·5	7·50	0·71	1·80
Salford	141184	27·3	161	87	54·5	33·9	45·0	7·22	0·65	1·65
Oldham	89796	19·2	70	59	...	...	...	...	...	...
Bradford	179315	24·8	136	84	58·4	38·4	47·1	8·39	0·41	1·04
Leeds	298189	13·8	227	119	55·0	38·0	46·3	7·95	0·25	0·63
Sheffield	282130	14·4	229	88	55·0	36·5	46·3	7·95	0·25	0·63
Hull	140002	38·5	127	50	56·0	35·0	44·1	6·73	0·31	0·79
Sunderland ...	110382	33·4	71	37	56·0	37·0	46·4	8·00	0·70	1·78
Newcastle-on-Tyne	142231	26·5	119	71	...	...	...	...	...	...
Edinburgh... ...	218729	52·2	135	87	54·5	34·0	43·2	6·22	0·85	2·16
Glasgow	555933	92·1	357	278	...	...	...	...	...	...
Dublin	314666	31·3	144	158	58·6	33·0	47·3	8·50	0·63	1·60
Total of 23 Towns in United Kingdm	8144940	38·3	5934	3535	58·6	30·9	46·4	8·00	0·57	1·45

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·70 in. The lowest reading was 29·47 in. on Monday afternoon, and the highest 29·92 in. by the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

THE BIOLOGIST AND THE PHYSICIAN:

BEING THE

ANNUAL ORATION

BEFORE THE

HUNTERIAN SOCIETY FOR 1877.

By W. MOXON, M.D., F.R.C.P.,

Physician to, and Lecturer on Materia Medica and Therapeutics at, Guy's Hospital.

We are met this evening, on the birthday of John Hunter, to call to mind and to honour a kind of man to whom ordinary men, and also extraordinary men, owe an earnest reverence. Hunter was born in 1728; so we have to go some distance back for our hero. And the world has changed since he lived; and many men of note in the line of his excellence have become conspicuous between his time and ours,—in a period in which, as Mr. Carlyle says, "Every cellular vascular muscular tissue glories in its Lawrences, Majendies, Bichats,"—so that one may well conclude he was indeed great to be still visible above and beyond such a number of great ones. And even the current time is, as usual, at no loss for heroes in this as in every other line of excellence. The cynical historian of Don Juan says—

> "Want a hero! An uncommon want,
> When every year and month sends forth a new one,
> Till, after cloying the gazettes with cant,
> The age discovers that he's not the true one."

A serious reflection for any group of hero-worshippers at all in doubt of their hero—if Mr. Carlyle is right in fixing it upon them, that to worship a flunkey is a sure sign of a flunkey. . . . . But I am secure of my hero to-night, and am allowed the further assurance that, should I fail to do right honour to him, his merits have been yesterday elsewhere well rendered; and whereas in contrast with that rendering I must needs suffer, I shall take for my comfort the well-known comfort of Livy the historian, using a little liberty with his Latin, and say, "Si, in tanti oratoris umbra mea fama in obscuro sit, nobilitate et magnitudine ejus, meo qui nomini obficiet, me consoler." Yet it will be for me to remember the duty each of us owes to the hour we spend here, and the duty I owe to your significance, that I may, in Hunter's name, justify, as far as I can, this sacrifice of living time to the recollection of the dead—if dead he should be called, whose spirit was not lost as though a ghost had been given up, but was transferred as a living activity to others who in succession continue the work of his life.

But how shall I represent him so that I do no injustice to him, nor injure his influence to the extent of my power in the tracing I shall make? It is a hard task in portraiture to publicly exhibit the idea of a life, and especially such a life as Hunter's.

We read of him that even the greatest of portrait-painters, Sir Joshua Reynolds, could not succeed in taking a likeness that had Hunter in it, and, when almost in despair, turned his canvas upside-down to record a sudden inspiration which revealed to him the true Hunter of this print—Hunter thinking towards truth that shall be power.

Now, the idea of Hunter's life which has come to me most strongly as I havo had the pleasure of reading again his works for this occasion, is mainly this: that Hunter was great through his genius in the application of the experimental method in physiology to the purposes of surgery. And that he applied this method in physiology so that, of all men either before or after him, he was the most intelligent and richly endowed amongst the workers who in this direction have sought to bring science to practical use. To experiment and observe for the improvement of surgery, that was the aim which distinguished him. The rest of him was common humanity. Strange that it should be remarkable, he was found as early as five o'clock in the morning at his labours in his museum. So that he was as assiduous in the noble work of his life as thousands of large linendrapers are in the making of their fortunes. He was open-hearted too, and ready with honest anger on occasion. All this is good North-British character, useful and praiseworthy. You may read about it in the "Cyclopædia." It is common humanity. And that, I suppose, is the greatest part of every man, and of every man it is the best part. But as an instinctive worker on the experimental method in physiology he was gifted with insight, and with adapted forethought; and hence he laboured successfully where the utmost patience and the utmost truthfulness without such insight must fail, and where also the mind requires to be carefully restrained from pursuing inquiry beyond those limits where experiment cannot reach sound conclusions, and threatens to degenerate into mere cruelty.

In this field of experimental physiology Hunter was successful, and thus to-night we have met to honour a man who succeeded where I shall presently show, from the highest authority in logic, success was impossible. Such men enable us to know how the impossible is made to come to pass in this wonderful world. And we have to see that he achieved the impossible by sacrificing to his search after it all that luxury of omniscient criticism which keeps us little minds so sure of the impossibility of the impossible that we sit down before difficulties which he conquered and dissipated. Such men give over all those selfish, self-satisfied certainties of logic which persuade the intellect, as impotence persuades the will, and as sleep persuades activity. They may be said to sacrifice themselves, all their lives, to create and realise for others what those others' science of the impossible had kept them from.

His profession was one whose ostensible aim has always been boundless in the sense of unlimited, but its success boundless in the sense of indefinite. Sometimes esteemed as with Æsculapius amongst the gods, and sometimes judged almost with Sgnarelle amongst the comic impostors, and satirised as scarcely honest.

Dealing with a life influenced by nature at all points, the physician tends to be a professed nature-knower. He prides himself on a title which touches in him a kind of claim to the knowledge of nature. There is no more beautiful idea than that expressed by this word Nature—the spirit of the things that grow. In such mysterious antithesis to the form of things that are made; Nature, the sanction of so many strange actions and customs; the ultimate appeal, to which man at his proudest in Church or in State must be content to come, whether he will or no. The physician delights to be eloquently told that his field of knowledge is nature and human nature; and such graceful sententious utterances are true enough in oratory, and would far better suit an oration wherein men's sympathies are to be called out beyond commonplace, than would any criticism or limitation of this most ambitious claim. And is it not true, in the one direction, that, as to human nature, doctors are wanted wherever humanity collects in armies or expeditions to the poles, or even at home here in large business offices? And in the other direction, do we not bring the young physician through all the sciences? and are we not ready, as a sort of godfathers, to make the young ones swear by proxy that they will undertake any fresh additions to the curriculum?—a conclusion at which, I fear, they may be sometimes tempted to swear without proxy, when they come to try it.

All the world is deeply concerned in wishing success to Hunter's profession in its wide study of nature and of human nature. But it will always be necessary so to study nature as not to fall foul of the laws of human nature. This wide study of nature and human nature is the spirit of the Baconian philosophy, the spirit of inductive inquiry, the spirit of modern civilisation; the spirit, at least, in which alone modern civilisation can hope to surpass the great systems of civilisation which have died away of old. The Baconian philosophy, which we are proud to follow, is nothing else than a resolute ambition. The width of the scope of Bacon's aim was all that was peculiar to him; that, indeed, was all he claimed as new. Bacon taught us to add to the substance of knowledge by more and closer observation; whilst those before him, instead of adding to the little substance of knowledge they had, were content to spend their lives in playing upon that little knowledge with their lively imaginations. But Bacon, in his wonderful work, laid down plans for gathering truths of nature and human nature. His design did not merely comprise the perfecting of natural philosophy; he plainly said how wide his aim was. He intended to comprehend all the sciences—even logic, ethics, politics. This is what he says:—"For we form the history and tables of invention for anger, fear, shame, and the like, and also for examples in civil life, and the mental operations of memory, composition, division, judgment, and the rest; as well as for heat, cold, light, vegetation, and the like." And well he vindicated his system, where success on its lines was then possible. One cannot but wonder at the power he shows in his curiously classified "instances," and recognise the close approach he made to truths whose discoveries were to be the pride of later ages. By his tables of heat he reached the otherwise very

modern conclusion that heat is a mode of motion. He touched on the integral calculus, and the theory of tides, and other discoveries that came, in some instances, centuries after him. With such a spirit, a thought of limits to the possibilities of science must have been something mysterious to his conviction of infinite knowledge, as pain and evil are mysteries to those whose hope and aim are for infinite goodness. And the profession to which Hunter belonged embodies the same spirit, and extends its research out into the world around, seeking to know, by means of induction, the mental operations, memory, composition, division, and judgment, and the like, as well as heat, cold, light, vegetation, and the like. This enthusiasm for universal knowledge animates the young physician, if he is worthy of his name, which name lays a claim to the knowledge of all nature.

But the ambition to complete the knowledge of living nature and of human nature by inductive methods, which Bacon announced and urged, which was so long unattempted, which Hunter at length pursued, and which the medical profession now is following,—this ambition of experimentally analysing life, is not unchallenged and unopposed. The profession which extends its claim to such knowledge is met by a spirit of denial; and this spirit of denial has taken up very lofty position, held by a very formidable champion.

I do not of course allude to the scepticism of the ignorant, who scoff at any science of medicine, and refuse to believe in a knowledge of the laws of life if that knowledge does not give power to break those laws.

Nor do I allude to the satirists who, like Molière, find in the queer characters and pretenders amongst the doctors of their time good marks for pungent ridicule, which is both innocent and often useful.

Nor to those who, moved by a strangely narrowed humanity, which in this extreme is surely mistaken, impute to the motive of relieving sufferings a hateful readiness to inflict them.

But I refer to a far more grave and serious accuser—the greatest, or, at least, the most exact thinker of modern times, and perhaps the most, or nearly the most, masterly genius in analysis that ever lived; a man whose antagonism will not be lightly thought of; and, it must be said, a man not at all ill-affected to the inductive philosophy of Bacon. I refer to Mr. John Stuart Mill, the framer of the canons of the inductive method, who, after deep and experienced consideration, lays down the laws of that method of inquiry from which method Bacon drew such inspiring hopes of universal knowledge, and in which method the profession of Hunter works. Mr. Mill, in fact, made it into a method. With Bacon, and with the profession of Hunter, it was, and is, rather a resolute ambition than a method. Mr. Mill concludes that it is not possible, by Bacon's method, to do very much that Bacon looked forward to, and that the medical profession is bound to try and achieve.

Thus, although this is not quite in the line of progress of my argument, let me recall what Bacon so bravely said as to his forming tables of fear, shame, and the like, and also as to the power of his method over politics and ethics. Now hear what Mr. Mill writes. He speaks of Bacon's eloquent hope as a vulgar notion. He says—"The vulgar notion that the safe methods in political subjects are those of Baconian induction, that the true guide is not general reasoning, but specific experience, will one day be quoted as among the most unequivocal marks of a low state of the speculative faculties in any age in which it is credited." Now, if you refer to Mr. Mill's "Logic," book i., page 492, you will see that he had worked up to that observation through several pages devoted to proving that it is impossible to know by induction the action of a remedy. To remind you how uncompromising he is, I will, if you will allow me, read you a short extract. He chooses mercury to illustrate what he has to say, and he is proving that you cannot know whether mercury cures a disease or not. He describes the precautions necessary for any inductive method of proceeding, and then he says—"These precautions are inapplicable to such cases as we are now considering. The mercury of our experiment being tried with an unknown multitude of other influencing circumstances, the mere fact of their being influencing circumstances implies that they disguise the effect of the mercury, and precludes us from knowing whether it has any effect or not. . . . Anything like a scientific use of the method of experiment in these complicated cases is therefore out of the question."

Certainly this places a very gloomy view of its possibilities before the profession that Hunter belonged to. Mr. Mill says, You can only be right largely by chance. You cannot know whether you are right or not. The canons of your method are against you. You must go by what artificial light you can create. The daylight of proof and certain truth are denied to you for ever. And hearing this we might well be discouraged, for Mr. Mill was a great man.

And did he overestimate the difficulties of Hunter's profession when he thus wrote? Must we not confess how often in our most formal efforts we not only cannot obtain answers, but cannot even ask good questions? Take our discussion on syphilis, so ably introduced at the Pathological Society. There we all, with much strife of tongues, mainly sought to elicit whether syphilis is a disease of the blood or of the solids. Whereas it is so utterly impossible to have disease of the one without disease of the other, that the proceeding was most like speaking for ten weeks on the question whether it is the sunlight or your body that makes your shadow on the wall. Doubtless, when it was keenly said that syphilis was a flesh-and-blood disease, the whole secret of this issue was rightly touched. What with questions that are no questions, and questions that cannot be answered, and questions whose answers teach nothing, we flatter Mr. Mill to the top of his bent against us. Can you fancy his grim satisfaction, if his ghost thought it worth while to listen, in the absence of Parliamentary debates, to the discussions at the Clinical Society upon the questions whether phosphorus cures leukæmia, and whether salicin cures rheumatism? How, by such processes as those followed, *could* such questions be solved? Unfortunately there was really no question as to the phosphorus, when some simple person pointed out that the leukæmic patients all die in spite of it. Mr. Mill, however, might wonder if all the distinguished physicians had read his Logic, so ready were some to proclaim success of phosphorus on the strength of temporary upward fluctuations under its use in two cases of a very variable disease. He would scarcely have wanted against them such an instance as a man with leukæmia to whom I gave phosphorus pills. The poor fellow said he was much better for some time; and meanwhile, by directing a proper method of examination, we found that the phosphorus pills came away just as they were swallowed!

As to the other, and better-founded, question, whether salicin cures rheumatism, Mr. Mill need only put the word "salicin" for "mercury" in a passage of his Logic, and it would stand thus: "Supposing even that salicin does tend to cure the disease, so many causes, both natural and artificial, also tend to cure it that there are sure to be abundant instances of recovery in which salicin has not been administered." In truth he might have said to us, "Don't you see, that if you try ever so to make successful experiments on this question, you will find at last that you don't quite know what you are looking for? Is it recovery? Well, but recoveries are happily so nearly constant in rheumatism that to search for them would be like looking through the crowded trees to find the wood. What you should look for is some way of knowing a salicin-recovery from any other sort of recovery. When you know a salicin-recovery from a potash-recovery or a peppermint-water-recovery, then you may come to a useful conclusion; and that, if any, was the proper question for your Society." Perhaps it is a soluble question.

Neither would Mr. Mill yield any more homage to a type of our modern experiments, such as that undertaken by a certain committee to decide the question whether mercury is useful in moving the bile. The practical question before that committee was whether mercury would unload engorged human livers. To settle this they took *healthy* dogs, and, regarding lightly the vastly important connexions of the duct or pipe which carries bile out of the liver, this duct, with its neighbouring vessels and nerves, and its wonderful structure, they cut it boldly through and brought it to the surface, and fastened it to the skin outside, and then they gave the dog mercury,—and they say it did not unload him of bile! Now, I can fancy that Mr. Mill would grin rather solemnly at that experiment, if he were fond of dogs. For, first, as to unloading the dog's liver, it was not shown to be loaded at all, like the engorged human livers of the *practical* question are loaded, which loaded livers mercury is thought to relieve. And Mr. Mill might ask, "What did these people think we meant when we said mercury unloaded the liver? Did they think we meant that it squeezed it as in a cheese-press? Or what force did they think the mercury would use that it could act in spite of all this rudeness? Does experience lead us to think biliousness is determined by very rough measures? Some people grow

bilious on sherry, and not on port; and if the bile is determined by such trifles, could it be indifferent to the dragging of the bile-duct from its supremely important connexions and cutting and tying it? Surely it is possible that it is along this pipe that the mercury acts, so that its channel was cut off." And Mr. Mill might say what I would not, and ask whether a simpler experiment would not have answered better. He might ask whether, if this committee, instead of hardening their hearts and sharpening their knives, had met in a protracted dinner-party to quicken their brains and thoroughly engorge their livers, and had then each taken a blue pill, and in due time held another committee, the experiment would not have been, if of less boastful quality, more truly reasonable, and might not have ended in establishing mercury more firmly than ever in its almost proprietary command over the British liver.

Thus would Mr. Mill triumph over us, acting as such experimenters were in the best intentions, and would say, "So to use dogs is not wicked, because of your good meaning; but it is worse than wicked, it is bad logic."

And thus might we have to hide our diminished heads, with our mercury, and salicin, and phosphorus, and perhaps have considered our ways in fear of Mr. Mill, and penitently used up all the pharmacopœial phosphorus to tip all the pharmacopœial sarsaparilla sticks and dulcamara sticks to make matches, to burn up the rest of the materia medica periodically at the shrine of Mr. Mill; and the British nation have to erect temples to the fevers and to evil fortune, as Cicero says folks did in the days of ancient Rome.

But we don't do so. We stand by our remedies, because we find that we have somehow come into possession of general inductions, even about ever-mysterious life and its troubles, which would be very valuable in case any of Mr. Mill's followers should be so unfortunate as to have epileptic fits, or if any of their babies should have, say the thrush, or if they should suffer in a hundred other ways that I could name. Our cures may have come into existence in sad defiance of the laws of induction, and we may have to apologise to those laws for their existence.

Yet there these laws of cure obstinately are, and their existence cannot be denied or explained away. It is too true, however, and it is a very curious fact, that nearly all the really powerful remedies came from a sort of people who could have known nothing of the laws of induction. Indeed, I can imagine Mr. Mill turning upon our chief remedies to show them all to be the product of periods and places strange to the inductive philosophy—periods of the infancy of manhood or of race, when the mind may have been like protoplasm, and, as Mr. Huxley appears to suppose in the case of protoplasm, may have been able to use powers which had not yet limited themselves by separate existence, so as to operate in a sort of potential-indicative mood, present-future tense. The minds of savages may have acted on this protoplasmatic principle, not having yet tied themselves down to grammar, when they found out the uses of opium and of ipecacuanha. I can understand Mr. Mill saying, "You do not divide your awards of credit quite faithfully, you of this loquacious age. Nobody knows who first gave opium. You say much about the finding of morphia in it, and that was very scientific and clever; but if he who found morphia was a hero, he who found opium was a god. Why don't you every year have an oration to those old fishwives who discovered the law that rickety infants get better by cod-liver oil? and another oration to those savages who perceived the laws of the use of ipecacuanha? and another to those other savages that found out the laws of the use of Peruvian bark? and surely another to those doubly wonderful ones who gave burnt sponge in goître, and so made it providentially possible that finding iodine in the burnt sponge could suggest that iodine might be the cause of the goître-cure? Those unknown personages, forgotten perhaps because the Muse of History could not pronounce their names, were not adepts in experimental physiology. Yet, deprived of opium, ipecacuanha, bark, iodine, and cod-liver oil, what have you got left comparable to these in direct usefulness and due to the experimental method? And if you really give yourselves to inquire how your profession did, as a matter of history, get hold of its most invaluable agencies, you see it was by the genius of wonderful savages. And that genius, if you seek what corresponds most nearly to it in your own highly civilised minds, would be, I say, the art of observation; the genius of insight; the quick, keen sense of effect following cause, which the eye that lets nothing pass unnoticed catches, and the brain registers because it is not wool-gathering in bad experiments and inductions." Truly, Mr. Mill is hard to please.

And here, lest Mr. Mill should triumph over us for ever, I am reminded of my great theme of this night. No doubt, if progress in our profession were dependent on ordinary men, or even on committees, Mr. Mill would triumph over us for ever. But Mr. Mill, like all men of system, who argue human nature into a machinery, falls into this fallacy—that he supposes always a common *degree* of intelligence, for which he and his followers make laws of more and less, equal and unequal, saying at last, "Hitherto shalt thou come, and no further!" Thus moralists suppose average moral susceptibilities in the readers of their books; and clergymen average goodness or badness in the people around the pulpit. But intelligence is not of a nature to be treated in that way. For, like fire, or like that electricity which nerve-work so much resembles, intelligence has two wholly different modes of increase—increase in quantity, and increase in intensity. I mean so that, just as by adding a pint of lukewarm water to another pint of lukewarm water you only get two pints of lukewarm water, and no number of pints of lukewarm water would ever make any of it boil,—so with intelligence of a given degree, any more of the same degree, say in committees, would not raise higher the intensity and penetration of intelligence. And Mr. Mill's rules of induction are for a certain standard of intelligence, and somehow did not consider the case of extraordinary intelligence. Mr. Mill left it to his "Autobiography" to show that he allowed, at least in Mr. Carlyle, the power of a sudden reach of thought, which he could only slowly follow, but in which, like *Punch's* "Athlete," painted after Rubens, he perhaps "never caught him though." Now, Mr. Carlyle—whose greatness is so conspicuous, in that two so strong and so different as Mill and Ruskin equally bow down in reverence to him, without waiting as usual until he is dead,—Mr. Carlyle on "Heroes" better shows why Hunter should have discovered laws of life, in spite of Mill's canons of induction. Let me read you a piece from "The Hero as Poet": "And, indeed, may we not say that intellect altogether expresses the power of discerning what an object is? Is it even a business, a thing to be done? The gifted man is he who *sees* the essential point, and leaves all the rest as surplusage." Mill, you see, lays down laws for the worker at a dead level, more of whose work is more of the same. Carlyle—himself possessing the poetic faculty, which Mill did not, for, as he says in his "Autobiography," he rested his admiration finally on Wordsworth, who did all things poetical with much unpoetic labour,—Carlyle, himself a poet, perceives that the power of seeing, which inspires the great ones of our race to be *seers*, raises them above Mill's rules, just as the intensity of flame is raised above the laws of hot water.

Gentlemen, it is thus we must recognise such men as have made real what Mill, that master of denial that "Geist der stets verneint," declared impossible. Mill proves, in cold formality, that by experiment and observation you cannot discern the laws of living nature. Hunter, warm with ardour in his noble pursuit, discovered law after law of living nature and was one of the first to make possible that knowledge of living nature which is a very worthy pride of our very proud generation.

And I do well to quote upon him "The Hero as Poet." For Hunter showed a most fertile imagination. Did a fact come before him, forthwith arose vivid suggestions which he pursued ardently. Hunter's mind was fruitful of hypotheses and analogies,—they came freely; and his great excellence lay in the truthfulness and industry with which he verified or rejected them. He directly repudiates tho looking for principles by studying facts. With him facts were to establish principles. Principles, whose rise constituted the power and life of his mind. He was not the biologist who, even if he found it among facts, would accept an apes-universe. A universe without a leading principle like to the power and life of his mind was a thing he refused to recognise. Whatever we may say of the crudity of his belief in a vital principle, if you study his works you will, I believe, find that belief to have been no mere accidental ingredient in a mind otherwise comparable to that of the biologists who construct a universe out of fragmentary facts. If you take away from him his faith in a vital principle, you undo him. That belief animates and is the soul and faith of him, no mere chance ingredient. Without it his genius is reduced to mere instinct. He would be the first to rise against such a rendering of the

source of his power. His was the true poet's imagination, fertile not in freaks of morbid fancy couched in verses full of "fume" and "spume" on some revolting theme of lust, or rage, or despair, like some fashionable poets of a modern school. He was greater even than the true poet whose works mirror nature truthfully. He was a poet whose rich imagination thrilled to accompany the secret harmonies of Nature's design. Such men make almost tangible that great poetic Power, whom seeing in His works we ignorantly worship. Like a *true* poet, he rose from truth to truth by keenly seeing analogies between known and unknown. Yet, like a man of sense and science, he held always to an answerable question, and in its solution showed grandly that intellect which, as Carlyle says, "*sees* the essential point, and leaves all the rest as surplusage." So, in common with all modest labourers in science, leading by the hidden likeness of strangely different things into that oneness which man longs for as rest from his task of inquiry. The oneness which seems almost within our reach, as, with Odling, we see the elements of chemistry becoming terms in an arithmetical progression of numbers; and with Mill, in one of his poetic times—for all men have a little poetry at times,—we see the intellect as chemical combination of ideas, which in uniting reveal new phenomena.

Hunter did not see Nature in a servile spirit. He went to her to practise his active intelligence, not to bring facts like a cart-horse brings dust, nor to heap his memory with scientific details until it became the Arcana of Science. Loving nature as he did, hear how he speaks of facts. He says—"the surgeon who should wish to resemble those Chinese philosophers, whose knowledge consists only of facts. In Europe philosophers reason from principles, and thus account for facts before they arise. Too much attention cannot be paid to facts, yet too many facts crowd the memory without advantage, any further than they lead us to establish principles." Really, I wish modern authorities in medical education would see that as clearly. But more of that presently.

Here is no mere matter-of-fact individual on a larger scale than usual. No heaper-up of a bigger dust-heap than other people's. True, no one ever brought together so many facts. Everyone should see the Hunterian Collection, and remember Hunter's busy life, that he may think shame of such a little as we allow our own lives to concentrate themselves upon. But if he worked patiently at facts, it was not like us young aspirants of the Pathological Society, who hand up our specimens of happy surprises in a glow of wonder that such a thing should happen, and of pride that it should happen even unto us. Thus, no doubt, is growing an invaluable store of facts; but surely the glow that warms each face as the molecule of experience descends into the *Transactions* must remind us of the shine of the unintelligent Sun of the Coal Era, as he warmed down the fuel for future use. Not so did Hunter collect facts; he always followed principles in his work. And herein is the peculiarity of that wonderful Hunterian Collection, which fully entitles it to the charge of that separate commission under the Crown who have care of it; this peculiarity, that the preparations always answer some intelligent question. They do not merely reply to such a query as "Let us see what is inside a whelk?" nor stand to record the fact that something unusual happened to somebody who knew the curator, and gave it him to put it beside the thing that was nearest like it in the Collection, or rather the gathering; that principles might come out of the bottles into the curator's mind if he waits patiently in the presence of the, as yet, unknown—lines of proceeding which form the *raison d'être*, as well as the reason of the neglect of so many museums.

Hunter's mind was creative in the highest degree, and his energy of inquiry was of lifelong endurance. Ah! how the little experimenters miss his genius, who work in a spasm of acute inquiry of two-and-a-half to twenty-four hours' duration to find a secret which Hunter would have given his lifetime to reach!

Hunter did not sacrifice dogs to foolish inquiries, which with all the pain and trouble could not thereby be answered. And if we ask what gave him that most valuable power of estimating what was worth doing, and what could be done—the power which Bacon calls the "mathematics of the mind,"—we find the reply, I believe, in these great facts of his history. Firstly, that he was a man who had a free youth, not over-taught, nor over-strained; and, secondly, that in his manhood he worked with an eye to usefulness and duty, and not only to notoriety, nor to the mere cry of "Who will show us something new?" Indeed, the main and distinctive feature of his noble life was his resolute pursuit of the practical aim of his profession, to establish sound laws for scientific surgery and medicine. I have said that the wonderful store of facts he collected constituted answers to questions: Hunter the physiologist answering the questions of Hunter the surgeon. He did not so follow physiology as to turn it away from usefulness. With a mind set on discovering the nature of the heat of inflammation, he studies for years, and would set Jenner studying the temperatures of bats and hedgehogs at times when these creatures are starving and asleep. He watches and dissects hybernating bees with the same purpose, taking note of the amount of fat within the insect's body,—nothing too minnte or too laborious, where his desire is to examine and establish a principle in surgery. To throw light on the redness and active pulse of inflammation, he causes artificial inflammations, and injects the widened vessels; and he watches for, and finds, the effects of rigor mortis in the arteries. And the results of his work he puts up in his museum. And he will gladly have anything for his collection. *But always putting things by in their physiological order*, mark! so that in due time they shall answer to his further questions. He will lecture on surgical principles,—true ones they must be,—if he changes them yearly in accordance with his observations. But he will not, he cannot lecture on comparative anatomy or zoology. Why not? It does not conform enough with his main bent to surgery, to a practical aim, to a duty. He believes in a vital principle. Therefore he must have an aim before him. He succeeds in his aim; and by the masterly introduction of the operation on aneurism which bears his name he saves thousands from a painful death. Led further by the same enthusiasm for the true purpose of his life as a surgeon, he inoculates his own frame with a loathsome disease that he may have it always by him to study it, regardless of danger and of pain.

It is true that in the course of his life of observation and experiment Hunter attained to a large zoological knowledge. He sought that knowledge that he might apply it in the service of surgery. But I gather from the accounts of Hunter, from his letters, from his museum, that the life's aim and meaning of Hunter was duty, and not mere knowledge. His was the nobly useful and controlled enthusiasm of the knower for duty's sake, not the vague enthusiasm of the knower for knowing's sake, which may end in making a man of large natural intelligence find the extreme of his glory in the completest possible knowledge of the common frog. Such a spirit as this was strange to Hunter. I doubt if he would understand a man whose life was settled on mere zoological biology. The instinct in boys which leads them to collect all possible birds'-eggs, and every kind of snail-shell, is very praiseworthy, and if it continues on into manhood the pursuit of natural history is most enjoyable and improving when followed as a recreation. White's Selborne, or the story of Tam Edwards in the charming book of Smiles's, creates in you a love for the natural historian as well as for natural history. Such works start in the young the spring of tho knowledge of nature. The spring of all knowledge is desire to know.

Even when the knowledge of living nature takes the form of zoological biology, and is made a profession of, I know no reason to think slightingly of it, other than that all professions of mere amusement are more or less one-sided affairs. Hunter's life was so devoted to usefulness, that I think the professional zoologist would have been a mystery to him. But he was spared the question. The zoological biologist is a new species. In Hunter's days that proudly Darwinian development had not struggled into existence. If you observe the zoological biologist, you see he does not belong to Hunter's species; he is distinguished from it by not possessing the aim to be useful. Neither does he belong to that gentle species—the author of the beloved natural history book of my boyhood; for that gentle author was very humble and reverent towards the mystery of life and its authorship, and he addressed the youthful reader very kindly. But the zoological biologist is not very humble or reverent; in fact, he shows very openly a sad *penchant* for doubtful theology, and he comes down upon the pupil like a pedagogue. Hunter classified the specimens he collected from the structures of living creatures in classes, according to those organs of the human frame which he studied to relieve their disorders. The zoological biologist collects specimens, but he classifies the animals in a chain leading downwards, and he preaches certain conclusions. If Hunter had seen such a collection, I can fancy he would have said to the zoological biologist, "Why have you brought them together in that way, in a chain from man downwards—with the

gorilla there, and there the crocodile, and there the amphioxus, and there the salpa, and there protoplasm, and then the mud at the bottom?" And if the zoological biologist, with cynic smile, began eloquently to discourse upon the divine attributes of protoplasm, and its operations in the superhuman potential-indicative mood, present-future tense, and to eulogise mud as the great parent of things, the source of life and beauty, I believe that Mr. Hunter would have turned his back on the zoological biologist, for he was a strenuous believer in, and combatant for, the vital principle, as are all good men and true who have their faces forwards, and who do not fall into the absolutely unproven guess of the correlation and conservation of vital with physical "forces,"—a view which dwindles down the study of life to a correlation and conservation of its physical details in the pickle-bottles and dry bones in museums, to the neglect of its vital principles. And then Hunter would rejoice that his museum is under the care of the Crown, and is not mixed up with the museum of the Royal College, and would be glad that in his truly natural classification of that physiological museum which he made, and which is the true pride of our profession, he gathered his numerous specimens of the wonders of the living world into groups of organs—breathing organs here, organs of sight there, organs of hearing, of smell, of touch, in due order,—thus intelligently studying the several members of a life within the circle of manhood, the completest terrestrial form of life; working within the outlines of the completest life, rather than comparing life with life, and modestly putting forward his vast study of the living frame in terms of admittedly incomplete knowledge of its parts: instead of taking the whole man, of which we know just a dangerously little knowledge, and comparing him with the whole gorilla, of which we know but a dangerous little, and then with the crocodile and the amphioxus and the salpa, of which we know but dangerous littles, until our once charming natural history becomes a mental way by dangerous littles into the prehistoric mud, there mentally to sit in the damp and look into the dark.

It is very true that to know and to think all you can to widen the knowledge of fact-truth is in its way commendable. My point is clear. I claim for Hunter that, great anatomist as he was, he was saved from mere doctrinaire tendencies by his noble aim to follow and improve the art of surgery. You might have learnt much zoology and comparative anatomy from Hunter, as I did in like manner from Mr. Hilton and Sir William Gull. With it he aided you to learn, and fixed in your memory some important rule of surgical treatment. And you were the better surgeon or physician for your physiology, and perhaps would imbibe an ardour in the same spirit to find matter in nature knowledge to bring in further aid of practice in the future. But the successors of that Hunter who thus taught physiology in aid of professional knowledge have handed over physiology to the special biologist, to be taught rather in competition with than in aid of professional knowledge. The rise of the species biologist, who knows nature like the boys know birds'-eggs, for the sake of knowing, and is nobly superior to mere utility, nobly useless,—his rise has brought a problem of increasing importance into the question of education, and chiefly of medical education. The new species influences us in several serious ways. Thus:—1. In that enthusiasm which would find it the highest glory to know perfectly the common frog, he pursues facts without due regard to their utility or principle, and thus the science of physiology is fast becoming very like that Chinese philosophy of facts which Hunter ridiculed. 2. As he knows for knowing's sake, unburdened by duty, he does not estimate the smallness of the time the student for duty has to devote to inapplicable fact-heaps; and presses for more of that student's time, already too small, in which the student has to learn his professional duties. 3. The *aim* of his system of knowledge not being towards utility, there is a neglect in enforcing the useful bearing of that comparatively small part of the fact-heaps, which applies to the student's ultimate professional services. Meantime, the trainers of the student for professional duty having given up physiology to the professed biologist; the bright influence which Hunter brought to bear direct from his physiological knowledge to his surgical enthusiasm is lost to the student. In short, physiology is made too large and too loose for the student's grasp, and has not its chief bearing in the direction of his future service. And if it is true, as I hear, that the zoological biologist is to bring in a law that at the London University no one shall join Hunter's profession unless he previously dissects some frogs and snails, surely this is not only contrary to common sense, but it is contrary to the analogies of the biologist's own proper field of inquiry. For if it be true that nature, in developing the human embryo, raises it through a stage of fish and reptile, just as the medical embryo is raised through a stage of botanist and zoologist; yet in the human embyro the stages of fish and reptile are very fleeting, nay, merely suggested. Nature does not make the little mannikin into any kind of fish or reptile, and certainly does not set him to do the work of a little fish, whatever that is. Why then should the zoological biologist, devotee as he is of stages of development, wish that the young medical embryo should work as a larva, and should not only dwell long in the zoological stage, but even do the proper work of a zoologist? If I remember rightly the zoology I was taught, the only sorts of creatures that work in their larval stages are cockroaches and silkworms and sea-urchins, unless it be professional zoologists. If it be intended to make the student obtain a realising sense of the time and patience which have been actually consumed in the work of the biologist, that is a result desirable in its way nowadays when people carelessly use the fruits of others' labours without ever thinking of the effort those labours involved. I believe it would be well if over the lion's den in the Zoological Gardens it were so inscribed how hard it was to catch him, that the couples who play the higher animal on the safe side of the bars could feel what lion-catching means. And the same principle may apply when the chase is not the chase of the Lion, but the pursuit of the closed end of the bowel of the Cockle. Nay! That the battle may wax warm indeed in the latter pursuit, all readers of zoology are compelled to know.(a) Yet surely it would be a pity if the following up of the celebrated blind end of the intestine of *Terebratula* should make any student blind to the great ends which Hunter's life was so nobly devoted to achieve.

The main point I want to urge is that our youth need to be taught more by the professional worker, if less by the professional knower. I believe that if the right kind of nature-knowledge—such as bears on the great questions involved in his life's duty, such as is carried in mind and used by those who themselves discharge the same life's duty—were imparted to the student along with, and in the course of, his practical training, there would be far more of earnest work in fruitful departments of physiological knowledge; clinical chemistry would be advanced. The descriptive characters of disease would grow into a true science. The diseases to be recognised and the art of recognising would be more sure; and the true purpose of the profession would be furthered, even if the more fruitless departments of biological lore might progress less in that futile way which tends to make their chief professors' main apparent aim to become a Doctor of doubtful Theology.

Under Hunter, and after his death, many surgeons set themselves with enthusiasm to found the rules of cure in the laws of nature. Museums were set up, and work was earnest and hopeful. Now, what we observe is that the enthusiastic young minds of the profession are very apt to be drawn aside to professional biology, depriving our ranks of some of the best workers, or causing our best workers to gather knowledge along lines which have not the practical bearing Hunter maintained; so that those who follow such lines are not thereby led into usefulness. Surely for our hopes of the future we must ask whereto does our proceeding engage the minds of the young? Do our youth now form or even frequent museums, which embody inquiry? I fear not. They are forced to be too long over their biological fact-heaps. I doubt if the professed biologist's physiology stirs any enthusiasm in medical students; and I do not speak without a certain experience. Nothing in the way of useful physiology can be so attractive as Hunter's preparations in the Hunterian Collection. Does the modern system send young men to this priceless treasury? In answer, I will just mention that I read in the year 1859 every preparation in the large room which contained the Hunterian Museum; and this took me four months, from ten in the morning until four in the afternoon. Well, in all those

(a) I refer to the following, in "Elements of Comparative Anatomy," by Professor Huxley (page 27, footnote):—"Professor Owen, in the second edition of his lectures on the 'Comparative Anatomy and Physiology of the Invertebrate Animals,' published in 1855, thought it not unbecoming to sneer at this discovery,—'There may be blindness somewhere, but I think not at the termination of the intestine of *Terebratula*' (*l. c.*, page 403). As my statements have subsequently been fully borne out by Mr. Albany Hancock and by M. Lacaze Duthiers—two of the best minute anatomists of the day,—I trust Mr. Owen is now fully satisfied as to where the blindness really was in 1855."

four months I never saw a single inquirer in the Museum. I was there from ten till four daily, and all that would happen was that on some days a saunterer would come in (usually with his sweetheart) to look in an agreeable mutual horror at the dreadful things in the bottles! I beg pardon, I did see one inquirer one day, and he deserves mention. There was a hubbub one day, and a distinguished-looking gentleman came to me, led and followed by several of the minor officials of the Museum; an anxious inquirer was to them an interesting specimen, and they brought him to me because the then curator was out, and as I had seen all the specimens they thought I could answer the gentleman. When he spoke, I found that the night before he had made a bet that the woodcock has no bowels, and—honest man as he was—he came to the Museum to settle the matter. He was the only inquirer I ever saw there, and I am sorry to say he went away very dissatisfied. He wouldn't believe me, and did not conceal that he thought nothing of a museum which had not a woodcock so prepared as to answer his question.

What Hunter's life shows is that the value and power of a man does not consist in what he knows, but in how he knows it, and whether he can use it. Hunter's was a character quite distinct from the professional knower. In studying his life some great fallacies, such as spoil many lives, may happily be exploded. In him you see that it was not his knowledge, vast as that was, which constituted his power. And we of this generation, who seem to commit ourselves deeper and deeper to the fallacy of confusing knowledge with mental power, may well consider the life of Hunter. Knowledge may be a token or even a proof, as it is an instrument, of power, but it is quite false to regard it as a *cause* of power. The bending of the trees to the west when the east wind blows does not induce people to think such a bent of the trees to be the cause of the east wind; but similar fallacies of less open instance are often allowed. Thus, to take an example. When a river flows through a fertile valley, the geography books commonly say that valley is watered by the river, as if they looked on the river as the cause of the watering of the valley. But, in truth, what seems to water, only drains; once in the river, the water is away to the ocean, and waters not the thirsty land, but the sea that is wet enough already. The river is the drainage, not the water-supply—the effect, not the cause. Now, it is just the same with the knowledge of biology in such a mind as Hunter's. There flows the knowledge visible enough in his fertile mind, but whoever is concerned in raising the like fertility in another mind must rightly know the source and spring whence that knowledge came, and not look only to the mere body of learning. He who would make a Hunterian mind by cramming a young man with biology is very like one who, hearing that a river watered a fertile valley, should, to fertilise another valley, dig a long trench, and fill it with water. But, in fact, it was not the possession of the knowledge that made Hunter's mind great and fertile. It was the continual desire and getting of the knowledge for use; so that it was a living stream, and not a stagnant pool. For as the river flows and endures by reason of the water the uplands have attracted to themselves, so the stream of knowledge in a human mind, to be useful, must come down from activities of thought which demanded and drew down a supply of principles to the dry dust. For instance, to the Chinese dry-dust fact-heap of modern biology.

The great fallacy of the age is the vulgar fallacy that knowledge is power. But not all knowledge is power. Only the knowledge you have faith and aim to use is power; and the instinct of each mind is, I believe, a far better judge of how much knowledge it has faith and aim to use than we commonly suppose. Knowledge is not power. Any fourth year's student knows much that Hunter did not, and could not, know. But where is the power of Hunter? Power arises by *training in the use of knowledge*. Consider the difference between training and teaching. The *teacher* carries over the things he knows, and fixes them in the learner's memory; the *trainer* takes what is in the memory, and converts it into an organ for the pupil's own use. The store of memory of things taught is totally distinct and separate from the trained mechanism for use of knowledge. And these two different things—the store and the mechanism—are in separate places in the brain. It is only of late years we can be sure of this. We have it proved obviously in the case of language in what is called Aphasia. In aphasia, a person paralysed on the right side of his body has lost the power of using language, and yet understands all you say. Obviously, then, the understanding of speech is in one place, and the power of framing language is in another place, in the brain. The same is true throughout all human acquirements. The power of knowing is the fruit of knowing, and the power of acting is the fruit of acting. There is knowledge stored in one place, and the power of using it stored in another place. *Teaching* is the storing of knowledge: it may be done quickly. *Training* is the creation of an organ for use of knowledge: it needs much time; it is a slow process. The trainer has to convert the pupil's knowledge into motive, his desire into patience, his will into skill. Every good trainer aims to raise up in the pupil's mind a *self-training faculty*, which shall itself continue to train more and more knowledge into motive. By such training knowledge becomes power. But knowledge, as given by the mere *teacher* into the memory, is not power; it is so much weight, which by training may become the instrument of power.

Now, the self-training spirit is natural to some men—to all great men. On the other hand, the self-training spirit is almost absent in some men. These are the fools, and trouble everyone as to what is to be done with them. But the vast majority of men have some self-training faculty; and the proper aim of education is to support this, which I may call the vital spark of character, by help from the training faculties of others.

Every man is born with so much possible desire, and with so much possible power is he born. Desire is even greater than power; it is the possibility of power. A man's power cannot grow beyond the limits of his desire. The great fallacy of the age is in thinking that education is packing a man's knowing faculty with a heap of facts; and this fallacy is founded in the belief expressed in the vulgar and erroneous proverb, Knowledge is power. Large amounts of knowledge which cannot be brought into present motive and use interfere with training. Such knowledge absorbs the pupil's intelligence uselessly. The pupil rests his attention on what he cannot use, instead of fixing it on what he can use. Such knowledge diverts the pupil from the trainer's aim. It raises vain questions to which there is no answer, yet which may be more attractive than the aim the trainer has to create. The pupil thinks himself wiser than the trainer. The trainer's always slow process is rendered more slow and more difficult. Now, bearing in mind this distinction between *teacher* and *trainer*, and remembering that these two act on entirely different parts of a pupil's brain, let us note that in medical education, whilst the average pupil is for usually two years or more in the hands of the teacher of more or less aimless scientific knowledge, the average pupil is only nine months in the hands of trainers in skill; the trainer in medicine has him three months, and the trainer in surgery has him six months. The medical trainer has in three months to make a pupil experienced and skilful in using the most complicated system of means of recognition and of operation that are to be found in any art under the sun. And the natural consequence is that he very often does not succeed; that the pupil in a vast number of cases goes away with the dust-heap of biology department wasting into oblivion, and a merely abortive or embryonic organ of skill. And this state of affairs has arisen because the aim of the biologist has separated and diverged from the aim of the physician. The one seeks the largest knowledge of living creatures; the other the recognition of diseases for the purposes of prognosis and management. In Hunter's mind, the aim towards surgery dominated all serious divergence into the professional nature-knower. Now we have the aim after the largest possible knowledge of living creatures in the hands of the professional biologist and physiologist. The physiologist is endeavouring to reach the most minute and thorough knowledge possible of all the textures in the frame. I do not quarrel with this. It is most praiseworthy.

I must ask of your justice to notice that in all this nothing is said against science. I only claim that the right teaching be given at the right time, so that each student may have a chance of being trained adequately in the practice of recognising the kinds and varieties of diseases and accidents, and learning to use the means of relief. Give him nature-knowledge in such a manner as will serve in establishing principles for his practice, but don't lead him hurriedly all afield into professional biology. If you teach him rightly as much nature-knowledge as he has fairly time to know well, he will not forsake the pursuit of more in the earlier and less occupied years of his practice. He is all the more likely to seek to know more when he has the satisfaction of knowing well, and

feeling the use of what he knows; whereas a smattering omniscience raises vanity and takes off the freshness from inquiry. But now, by publishing the pass-lists of the schools, a pressure is put upon every school, compelling it to devote itself more and more to the teaching of fact-heaps, because fact-heaps show in examinations, and training cannot obtain credit in examinations. Thus we often see men who are naturally devoted to professional duty, and who have been constant in the wards,—we see such men snubbed or plucked, whilst a quick learner of fact-heaps passes with *éclat*. But I do not speak against Science, rather confiding in her natural attractions, and believing that although by teaching science you do not train, yet by good training in pathology and medicine you raise a desire for more and more knowledge of the laws of life, as bearing on the human organism, at least in all those who are capable of anything above mere routine, and who could be benefited at all by any science in excess of the least they can get a living with, teach it when and how you will. Far from disregarding the study of life, or being willing to throw a slight upon it, I would declare that my most enjoyable years have been spent in its pursuit, and I would humbly recommend the like pursuit to all who in their earlier years have leisure for it. They were almost my happiest thirteen days which were spent in watching three embryonic cells in the dorsal fin of a living young salmon, and identifying them and sketching daily their changes, whilst two of them extended out to join a bloodvessel, and the third extended out to join the other two, and thus an arched loop formed, into which loop the first rush of blood occurred under my observation, the blood rushing first into the two cells, and at last into and through the third. Or those months spent in searching through very many transparent water-dwelling larvæ of insects to discover the ending of nerve on muscle, until I lit upon an instance where it can always be easily and certainly seen in the living creature; although no one since its publication has repeated this easy observation, which is even at present the only English description of a mode of nerve-termination now universally taught on the Continent. Or in watching the Rotifera, wherein I first explained the true nature of the cilium-tags, and pointed out the presence of a water-vascular system in *Limnias* and *Floscularia*, the tube-valve of the latter, and the constancy in all these animals of an organ of sense on the back of the neck, and of two symmetrical sense-organs at the sides, etc.,—in the course of which watchings it chanced to me to be very near making a medical invention, only that it was in use already, for I saw most obviously a constipated rotifer of the genus *Euchlanis* give himself quite successfully an enema with a syringe shaped exactly like those green indiarubber bottles in the chemists' shops, only much smaller—all which is duly set forth in the *Transactions of the Linnæan Society*, vol. xxiv., 1864. Or in following the individual Stentor for eight hours at a time, whilst a crest on the side of his trumpet-like body, which crest was described as a generic character of some Stentors,—whilst this crest turned slowly round the creature's body, and proved to be the new head which should carry off the old tail in the self-division of that body. Or, in short, in eight years' continual study of the life of transparent inhabitants of fresh water. But at the end of which eight years there grew in me by experience the conviction that such study carried to excess takes one away from those vast masses of information and experience which constitute pathology and clinical medicine, and which it is one's duty to know thoroughly if one is to keep at all within the lines of medical or surgical practice, which it is one's duty to know not as things one has heard of, but as far as possible to know as things seen and seen again until they are familiar, and seen in such a way that the mind rises to meet each emergency with a plan of management. To teach every student to recognise rightly every disease, and to have promptly ready a proper management,—such is the proper aim of medical education. And matters of knowledge that do not help men to recognise and to meet disease should have a moderated proportion to the training in use of matters that do help to recognise and meet disease.

I will illustrate my meaning by a case to show how the excess of teaching tends to bewilder and paralyse the pupil against the efforts of the trainer; and, if the trainer fails, tends to carry the pupil from the extreme of science to the borders of quackery, which are less distant than you might at first suppose. Let it be the case of indigestion; and let us compare the mere knowledge that a modern student is taught, with his possibilities of trained skill and power in dealing with the case.

What the learner is *taught* as to digestion is this:—That the process of digestion is the solution of the food in the stomach by the saliva, and by a juice from the stomach itself, which juice acts partly through solution by three several acids, and partly through the peculiar action of a principle called pepsin, which aids the solution and prevents decomposition; the process requiring also that the food be churned about by the muscular wall of the stomach, and kept at a certain temperature. The juice is drawn by certain glands from the blood, which requires to have certain qualities, and which flows in vessels in the stomach-wall. These vessels are widened and narrowed by the sympathetic nerve; and, finally, the pneumogastric nerve has a certain influence on the work of the whole, keeping all the processes in play. In addition to that knowledge, the learner is taught the microscopic details of these numerous parts, all and several. *There* is plenty of knowledge, if knowledge is power. That is the biologist's view of digestion. Is such knowledge power? Consider your case of indigestion. What is the cause of the indigestion? Is it that the saliva is wrong or deficient? or is it the gastric juice? and, if the gastric juice, is it that there is not enough of it, or too much of it, or is it wrong in quality? and if so, is it the acids deficient or excessive? and if so, how many, and which? Or is it the pepsin that is not enough, or will not prevent decomposition? Or is it that the stomach-coat does not churn enough, or does it churn out the food too quickly? Or, instead of looking to one or more of these special causes, are we to look to the glands being wasted or obstructed? or is the blood impure or thin? or are the vessels thick? or does the sympathetic nerve widen or close them too much, or at the wrong time? or is the pneumogastric nerve disturbing instead of combining all these acts? Yes! knowledge is power; it is a great power of asking questions. But when the biologist has set all these questions working in the student's head, how far does that help the training physician to *train* the student in the art of treating indigestion? What, then, does the trainer now do? He considers the forms in which indigestion appears. He does not make much ado about its possible causes, leaving these perhaps in the fact-heap departments of the student's brain, with danger of their serving perchance for mild quackery on occasion. He divides the forms of indigestion into classes, according to his means of relieving them; and he trains the pupil in recognising these, and also trains him in the proceedings for curing them,—which is the only sound, sensible, and proper plan.

And to thus train a pupil through the forms of all diseases requires a very long time, whereas, as I have said, his trainer is allowed a few months. Yet the pupil has been two years or more in the hands of the biologist learning aimlessness. But I find a few months of little use in training a pupil. If you only had to *teach* him it would be little, but in order to train men you have to know something of their nature. For you have, as I said, to convert, and train them to convert, their knowledge into motive, their desire into patience, and their will into skill; and in a few months you have hardly found out what sort of a man you are dealing with, and much experience hardly enables you quickly to know your man. For not only are all natures not alike for training purposes, so that some need training one way and some another; but you find that equal points of character in different minds are of variable value as leading features. It is just as it is in botany, in which you know characters that are fixed throughout one order of plants become very variable in another order. I need not remind you, for instance, that the pore-opening anthers which are constant in the *Ericaceæ* are very variable and inconstant in the *Solanaceæ*. And everyone knows that the imperfect condition of the flower which characterises the *Achlamydeæ* is reduced to a mere specific trait in the *Fraxineæ;* so that the ash has no petals, whilst its cousin the lilac is a rich and beautiful flower. It is just so with sorts of pupils. A character or power is constant and trustworthy in one kind of pupil, yet that same character or power becomes inconstant and variable in another kind of pupil. In short, one kind of men are best trained with due regard to their imagination, yet another kind of men require the whole address to be to their reasoning faculty. But meantime no experience will save you from the necessity of knowing each one if you are to train him well; for unless you know a man you may be hanging the knowledge on a point of his mind whose activity he least enjoys, and naturally least encourages.

Now, besides this truth that the biologist takes up relatively too much time, and leaves not time enough to the practical physician, there is yet another aspect of this

important question which must not be overlooked; and that is, that the biologist and the physician work in opposite directions, if upon the same lines. And it is very curious to me that no one notices this leading truth. The biologist, if he shows any aim at all, stretches himself out to learn the first beginnings of life and its smallest minutiæ. Now, the task of the physician is in quite another direction. I will show you what I mean. Life is in nothing more mysterious than in the strange want of relation between its beginning and its end. Life comes as by spermatozoon, and breaks down by mechanics. The biologist's question is always driving at the origin of life, but the physician is concerned with the wear and tear which comes by mechanics. If we follow the biologist through his long story, what does he do towards touching the mystery of genesis, or help us to conceive how a little thing shaped like a frying-pan, and so small you can scarcely see it with the best microscope, shall carry over the shape of the paternal nose, the colour of his whiskers, and even his mode of thinking, for sixty odd years? Towards that strange truth goes the biologist. He has yet to explain how it correlates with the physical forces. But my point is that the biologist's question of origin and development is not the same as our question, when we remember that we [are concerned in the breakdown of life, and that life, which begins in mystery, breaks down mostly in very traceable wear and tear. Just think of the pretty foot of the maiden, how it grows into the corny, knuckly extremity of later years. So, though lost to sight, every fibre of us wears and tears. The heart's beat strains the vessels, as walking strains the foot. Dust chokes up the lymphatics and glands of the lung, until its texture breaks down. The knee-pan in every man by forty has a bad-looking patch worn on it. And the knowledge of these changes, which is pathology, constitutes a vast field of inquiry. It is a most important field for the practitioner. The physiologist considers the origin of the spirit of life, whilst we have to consider the very different question of how the living thing beats itself to pieces—a question which is so often purely mechanical that I am tempted to say it is nothing like the question how they grow, any more than the wearing out of shoe-leather is like the development of cow-hide. Preventing wear and tear by soothing and supporting is nineteen-twentieths of the function of the physician; and wear and tear has to do with severity of use, and not with history of development. Supposing that by a chain of argument to which Schleiden, Remak, Virchow, and Darwin each contributes a link, I prove that the tubercle-cell is a direct descendant of the ovule of the original gorilla. In what does that at all tend to help me cure tubercle? It goes the wrong way, if along the right road. To the physician the cause of disease is the preventable cause; but so ignorant are we of the causes of development of tissue that to find that a disease includes development of cells, tends to render it mysterious and place it beyond our reach, and to make us so far powerless in prevention. That side belongs to the biologist; the practitioner has to consider the shocks and injuries that are the preventable causes of disease. The point I urge is that there is a certain neglect of training and of the aim of training in completing the course of medical study. Our modern tendency is to spend the larger part of a man's time in teaching him professional biology; and there is growing up a generation of physicians, through the long prevalence of that system, who are so imbued with the scientific spirit as absolutely to forget in the highest issues that their profession has any practical aim. How else can we explain this fact: that at the highest examination for the degree of M.D. at the University of London, not three years ago, the case set before the candidates for commentary, to test their power of knowing disease when they meet it, and of treating disease, was the case of a man who died without the physicians having been able to make out his complaint at all. Now, it is evident that whether the poor man had the symptoms which would have revealed his disease, or whether he had not those symptoms, his case could not be a fit test of skill in recognising disease, let alone treating it. For if the symptoms of the disease were present, they were not noticed, so that the observation failed. But if the symptoms were absent, why choose such a case, and set an impossibility before the candidates? At Cambridge they don't for the wranglership set problems that they cannot answer themselves. And if you reply that the examiners wanted to try how much the candidates could produce of learning, that is just my point. It shows that the examiners called for scientific information towards an end which they could not achieve themselves; as if the learning were everything, and the end nothing. Now, these examiners were such able men that I can see no explanation of the proceeding, except that they were so scientific that they only thought of an intellectual puzzle, and were so afraid of not making that puzzle worthy of their clever candidates, they made it quite insoluble. But that was letting go the practical aim of the profession, and I mention it because it is a *sign of the times*. But there is a greater sign, and that sign is the Nomenclature of the Royal College of Physicians. That, you may remember—for I have no doubt you have not looked at it lately,—is a book to fix names of diseases for the registration of deaths and of sickness. It is in five languages, which may indicate a hope that if it is of no use in this country, it may be found of some service in foreign parts. And one of the languages is a dead language, which suggests that at the worst there is yet another hope—that if it is rejected amongst the living, it may chance fare better amongst the dead. In it there are 1146 names for diseases, and yet there is no attempt to show a desire that the names shall be of practical use. No attempt is made to give names for those groups of symptoms which leave the best physicians in doubt as to the nature of the case,—which even left the London University examiners in doubt about the case I just now mentioned. Am I not justified in speaking thus strongly, when, as a typical instance out of a hundred, you observe that the College gives one name for Typhus, and one name for simple Cyst of the kidney, which latter condition no one can know of, and if he could, no one need care about? Whereas it were surely possible if a practical aim were before the College, and it were surely most valuable, to specify some forms of typhus, if not some of its associated accidents, so that the distribution of one or other of the forms in different epidemics, or in different places in the same epidemic, could be recognised by registration of such forms. We all know typhus. What we want to know is what governs this form and that form of typhus in its distribution and causation. Yet the College takes no notice even of the existence of kinds and degrees, so that all that can be registered is the relatively bald and useless fact of the occurrence of something thought to be typhus in any district. Why not so divide typhus by its leading characters that we can see whether given districts and circumstances give rather one sort of typhus than another, and so on through a number of other diseases, instead of crowding names of unknowable and practically valueless items of morbid anatomy? To apply this Nomenclature you must have the certainty of a post-mortem; and you know well that not one in 300 of the bodies that die undergoes a post-mortem inspection. If you consider the book you will see that not one in twenty of the names could be used with certainty without an inspection of the case. So it is a book of names that does not name what you might know, and plentifully names what you cannot know. Well may it be in at least one dead language! And the College are going to issue another edition; so there will be plenty of copies. Then a copy may be torn and put into each coffin, as those Indians put a broken bow and arrows with the dead warrior for his journey. It may be that down among the shades in the poplar groves of Persephone they would amuse themselves settling their exact nomenclature on the College Register.

I mention these *signs of the times* in no spirit of mockery,—very humbly. I feel no desire to look around for your approval. I have an earnest belief that Hunter's profession needs recall Hunter's spirit, and once more, instead of wandering in professional biology, and proceeding as if nature-knowledge were their ultimate aim, pass through and take such a knowledge of nature as is helpful, always in a spirit of self-control, and always keeping their great purpose in view.

We want less of such biology as takes all purpose out of the universe, and aims at professing a theology of high apes. We have a right to resist, as physicians, the drag upon our profession of workers in such an aim. But Hunter's back was towards all apes, and his face to the future. Because he did not make futile biology, but took pains to bring in the knowledge of nature to the help of man. Infinitely energetic as he was, his energy was towards utility. Modestly he claims your remembrance. A true utilitarian, if any skeleton should be of use to fix the standard of human greatness, he would secure it at all cost in the Irish giant, whom he accordingly followed with triumphant tenacity of purpose. He did not do as the great author of the utilitarian philosophy, whose fleshless bones, clothed in a coat, were, by his will, to sit at the meetings of his followers, to give the greatest pleasure to

the greatest number of Benthamites. Hunter showed no unworthy touch of self, either past self or future self. And what was it that kept him so pure, so that he was not like the speculative leaders in biology, who pursue their subject regardless of the aims which kept him simple, until their subject, however elaborate, becomes as debased in its departure from function, as it is florid in profusion of ornamental minutiæ? It was this: the maintenance and steady following of his aim as a surgeon. That kept his mind from wandering into vain-questioning biology, which wandering I hold must be judged twice, and not passed offhand into the light of the glory that surrounds Galileo, and Newton, and Dalton, and other great philosophers, who pursued knowledge for the sake of the knowing, or at least with no evident direct aim towards utility. For those philosophers offered truths which enhanced the sense of personal dignity in the learner's mind. Nothing in their discoveries tended to spoil the knowing thing for the sake of the knowledge acquired. You may know the laws of light without disturbing your own light. But in vain do we overlook the truth that a new element is necessarily introduced when the pursuit of the knowledge touches inquiries that are charged with inferences as to individuality and its destination. Such knowledge plays on other parts of the learner's mind besides his knowing faculty. So it is only fair that time and circumstance be considered in such learning. However unfashionable and unpopular it may sound, and however unworthy of an age which, in the false faith that knowledge is power, will have the tree of knowledge up to examine its roots lest anything should remain unknown, I believe it should be said and held that when any facts are raised into opinions which tend to greatly change the learner's views of his own individuality, the question is not simply one of knowledge and of the glory of discovery; lest theorists should go farther than they have gone, and hasten to raise incomplete fact-truths into unworthy and debasing general belief. For all human history has shown that those who hold general beliefs which animate individuals with a sense of personal worth, surely displace in the human struggle for existence those who hold general beliefs which abase and demean their individuality. So that if in his wanderings the biologist touches by necessary inference the value of individuality in his average fellows, the question of the worthiness of such biology is more complicated than any question in regard of mere knowledge, because it affects the knowing faculty. And if experience should show that it harms that faculty, the glory of biological knowledge may come perhaps more under the analogies of the laws that make men cover some fact-truths of their frames with due clothing. And should it prove that a training in exalted views of their individuality is essential in the average members of a strong community, overmuch display of speculative biology may ultimately come to be regarded as an exposure, and not gloried over, lest the young and experienced learn to think meanly of the house into which they were born, and, knowing no better, believe their mean view to be secure in the sacred name of Truth; whereas at best it is but a phase in the speculative struggle over the half-sacred name of General Truth. I say advisedly the half-sacred name of general truth. For no complete answer all these 1877 years has been given to the question, "What is truth?" and, until we know the answer, how can we tell but that there may be something required to make human views of general truth completely sacred? And thus it may prove that Hunter's dealing with nature-knowledge was right when he instinctively perceived that the true sanction of biology is utility, and its proper method the study of function within the circle of the completest individual life.

According to a return published in the *Journal Officiel* of the 20th ult., the excess of births over deaths during the past year in France was only 105,913 in the whole country, and in twenty-six of the departments the deaths have exceeded the births.

The New Liquors Act, Victoria.—The Parliament of Victoria has passed the new Liquor Sales Act. It declares that no new licences for public-houses shall be granted for three years, except for houses having thirty rooms; and that any house required for a public-house shall not be licensed unless the sanction is obtained of a majority of the neighbours. The grocers' licence, which had been struck out, has been restored. As to the Sunday difficulty, no man shall be deemed a *bonâ fide* traveller who has gone less than ten miles on Sunday.

ORIGINAL COMMUNICATIONS.

ON REDUPLICATION OF THE CARDIAC SOUNDS.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Clinical Medicine, Senior Physician to King's College Hospital.

There are but two or three points in Dr. Barr's rejoinder to which I feel called upon to reply.

If Dr. Barr had read Dr. Patrick Black's pamphlet "On Asphyxia," he would have seen that the author has appended to an old theory some novel speculations of his own, especially with reference to the final cause of the relative weakness of the right side of the heart, and he would scarcely have thought it "strange" that I spoke of "Dr. Black's theory of asphyxia."

In representing the triple cantering sounds of the heart by "rat-a-tat," I no more "said" that the first element of the so-called reduplicate sound is louder than the second, than in the analogous representation of the triple friction-sound by "rub-a-rub" I "said" that the sound produced by friction of the auricle is louder than that which attends the ventricular systole. But as such a misconception, however improbable, has now been shown to be possible, I have altered the diagram which I have had prepared for teaching purposes. The "rat-a-tat" is changed to "rat-tat-rat," and the "rub-a-rub" to "rub-rub-rub."

Dr. Barr says that I now ignore Dr. Leared's theory, to which in my lecture in the *Lancet* I attached importance. The fact is, that since I have read the recent discussion in the *British Medical Journal*, between Dr. Leared on the one hand, and Drs. Williams and Broadbent on the other, I doubt whether any sound results, as Dr. Leared supposes, from the impact of moving blood against stationary blood. But if sound did result from the blood being driven by the contracting auricle against the stationary blood within the ventricle, I should expect it to be best heard, not at the apex of the heart, as Dr. Barr assumes, but over the point of collision—that is, at the junction of the auricle and ventricle. Dr. Barr's assertion, that my inference that a sound resulting from the contraction of a dilated and hypertrophied auricle would be best heard over the auricle "is an unfair one," is quite incorrect and not quite civil. Surely a sound resulting from the sudden tension of the auricle would, like the sound of auricular friction, be best heard over the tense auricle, just as the normal second sound of the heart is best heard over the tense semilunar valves. Dr. Barr repeats his denial that in the early stage of Bright's disease there is any strain on the left auricle, and this notwithstanding the evidence mentioned in my previous communication, that in the course of two minutes the peripheral obstruction, which results from apnœa, may distend the auricle to the point of bursting. It may be safely inferred, from the evidence of high arterial tension in the early stage of some cases of Bright's disease, that there is sufficient auricular distension to explain the so-called reduplication of the first sound in this class of cases.

Surely Dr. Barr does not consider "accentuation of the pulmonic second sound" to be requisite proof of distension of the left auricle when the obstruction which causes the distension is in the peripheral sytemic arterioles. When there is obstruction at the *mitral orifice* the pulmonic second sound is accentuated, for the obvious reason that the tension of the pulmonary artery is increased in proportion as that of the aorta is lessened; but with a peripheral systemic obstruction the aortic tension must obviously be excessive, and it is the *aortic* second sound which is accentuated, as Dr. Sibson has well shown.

DOES THE POISON OF MALARIA REALLY EXIST?

By JOHN SULLIVAN, M.D., M.R.C.P.L.

A work has been lately published by Dr. Oldham on Diseases in Tropical Climates, in which he virtually ignores the existence of marsh malaria. In medical men who have practised many years in the tropics, and who have treated these marsh fevers with success, based on the firm belief that they owe their origin to malarious emanations from the earth, such an assertion produces an effect similar to what might be

expected were a bold and eccentric individual to publish a book in which he would strive, with great industry and ability, to cry down the merits of Milton or of Shakespeare. Why the subject in question should ever be doubted or disputed, appears to me truly surprising, for if there be any effect which can with ease and certainty be traced and followed up to its cause, it is most assuredly the intimate connexion between intermittent fever and the poison of malaria.

Professional occupations will not allow me for the present to take a review of Dr. Oldham's interesting work. I shall now confine myself to making a few remarks upon a strangely vague and hazily expressed paper on "Malarial Fevers," published by Dr. Inman in the *British Medical Journal*.

Dr. Inman makes the assertion—for I cannot call it a theory—that the "so-called malarious diseases are due to cold and chill after exposure to great heat, especially after the body has been exhausted by great toil and fatigue." Has this gentleman ever resided in any malarious or aguish district, especially in a tropical climate? If so, he must have observed many cases of malarious disease, due neither to extremes of heat nor cold, in affluent persons who had taken all necessary precautions against fever, and in whom no bodily or mental fatigue had existed. How, then, has this intermittent fever been produced? Surely he must admit that many emanations proceed from the earth, acting as poisons on the blood in various ways, each having its peculiar affinity for some particular tissue of the body. What was the nature of that emanation from the earth which prostrated almost at death's door the Prince of Wales, which proved fatal to the life of the late lamented Dr. Anstie? What of that which is capable of generating typhoid and gastric fevers, and those organisms which affect the vicinity of Peyer's glands?

Has Dr. Inman ever turned his attention to the results of the long experience of that eminently practical physician, Dr. Allbutt, of Leeds, on the uses of quinine? In all fevers of a septic origin he has found the use of quinine to be invaluable, while in fevers of a specific origin it has proved of little or no value, especially at their commencement. Now, in no fever does quinine produce more striking results than in intermittent fever. That is, that quinine is a valuable agent as an antidote and an antiseptic to counteract the effects of the septic poison of malaria, from which this fever derives its origin.

We know from the process of induction, founded upon long experience, that the poison, always constant in its effects, produces a fever of an intermittent type, and tends towards a decomposition of the blood; that it is generated from the soil of the earth, and not from the air, as Dr. Inman presumes. It is confined to certain localities in low marshy situations, covered with rank vegetation, subject to constant decay and putrefaction, acted upon by a hot sun. Or this poisonous miasma may emanate from a sandy, stony, porous soil, percolated by water running from neighbouring ravines or distant hills, as may be observed along the sandy coast of Peru, where no blade of vegetation is visible, and bad fevers of an intermittent type prevail. Through the crevices and porositics in such soils, a fetid odour is frequently perceptible to the senses, and the decomposing matter exists in the earth itself, which consists of decayed organic matter, covered over by a thick coating of sand, acted upon by a burning sun. No dull, heavy fogs like funeral palls rise suspended over these sandy malarious localities, as we always observe in those which are clothed with a rank vegetation. The sky is clear and serene, but the malarious emanations are very deleterious.

He introduces the fact of Dr. Oldham's having slept in a swamp for the space of one month, on a bed placed two feet above ground. I would recommend him to try the experiment not on one *corpus vile*, but upon, say, half a dozen. He may lay them upon beds placed six feet above ground for greater cleanliness and comfort; he may tuck them in carefully with warm bedclothes for a night or two, so as to exclude the malarious influence; but soon he will find his "subjects" succumb to the influence of malaria, and betray its presence, some in one way, some in another, according to their difference of constitution or of susceptibility; due not to the alternations of heat and cold, but to the surrounding penetrating blood-poisoning vapours.

Dr. Oldham's powers of resistance have been, no doubt, remarkable; but, for humanity's sake, he should forbid the use of his experiment to his friend Dr. Inman. I have attended daily for many years in Cuba numerous cases of yellow and dangerous intermittent fever; I have been constantly exposed to those influences which are supposed to generate such diseases; and yet I have providentially escaped from them. Whether this be owing to habits of insensibility, arising from long acclimatisation, or from some peculiar idiosyncrasy, I cannot say; however, I should never dream of inviting any friend of mine to come out and pay me a visit in Havana, especially during the unhealthy season, and expose him to an attack of yellow or pernicious fever. For to this comes the experiment of Dr. Oldham: confident in the non-existence, or in the innocuous quality of malaria, he throws a man off his guard, and invites him to "go and do likewise."

Dr. Inman asserts that men who work hard in the heat of the day, followed by alternations of cold by night, are liable to attacks of dysentery, hepatitis, intermittent and remittent fever. What a mass of diseases of an entirely distinct character, both as to their origin and to their symptoms, does he pile one over another—*Pelion super Ossa!*—some of a specific, others of a septic origin. What different effects does he derive from one and the same cause! I beg to tell him that he labours under a profound mistake. Exposure to alternations of heat and cold may give rise, through suppressed perspiration, to a congested state of the intestinal mucous membrane, causing diarrhœa in a cold, or probably dysentery in a hot climate; may give rise to congestion or inflammation of the lung, of the liver, to some rheumatic affection; but it can never generate fever and ague, which can only result from exposure to the malarious emanations from the earth. And that such a poison exists, I am as confident as of the existence of that poison which generates typhoid and gastric fevers. Moreover, I conscientiously believe that to propagate the notion, whether by writing or otherwise, in the minds of the public, that fever and ague are not the products of a telluric specific poison, is tantamount to proclaiming to the public that due care and attention to proper drainage and sewerage are not essential for the public safety, in order to guard against the ravages of typhoid and other fevers of a similar nature.

In the more swampy and unhealthy districts in Cuba the nights are warm, therefore alternations of heat by day and cold by night cannot give rise to the formidable intermittent fevers of daily occurrence in that island.

Dr. Inman speaks of the Ashantee Expedition as calculated to illustrate his proposition. I believe the case to be exactly the reverse. I happened to be in England two years ago, when the Queen distributed in Windsor medals to the soldiers who had returned from that Expedition. To any medical man accustomed to the treatment of disease in tropical climates the very sight of these men, as they stood in rank and file, was well calculated to convince him that they had returned from a climate under which they had been exposed to the effects of a malarious blood-decomposing poison for a longer or a shorter period of time,—that sallow, jaundiced, shrivelled skin, that haggard and careworn expression of countenance, lighted up now and then with a beam of pleasure on being addressed in the kind language of the Queen.

There can be no doubt that had it not been for the admirable precautions taken to protect these men against the effects of the climate, by proper attention to food, clothing, and the proper administration of antiseptics, few would have returned to tell the tale of their hardships. Although the campaign had been a short one, still their appearance sufficiently indicated that they had suffered from fever—a fever produced not from the transitions of heat to cold, the effects of which would have been transitory, but engendered by a poisoning of the blood from the malarious influences in tropical climates.

Dr. Inman makes another astounding discovery in his essay upon "Malarial Diseases." He assures us that vessels coasting along or anchored off the coast of Africa are free from attacks of fever, where precautions are taken to shut down the port-holes or windows at sundown, and thus exclude the cool night-air from the land. Does he really ignore the existence of a deadly paludinous emanation producing malignant remittent bilious fevers which prevail along the coast of Africa, due to peculiarities of soil under a burning sun? Does he mean to tell us that by shutting down the port-holes at sundown he only excludes the cold night-air, and not the unhealthy malarious land-breezes?

According to Dr. Inman's notion, a return excursion of some hardy adventurous Londoners from Ramsgate to London-bridge would be attended with as much peril to life by the admission of cold night-air through an open port-hole, on the eve of a hot summer's day, as though their craft had been cruising along the coast of Africa!

This idea is certainly, if at all encouraged by the public,

well calculated to inflict a heavy blow upon the principle of good ventilation. If this theory is to be insisted on, what explanation can be given of the fact that a man who resides in a malarious district will be unable, sooner or later, to resist the effects of the cause of fever and ague? How many such well-fed, well-housed, well-clothed, and well-to-do persons I have attended, who, when symptoms of blood-decomposition began to appear, which had resisted all remedies capable of acting as antidotes to the poison of malaria so long as they continued to reside in a malarious locality, could only find relief in a change of locality!

But, to settle the question in debate, let some believer in Dr. Inman's doctrines—for the public welfare, safety, and instruction, in imitation of those devoted children of science who swallow a variety of poisons in small doses in order to test the properties and effects of each—subject himself to the influence of the poison of the "so-called malaria" in a swampy malarious district. I fear he may not meet with a dose of the poison in sufficient strength in the British Isles; let him, therefore, try the Campagna near Rome, or the Pontine Marshes. I should hope that he may procure all he may require for his experiments in that delightfully unhealthy spot. But I must lay down one condition—he must not travel through the Pontine Marshes seated in a comfortable carriage with closed windows, or, should he choose to sleep in those pleasant marshes, he must not exclude the air; this would not be fair, since by excluding the air he would be in the marshes, and yet out of them or beyond their influence. He must expose himself freely to the influence of the malarious locality, since the question is—not how to guard against fever, but what is the result and the effect of exposure to marsh miasma: does it produce intermittent fever, and how? by what channel is the poison introduced into the system? what parts of the human body are primarily or principally affected by it?

Thus we shall decide the point at issue: Is fever of an intermittent type (I do not include other kinds of fever or diseases) produced by malarious emanations from a marshy or a sandy soil; or is it the result of exposure to heat by day and cold by night in a body exhausted by fatigue?

Unhappily, Dr. Inman has been taken from among us since I wrote this paper; but could he have himself made this experiment, I have no doubt but that he would have brought with him to the contest all those powers of resistance which his determined character placed at his disposal in defence of his theory. However, after a few days passed in examining the beauties of the Pontine Marshes (unless the malaria of cold climates be different from that in the tropics), he would, I am convinced, have begun to perceive a feeling of weariness steal over his senses, and his spirits would have been so depressed that he would have been inclined to wish that the Pontine Marshes were a little further off, and himself still further.

Still I believe that he would not have given in; when presently, to his great surprise, he would have felt an unusual sense of oppression and of weight about his heart and chest—as though all his internal organs were pressed down by some heavy weight. He would have sighed as he felt a sense of constriction around his head and down his back; more surprised still as a cold feeling crept from the extremities to the body; and so soon as the cold icy feeling pervaded the heart he would have begun to tremble and to shake all over.

After a space of time—occupied, probably, in the endeavour to discover whether the pneumogastric or the great sympathetic were the nerves primarily affected and paralysed by the incubus of the unknown cause, he would have felt the reaction of fever steal over him, maddening his senses and disturbing his intellect. But soon, when complete relief came with copious perspiration and a restoration of all the secretions, he would probably resolve in his mind the cause of his access of fever, and exclaim with Hamlet,—

> "There are more things in heaven and earth, Horatio,
> Than are dreamt of in your philosophy."

Dr. Inman very justly observes that because a theory is a time-honoured one, a century old, that is not a reason why it should not be subjected to the rigid scrutiny of science, and, if found unworthy of credit, it should be exploded. I entirely concur with him; the march of science is progressive. But the idea formed by Dr. Inman respecting the origin of fever and ague is not a theory, but an assertion, unsupported by a single fact—a most crude and unscientific notion. The fever produced by exposure to the miasma of malaria is not a theory, but a fact. I find that the feelings of hunger are allayed by the ingestion of food; I find that exposure to this miasma is constantly and universally followed (some very rare cases excepted) by certain symptoms of greater or lesser intensity, according to the climate in which the exposure takes place. I am, therefore, prompted to allay my sense of hunger, and to avoid the plague-spot of malarious influences.

These are facts; and until I discover a system better suited for the prevention or cure of intermittent fever than that afforded by Dr. Inman's theory, I shall cling to our old worn-out theory of the existence of a subtle, invisible, imponderable poison of malaria, which I for one believe to be as real as the poison of yellow fever, or as the poison of cholera. The Doctor recommends the air to be studied as well as the earth; and bids us remember the remark of the Indian colonel who said to Dr. Oldham, "You, Doctor, may talk of marsh poison as you like, but my experience has taught me that hot days and cold nights are certain to produce fever."

I am of opinion that it would be an exceedingly hard matter to study the earth without the air, as the malarious emanations from the earth must taint the air, and produce their effect through the medium of the air. Now, if we arrive at the conclusion that intermittent fever is the product of a malarious poison, our treatment will be plain, simple, and intelligible; but should we assume that the disease, in whatever form it may appear, arises from great heat by day and cold by night in an exhausted body, then must our diagnosis be obscure, and our treatment lost in the clouds in the air, to which the Doctor would recommend us all to aspire.

As regards the oracular decision of Dr. Oldham's more jovial than scientific colonel, let it pass into literary oblivion—into the "curiosities of literature."

Dr. Inman continues—"In my mind, it appears strange that an ague fit, coming on after a gravel-walk has been raised or a pit dug up." . . "He can recall plenty of cases in which ditches full of vegetable *débris*, stagnant ponds," etc. . . "In one man this process was marked by an attack of gout; in another of rheumatism or sciatica." Precisely so. Turning up the soil in a healthy, non-aguish district may be capable of producing, from the labour consequent, or the bodily condition of the digger, any disease with the exception of fever and ague.

He continues—"Would not everyone write me down an ass if I associated any one of these complaints with the turning up of the sod," etc. I entirely agree with Dr. Inman. I never knew a man so unskilled in the art and science of medicine who could imagine for one moment that the mere turning up of the sod is capable of being associated with the production of any disease whatever; but at the same time I should consider that man rather more than commonly obstinate and imprudent who would deny that fever and ague are capable of being produced by turning up the sod in an unhealthy aguish and malarious district.

A man may dig away as much as he likes in the Kensington gravel-pits, and never get an attack of intermittent fever; but were the same man to dig in a malarious swampy soil, as in the fens of Lincolnshire, his digging would probably soon come to an untimely end from an access of fever of an intermittent type, complicated or not with any other disease.

The digger in the gravel-pits would probably be seized with some specific fever, while he of the swamps would be seized with a fever of a septic nature.

True, the Pontine Marshes and Campagna, near Rome, are comparatively innocuous by day, but very deleterious at sunset; but this does not proceed, as he would make us believe, from the transitions from heat to cold, but from the condensation, by the abstraction of heat, of those miasmatic vapours, which are not precipitated as he asserts (and on the word precipitated he lays great stress), for these fog-like vapours remain at some distance from the earth's surface, and consequently are not precipitated, hence the traveller is more exposed by night than by day to the inhalation of those noxious vapours which generate intermittent fever.

So true is this fact, that, in some malarious districts in the tropics, tall trees are supposed to shelter villages from the miasmatic vapours of neighbouring swamps, which, like birds of ill omen, settle upon the branches, and thus villages are supposed to be sheltered from the ravages of fever and ague.

I have visited lately the South of Spain, having been informed that a district at four or five leagues distance from the city of Malaga, which had once been the focus of malarial fever, had been rendered comparatively healthy since trees of the *Eucalyptus globulus* had been extensively planted there.

I travelled by the railway to ascertain the truth of this assertion. I communicated with many of the peasantry on the subject, and also with the people employed at the different railway-stations, and all agreed and confirmed me in the belief of this assertion. The tree grows rapidly, and attains, in the South of Spain, a height of forty feet in a period of seven years. Its leaves have the odour of camphor, and contain a powerful febrifuge (eucalyptol), which is largely prescribed by Spanish physicians in fever and ague.

Now, the miasma of malaria must have some special affinity for the leaves of the eucalyptus. They settle down upon them at sunset, and are dissipated by the early rays of the sun. And thus the inhabitants of these districts are preserved against the absorption of these malarious vapours.

I am just reminded that it is proposed by the Italian Government, principally through the humane efforts of Garibaldi, to drain the Pontine Marshes, and thus restore them to cultivation and to healthy vegetation.

The result of this drainage is sure to be the complete disappearance of intermittent fever and ague from the Campagna of Rome; that malaria born from corruption, and which breeds corruption, which springs from decomposition, and promotes, when absorbed, decomposition of the constituents of the blood, will vanish into empty air from a deficiency of fuel supply. But there will still remain the alternations of heat by day and cold by night, capable of producing any disease—excepting fever and ague—which requires for its development a decomposing element, itself the offspring of decomposition.

It would be interesting to science to ascertain what was Dr. Inman's definition of intermittent fever. He does not consider it to be the product from the emanation of any soil upon this earth. He recommends the inquiry to those whose experience is equal to their acumen.

Now, I am very confident that from all men of experience he will receive but one answer, and that answer will not be in accordance with his notions respecting the origin of intermittent fever. All theories of disease, if they be not founded upon truth and nature, although they may attract notice for a time, cannot long bear the test of inquiry, and must ultimately fall into disrepute.

I should regret exceedingly should any remarks of mine appear, however slightly, offensive to the memory and reputation of a physician of the scientific attainments of Dr. Inman, but, on reading over his article on "Malarial Diseases," I considered it a duty I owed to my profession, and to the public at large, to contradict vague notions, which I conscientiously regard, from long experience, as opposed to all true science and to the interests of the community.

Havana.

H.M.S. "Valiant" and Typhoid Fever.—On Friday last H.M.S. *Valiant* arrived in Cork Harbour with twenty cases of typhoid fever. These cases will be taken to the Haulbowline Hospital. Twelve cases, which were brought round by tender, are now convalescent. The *Valiant* was stationed at Foones, and, on account of the sickness on board, was ordered to go to sea with the view of stamping out the disease.

Chloral in Delirium Tremens.—Dr. Orlow relates a case of delirium tremens occurring in a strong man of thirty years of age, in whom thirty-grain doses of chloral effected a cure with great promptitude. In fifty-seven hours he had taken 289 grains without any ill effect whatever having been produced. Refreshing sleep was produced, and he was then able to return to his employment.—*St. Petersburg Med. Woch.*, February 10.

Cantharidian Cystitis.—Under this title Dr. Vézien gives an account in the *Journal de Pharmacie d'Alger* of an affection of the genito-urinary organs, which he says the military surgeons are familiar with among the soldiers in Algeria. It has been commonly termed by them urethritis, but it is really a cantharidian cystitis, easily recognisable by its symptoms. Its origin is a curious one, it being produced by eating the flesh of frogs, which in the months of May and Junefeed almost exclusively upon vesicant insects belonging to the tribe of Cantharides. The irritating properties of these coleoptera are found in the flesh of the frog, which in a certain number of instances produces this affection in those who partake of this food.—*Rév. Médicale*, February 12.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

CASE OF GLYCOSURIA, ASSOCIATED WITH EXTREMELY RAPID ACTION OF THE HEART AND SYMPTOMS OF CENTRAL NERVOUS DISORDER.

(Under the care of Dr. CHEADLE.)

[Reported by Mr. J. S. Scriven, L.S.A., Clinical Clerk.]

M. A., monumental mason, aged forty-one, married, was admitted on August 10, 1876. He had generally had good health, although inclined to biliousness, and twice he had suffered from gout in the feet. Had always worked hard; but had not been given to excessive athletic sports, being inclined to sedentary habits in his leisure time, and always a strictly sober man. Previous to the present attack he had three within one month of same nature; about a year ago. The present illness came on in the beginning of June last, when he was seized with a feeling of giddiness, and obliged to give up work. He recovered and went to work again; but the attacks returned with increasing severity and frequency, especially when going upstairs, till about seven weeks ago, when they reached such an extreme that he was obliged to give up work altogether.

When examined, on August 11, the pulse was 76, but increased about three minutes after to 108; temperature 98·4°. Tongue white; bowels not opened since morning of 9th inst. Heart's beat very strong; apex-throb well marked on walls of thorax, one inch below nipple in nipple-line; first sound of heart rough, very rapid action, short impulse, but beat perfectly regular. Liver enlarged, extending about two fingers' breadth below costal cartilage, tender on pressure, and on percussion did not feel nodulated. Urine clear yellow, specific gravity 1030, very acid, no albumen. Ordered simple diet, with beef-tea one pint, and milk one pint.

August 12.—Vomited about 7 a.m. Bowels not opened. Pupils contracted. At 8.30 a.m. an enema of three ounces of beef-tea and one ounce of brandy was administered. Pulse lower than yesterday; at times only 80. Complains of throbbing in head. ℞. Sp. ammon. aromat. ♏xxx., sp. æther. sulph. co. ♏xx., aquæ ad ℥j., 3tis horis. Ordered four ounces of brandy daily. At noon a simple enema.

13th.—Brandy increased to eight ounces, and rice pudding added to diet. A simple enema ordered, the bowels not being relieved. At 5.15 p.m. pulse was 98 per half-minute, and 188 per minute, taken by two observers.

14th.—Had a severe attack of palpitation last night, brought on by fright from a patient near him getting out of bed. Weak and prostrate this morning. Heart-sounds rapid, with peculiar echo. Pulse 140. After this the patient continued better for some time, the pulse varying from 96 to 152, the chief difficulty being to keep the bowels open, their action causing extreme distress, followed by great relief. The least excitement caused great palpitation, dyspnœa, and distress.

18th.—℞. Ammon. carb. gr. v., pot. bicarb. gr. xx., sp. chlorof. ♏xv., infus. gent. co. ℥j., t.d.s.

21st.—The urine was for the first time tested for sugar, and found to contain a considerable quantity. The sugar was constantly present afterwards, and was regularly estimated daily, as appears in the table appended. Another attack of faintness and collapse came on to-day.

22nd.—Had a very bad night, the bowels being obstinately confined. Two enemata were administered, and brought away large hard fæcal masses. Ordered one ounce of castor oil statim. At 11.30 a.m., hands cold; pulse 136, very weak, hardly to be felt at radial; temperature 97·6°. Large accumulation of fæces in lower bowel, though some brought away by enemata.

There was little change until the 25th. The patient was restless, disturbed by palpitation and terrifying dreams. The pulse remained at 140 to 150, and the urine highly charged with sugar.

Had a violent attack at 6.30 p.m. on August 25, which lasted between two and three hours. It came on with action of the bowels, which were opened naturally. He then got a few hours' sleep.

At 7 a.m. on August 26 a similar attack came on, with

severe retching, and great coldness and distress. At 11.30 a.m. he was ordered—℞. Sp. ammon. aromat. ʒj., tinct. capsici ℥v., tinct. card. co. ʒ ss., acid. hydrocyan. dil. ℥ij., aquæ ad ʒj.; statim et 2dus horis. At the same time an ice-bag was applied to the epigastrium, which eased the pain he suffered in that region, but did not stop the sickness. The face and legs were deathly cold, the whole body being of a blue colour. Patient complained of pain over the whole abdomen while retching, which he did with great efforts, the vessels on the face standing out like cords; he clutched at the bedclothes as if to aid the expulsive efforts, and seemed to strain very much. Any food or medicine was rejected at once, the stomach being unable to retain even iced water. At noon a hypodermic injection of a quarter of a grain of morphia was given, which relieved the patient considerably. The ammonia, etc., above noted, was thrown up by the stomach as soon as taken.

No change worthy of special note took place until August 29, when a fresh and sharp attack of vomiting, faintness, and dyspnœa occurred at 8 p.m., which lasted two hours. He had taken half an ounce of castor oil, which opened his bowels, and as soon as they acted the attack came on.

August 30.—Does not seem so weak this morning as might have been expected. Pulse 136. Heart's action feeble. Not able to eat anything. Temperature 98°.

Continued fairly well with same condition of pulse and urine until September 2, when a severe attack of distress and palpitation came on after an action of the bowels, lasting a long time. Patient was weak. Heart's action very feeble beats 156 per minute. Urine clear, pale, specific gravity 1024, acid; amount passed 1900 cubic centimetres; sugar passed, twelve grammes.

September 3.—Very weak. Pulse 160 and feeble. Sugar passed in urine sixty-eight grammes. Vomited just after breakfast. Was in great pain from retching; relieved by exhibition of soda-water.

4th.—Patient had a quiet night, and remained easier, although the pulse-rate continued as high as 156; and he complained of pain down the left arm. At 5.30 p.m., however, an attack of sickness came on just after taking his tea. Heart beat 300 per minute; radial pulse beat too rapidly to be counted; but by placing a stethoscope over heart, 75 beats in fifteen seconds were counted; a few minutes later, 76 per quarter-minute; and a few minutes after that, 73 per fifteen seconds.

5th.—Breath short all night; says he feels very irritable. Pulse 148. No tenderness over liver. Ordered ol. ricini ʒss., o.m. Feels in pain all over; pain seems to go from abdomen to heart, and from heart to head.

7th.—Had another attack of syncope yesterday; but to-day feels better. Pulse 148 in the morning, but rose to 73 per quarter-minute at 4 p.m.

9th.—Had another attack at 10 a.m. Heart very feeble. Mustard-plaster ordered to præcordial region; but on urgent representation by patient, ice to be used instead.

From this date the patient suffered from various attacks similar to those already described. As before, the attacks came on when the bowels were opened. The urine was not regularly tested after September 9, but became gradually less in quantity, till it was almost suppressed. He was quite conscious to the last, and died from syncope on September 19. Patient was an intelligent man, and gave his symptoms and sensations with clearness and without exaggeration.

Post-mortem Examination.—Body well formed, well nourished, muscles powerfully developed; rigor mortis strongly present. Head: Scalp and calvaria normal. The brain appeared quite healthy. The medulla oblongata was taken out, hardened in chromic acid, and stained with carmine. When examined under the microscope, it showed no marked pathological changes. The vessels were large, but there was no erosion of nerve-substance round the vessels as observed by Dr. Dickinson in ordinary cases of diabetes. The nerve-cells in the region of the nuclei of the eighth pair appeared to be unusually elongated and somewhat shrivelled, but no other signs of morbid change were observed. Thorax: Pleuræ non-adherent. Lungs much congested on both sides, otherwise normal. Heart much hypertrophied, its substance firm; the valves healthy except the mitral, which showed smooth white patches of atheroma towards the bases of the valves, and rather thickened condition of the edges. The aorta showed extensive atheroma, its inner surface having a very rough yellow appearance all round, and being slightly dilated. Liver and spleen apparently healthy. Kidneys small; capsules peeled well, but the surface beneath showed a stellate arrangement of veins with small depressions; on section there was a fair amount of cortex, which was paler than natural, but otherwise the kidneys appeared quite natural.

Remarks, by Dr. Cheadle.—The interest of this case centres in the curious association of symptoms—viz., extremely rapid action of the heart, vomiting, constipation, dyspnœa, and vertigo, with the appearance of sugar in the urine. The man was fat and well nourished, and the glycosuria was evidently not of any long duration. The concurrence of the symptoms named seemed to point to some cerebral mischief in the region of the medulla, in the neighbourhood of the origin of the eighth pair of nerves; but a careful microscopic examination of the cord post-mortem revealed no material lesion. The supervention of the attacks during or immediately after action of the bowels was apparently due to the exertion this involved, and the disturbance of the cerebral circulation caused by straining. Any excitement or exertion of another kind produced them with equal certainty and severity. The final close of the illness in an attack of syncope was not satisfactorily explained by the condition of the heart. That organ was hypertrophied, and somewhat dilated, while the valves and aorta were in some degree atheromatous; but there was no extreme dilatation or degeneration of tissue sufficient to account for the sudden arrest of motion. It seems more probable that some nervous lesion which remained undetected was the common cause of the saccharine urine, the rapid heart-beat, the vomiting, the torpor of the intestine, the faintness, and the dyspnœa, with the fatal syncope at last.

Daily Report of Urine of W. A.

1876.		Specific gravity.	Urine passed (cubic centimetres).	Sugar passed (grammes).	1876.		Specific gravity.	Urine passed (cubic centimetres).	Sugar passed (grammes).
Aug.	11	1030	..	..	Aug.	26	..	1476	..
	12	..	..	..		27	1026	795	..
	13	..	..	..		28	1024	2300	..
	14	1032	..	..		29	1024	2414	..
	15	..	..	..		30	1024	2500	62
	16	..	..	..		31	1030	1600	80
	17	1032	2442	..	Sept.	1	1028	2160	80
	18	1030	1533	..		2	1024	1900	12
	19	1030	2101	..		3	1028	1650	68
	20	..	2158	..		4	1024	1730	54
	21	1030	1817	..		5	1022	1660	41
	22	1030	1533	..		6	1018	1900	41
	23	1028	..	..		7	1020	700	12½
	24	1030	1902	..		8	1022	1160	23
	25	1030	1874	..		9	1020	1380	30

LONDON HOSPITAL.

PURPURA—PERIVASCULAR RETINAL HÆMORRHAGES—RECOVERY.

(Under the care of Dr. STEPHEN MACKENZIE.)

[The notes of this case were taken by Mr. R. Atkinson, B.A. Cantab., House-Physician.]

The patient, W. W. H., aged eight years, was a delicate-looking, slenderly built boy, having light hair and grey eyes. His lips and conjunctivæ were of a good colour; and he had no enlarged glands or other manifestations of the strumous diathesis. There were no physical signs of heart disease. His pulse was regular and of good volume, and he presented no signs of feeble circulation save a slight blueness of the end of his nose, and a few dilated capillaries on his cheek.

On both inner and outer aspects of each forearm were numerous purpuric spots, which, when first seen, were of a bright red colour, varying in size from that of a pea to that of a pin's head. Nearly all the spots were distinctly raised above the level of the surrounding surface, and their colour did not disappear on pressure. In some of them the centre was pale and almost colourless; but this was only seen in a few of the spots. There was a similar eruption on the legs, which has extended up to the thighs and buttocks; but the spots were most numerous, and also smallest, on the fronts of the legs. The fundus oculi was carefully examined on admission by several ophthalmoscopists, who failed to detect any

hæmorrhages, but who found what were called by one observer "curious kinks" on the vessels. The patient's urine contained albumen, and some blood corpuscles, which, however, were not sufficiently numerous to impart any colour to the urine.

From the child's mother it was ascertained that in infancy he had had convulsions during teething. About nine weeks before admission to the hospital he had an illness lasting about seven weeks, and which from the description was clearly tetany. During this time he had stiffness of his hands and arms, so that he could not feed himself or walk. The stiffness was variable in severity, and he would be comparatively free from it for days together. During this period he on two occasions passed bloody urine. Following this he had an attack of diarrhœa; and it is worthy of notice that the diarrhœa followed, and did not precede or accompany, the tetany. Next he had a skin affection, which was probably nettle-rash. Then he had, on several occasions, bilateral clonic convulsive seizures, in one of which he had bleeding from the nose or mouth, possibly from tongue-bite. In one of these attacks he was unconscious through a whole day, during which he passed some blood from the rectum. About a fortnight before admission he had an eruption of purpuric spots on the arms and legs. His gums had never bled, and he had at no time any œdema.

The patient was brought to the hospital on December 6, 1876, and by the 16th the spots had become very faint. Two days later they again became very vivid. It was noticed that in the evenings the patient always walked stiffly, which was conjectured to be due to the fact that at this time the spots were always most pronounced. After this, without any appreciable change in the patient's general health, the spots continued to come and go, being on one day well marked, and on another dull and faded-looking. His fundus oculi was repeatedly examined in the expectation of seeing hæmorrhages, but there was never seen anything very abnormal, except the supposed "kinks" on the vessels, and a peculiar grey striated appearance of the retina. Mr. Couper was asked to examine the eyes, and kindly made the following note:—

"In the right eye, on a main branch of a retinal vein immediately above the disc, are two minute portions which appear, from their colour, comparatively empty of blood. They are bounded by normally filled portions of vessel. This seems due to the fact that the vessel is encircled by a collar of blood, beyond which is the pale portion of vessel. It must also be due in part to slight greyness of the retina over that part of the vessel. Finger-pressure does not alter the fulness of the affected veins, and there are no signs of diminished tension of the venous current. There is no reason, therefore, to suspect an embolic origin of the phenomena. Altogether there are in the right eye four of these spots in the course of large retinal veins having the above appearances. All the large vessels have thickened sheaths, some of them to the extent of a conspicuous greyish line on either side. The retina adjoining the disc and macula is unusually grey, and has a fibrillar appearance, the fibrillations taking the course of the optic nerve-fibres."

Appearances similar to those described above were found in the other eye, and a few days later I ascertained that they existed not only on the veins, but also on the arteries. One such hæmorrhage was then seen on the disc close to the porus opticus. The patient remained in the hospital until January 21, when every symptom of purpura had disappeared from his skin, leaving only a slight roughness and a very faint mottling. The collars of blood surrounding the veins and arteries of the retina still remained, though they were neither so numerous nor so distinct as before. He came to show himself on February 17. He had been in capital health since his discharge, and had gained flesh. There was one peri-arterial hæmorrhage in the right eye just above the disc, the vessel beyond being pale. This was the only hæmorrhage Mr. Atkinson could find.

Remarks, by Dr. Stephen Mackenzie.—Under the head of purpura are probably included a number of morbid conditions owning different causes, and pursuing very divergent courses. Various attempts have been made to separate these cases, and amongst the most recent authors who have endeavoured to classify them may be mentioned Henoch(a).and Couty.(b) The present case, however, will not exactly fall into any place in these arrangements; it presents several points of interest. The purpura was of the variety designated by Hebra "purpura papillosa." There were small round elevations of the skin containing blood-extravasations. Nowhere did these elevations assume the shape of wheals, as in "purpura urticans." There were no papules without hæmorrhages, but there were a few non-elevated blood-spots. The eruption came out in crops, which gradually died away, the spots displaying transitions of colour. There were soreness and stiffness of the lower extremities (especially in the evening, when the eruption was most marked), which interfered a good deal with movements; but there never was any objective arthritis or gastro-intestinal disturbance, as noticed by Henoch and Couty. The gums were not tender, spongy, or bloody. The skin was examined microscopically on two occasions, small pieces being snipped off for the purpose. There was observed a good deal of cellular infiltration in the papillary and sub-papillary regions of the cutis, in the course of the vessels and in the interfascicular spaces. A point of much interest in the case is the occurrence of retinal hæmorrhages. Retinal hæmorrhage has been but seldom recorded in purpura; but this may be due to the fact that it has not often been looked for. The patient had no affection of sight, and there was therefore nothing to direct attention to the eyes. The ophthalmoscope was persistently used, however, in order to detect any hæmorrhages. The only reference I can find as to the occurrence of retinal extravasations in purpura is in Mr. Jonathan Hutchinson's "Suggestions for Future Clinical Work in Ophthalmology."(c) Mr. Hutchinson there says, "These are only a local part of the general disease known as purpura hæmorrhagica, and as it is rare, they are very seldom seen"; and he tells me he himself has never observed them. The appearance of the hæmorrhages was peculiar. They were arranged round the trunks of the largest retinal arteries and veins, and not in the peripheral parts. They were not large blots such as are seen in common retinitis hæmorrhagica, or various-sized extravasations as seen in Bright's disease, or of the streaky character observed often with neuritis, but were limited to the trunks of large arteries and veins, encircling them, as it were, with a collar. Diapedesis does not occur—at least, as observed under the microscope—in vessels of a calibre such as these had, whilst rupture of vessels of such size would not be attended with so limited an extravasation. The probable source of the hæmorrhages therefore was the vasa vasorum of the affected vessels; and this would explain their exact limitation to perivascular areas. It becomes a question as to what importance should be attached to the retinal hæmorrhages—whether they should be regarded merely a local expressions of the general disease; or whether, occurring in a nervous structure, they can be taken in any way to indicate the nature of a process occurring in the nervous centres? The question might be answered in either way; for, in purpura, hæmorrhages are often found in fatal cases in the brain, and in other organs and tissues in addition to the skin; whilst there are other diseases besides purpura in which perivascular extravasations occur, in nervous structures, in the retina (Galezowski, Lebert, etc.), in the brain and spinal cord (Dickinson, etc.). There is, doubtless, much truth in the recent editorial remarks in the *Medical Times and Gazette*, February 17, as to the necessity of limiting the inferences drawn from ophthalmoscopical appearances; but it will not be denied that we have in the retina a means of examining more closely than elsewhere conditions of the vascular and nervous systems. I am inclined to regard the retinal hæmorrhages as indicative of some disease of the nervous centres—cerebrum, cerebellum, lymphatic nervous systems,—and not, as seems most natural at first thought, as mere local purpuric manifestations. That there has been some morbid condition of the nervous system is clearly evidenced by the tetany (cerebellar discharge), bilateral clonic convulsions (bilateral cerebral discharge), and urticaria and purpura (vaso-moter discharge or inhibition). Whether or not the changes in these nervous organs have been of a similar nature to that in the retina, it is, of course, impossible to say. It is interesting to observe, however, that the cerebral symptoms seem to have pursued a definite course, and this may have been regulated by vascular distribution. That the retinal hæmorrhages were not merely local expressions of purpura would appear probable from their appearance, which was very different from the hæmorrhages met with in various organs in purpura, and from their persistence long after all hæmorrhages had ceased in the skin. Apart from these appearances in the retina, we are justified, I think, in attributing the purpura to a nervous origin.

(a) *Centralblatt f. d. Med. Wissenschaften*, 1875, page 267.
(b) *Gaz. Hebd.*, 1876, Nos. 36-40; and *Centralblatt*, 1876, page 806.

(c) *Royal London Ophthalmic Hospital Report*, vol. viii., part i., page 2.

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Medical Times and Gazette.

SATURDAY, MARCH 3, 1877.

DR. MOXON'S ORATION.

We have the pleasure of publishing to-day a second Oration on John Hunter, and it is one which, like that we published a fortnight ago, will be more than gladly welcomed by our readers. The first of the two—the Hunterian Oration of the Royal College of Surgeons—was delivered by a Fellow of the College who resembles John Hunter in being one of the greatest surgeons of his day, and a great physiologist; and who is as unlike him as possible, in that he is moreover one of the greatest masters of words of his time. The second Oration—the one we now publish: the annual Oration of the Hunterian Society—was given by a highly accomplished Fellow of the sister College in Pall-mall, the Royal College of Physicians. And this well-known London physician again is unlike Hunter, inasmuch as he also is a recognised master of words; while he resembles him in that he is one of our great teachers in pathology. Both Orators had the character and work of John Hunter for their text; and both the Orations are alike admirable, and rich in teaching and in suggestion; but they are so unlike in style and type that they scarcely admit of, as they do not call for, comparison. In both we find, we think, much the same appreciation of the main characteristics of Hunter's mind and of his work; his untiring, unceasing industry, his insatiable thirst after knowledge and for the collection of facts, his singleness and directness of aim—the utilisation of facts and the attainment of truths, the simplicity and purity of his work and life, the absence of self-consciousness or self-seeking.

The idea of Hunter's life most strongly impressed upon Dr. Moxon is that "Hunter was great through his genius in the application of the experimental method in physiology to the purposes of surgery. And that he applied this method in physiology so that, of all those either before or after him, he was the most intelligent and richly endowed amongst the workers who in this direction have sought to bring science to practical use. To experiment and observe for the improvement of surgery, that was the aim which distinguished him." To this aim and end he subordinated his passion for knowledge. His collection of facts, both of physiology and of natural history, was a *systematic* collection with the intent to *answer* questionings that had arisen, and were ever rising, in his mind. He worked to *know*, not merely for the sake of *knowing*, but in order to make knowledge useful. And, according to Dr. Moxon, Hunter, pursuing in this spirit the Baconian system of philosophy, succeeded where "the highest authority in logic" had shown that success was impossible. "Mr. Mill proves, in cold formality, that by experiment and observation you cannot discern the laws of living nature;" but, the Orator says, "Mr. Mill, like all men of system, who argue human nature into a machinery, falls into this fallacy—that he supposes always a common *degree* of intelligence, for which he and his followers make laws of more and less, equal and unequal, saying at last, 'Hitherto shalt thou come, and no further!'" Mr. Mill's rules of induction are for a certain standard of intelligence, and make no allowance for a case of extraordinary intelligence: while Carlyle recognises intellect as expressing the power of discerning what an object is—"the gifted man is he who *sees* the essential point, and leaves all the rest as surplusage." And Hunter, being a gifted man, overrode all Mill's laws of logic, and, "warm with ardour in his noble pursuit, discovered law after law of living nature, and was one of the first to make possible that knowledge of living nature which is a very worthy pride of our very proud generation."

Dr. Moxon insists earnestly and at length on the spirit in which Hunter worked at and for facts. He was no mere heaper-up of bigger "fact-heaps" than other people's, though it is true that no one else ever brought together so many facts. He followed principles in his work, and the wonderful store of facts he collected constituted answers to questions. And Dr. Moxon believes that Hunter owed his great and most valuable power of estimating what was worth doing, and what could be done, to the facts that, "firstly, he was a man who had a free youth, not over-taught, nor over-strained; and secondly, that in his manhood he worked with an eye to usefulness and duty, and not only to notoriety, nor to the mere cry of 'Who will show us something new?' Indeed, the main and distinctive feature of his noble life was his resolute pursuit of the practical aim of his profession, to establish sound laws for scientific surgery and medicine." All the knowledge he sought, zoological and all other, he sought that he might apply it in the service of surgery. "His was the nobly useful and controlled enthusiasm of the knower for duty's sake, not the vague enthusiasm of the knower for knowing's sake." He was, as Sir James Paget calls him, "a *master* of facts"; he made them serve to use and fruitfulness.

Dr. Moxon is very earnest in showing the falseness of the common interpretation of the axiom, "Knowledge is power." "What Hunter's life shows," he says, "is that the value and power of a man does not consist in what he knows, but in how he knows it, and whether he can use it. Hunter's was a character quite distinct from the professional knower;" and he shows this in Hunter's knowledge of biology as of other things. "He who would make a Hunterian mind by cramming a young man with biology is very like one who, hearing that a river watered a fertile valley, should, to fertilise another valley, dig a long trench and fill it with water. But, in fact, it was not the possession of the knowledge that made Hunter's mind great and fertile. It was the continual desire and getting of the knowledge for use; so that it was a living stream, and not a stagnant pool. For as the river flows and widens by reason of the water the uplands have attracted to themselves, so the

stream of knowledge in a human mind, to be useful, must come down from activities of thought which demanded and drew down a supply of principles to the dry dust—for instance, to the Chinese dry-dust fact-heap of modern biology." He is severe on the professional biologist, or "zoological biologist," and in the latter part of his Oration he contrasts the acting, energising principle of Hunter's life and work with the present system of medical education. This, he contends, is far too much a system of instruction, not of education, of *teaching* instead of *training*. "The great fallacy of the age," he says, "is in thinking that education is packing a man's knowing faculty with a heap of facts; and this fallacy is founded in the belief expressed in the vulgar and erroneous proverb, 'Knowledge is power.' Large amounts of knowledge, which cannot be brought into present motion and use, interfere with training. Such knowledge absorbs the pupil's intelligence uselessly. The pupil rests his attention on what he cannot use, instead of fixing it on what he can use. Such knowledge diverts the pupil from the trainer's aim." *Teaching* is the storing of knowledge, and it may be done quickly; but *training* is the creation of an organ for use of knowledge: it is a slow process, and needs much time. "The trainer has to convert the pupil's knowledge into motive, his desire into patience, his will into skill. Every good trainer aims to raise up in the pupil's mind a self-training faculty, which shall itself continue to train more and more knowledge into motive." It is much the same truth as is expressed in the poet's words, "Knowledge comes, but wisdom lingers." But at present, "whilst the average pupil is for usually two years or more in the hands of the teacher of more or less aimless scientific knowledge, the average pupil is only nine months in the hands of trainers in skill; the trainer in medicine has him three months, and the trainer in surgery has him six months." This state of things has arisen, Dr. Moxon declares, "because the aim of the biologist has separated and diverged from the aim of the physician. The one seeks the largest knowledge of living creatures; the other the recognition of diseases for the purposes of prognosis and management. In Hunter's mind the aim towards surgery dominated the all-serious divergence into the professional nature-knower. Now we have the aim after the largest possible knowledge of living creatures in the hands of the professional biologist and physiologist. The physiologist is endeavouring to teach the most minute and thorough knowledge possible of all the textures in the frame." Nor does Dr. Moxon quarrel with this in itself; and, indeed, no one will suspect *him* of speaking against or decrying the value of science, but he demands that the right teaching shall be given at the right time, "so that each student may have a chance of being trained adequately in the practice of recognising the kinds and varieties of diseases and accidents, and learning to use the means of relief." And he adds wisely, "Give the student nature-knowledge in such a manner as will serve in establishing principles for his practice, but do not lead him hurriedly all afield into professional biology. If you teach him rightly as much nature-knowledge as he has fairly time to know well, he will not forsake the pursuit of more in the earlier and less occupied years of his practice. He is all the more likely to seek more when he has the satisfaction of knowing well, and feeling the use of what he knows; whereas a smattering omniscience raises vanity, and takes off the freshness from inquiry."

We confess to no little sympathy with Dr. Moxon, but we cannot now follow him further in the train of thought and line of argument that leads him to "an earnest belief that Hunter's profession needs recall Hunter's spirit, and once more, instead of wandering in professional biology, and proceeding as if nature-knowledge were their ultimate aim, pass through and take such a knowledge of nature as is helpful, always in a spirit of self-control, and always keeping their great purpose in view." His Oration takes a wide scope, and he is in parts decidedly polemical, but his arguments and teachings are well worthy of thoughtful and careful study, and our readers will find that they are enlivened, illustrated, and enforced by a most enjoyable play of wit, humour, and fancy.

MEDULLARY LEUKÆMIA.

The subject of leukæmia has recently been before some of our societies; and as it is one of very great interest, it may not be amiss to give a sketch of a most important and interesting case narrated in the *Berliner Klin. Wochenschrift*. It is the more important inasmuch as it was diagnosed as a case of medullary leukæmia during life. The patient, a ship's captain, aged forty-five, was admitted into the Hospital at Greifswald on July 19, 1876, complaining of pain in the chest and oppression in the epigastrium, increased by breathing, coughing, and stooping. The only diseases he had ever suffered from were pneumonia and intestinal catarrh; he had never had syphilis or ague. The commencement of his illness dated from a severe chill in the winter of 1867-68; since that time he had always suffered from cold feet and from a feeling of internal heat, as well as from pain in the chest along the sternum when working hard, which sometimes had been so violent as to force him to give up his work. He also noticed that if he touched certain parts of his sternum in putting on his shirt, or struck them with a button, he felt shooting pains at those spots. Somewhat later he noticed that his left leg was stiff in walking. On one point he is very decided—namely, that the pains in his bones preceded the uneasiness in the left hypochondriac region and the sense of pressure in the epigastrium by several years. Present state on admission:—"In the last two years he has gradually lost flesh and strength, but is still a tolerably powerful man, with good muscles and without any distinct external signs of anæmia. His appetite is good, and he has no fever. The only lymphatic glands which are swollen are the inguinal glands, some of which are as large as a pigeon's egg; they are not tender. The spleen is much enlarged, reaching, when the patient lies on his back, forwards to the umbilicus, and downwards into the iliac fossa, and partly into the true pelvis. The abdomen is not painful; the liver-dulness measures sixty centimetres in the nipple line. The lungs are healthy. There is slight increase of the heart's dulness, especially towards the left side, and the apex-beat is a little too far out. Heart's sounds clear. Pulse 80. The urine is normal in quantity, acid, and contains no albumen, but a small quantity of bile-pigment. His most important symptom is *the painfulness of the sternum*, which, though always present, is much increased by pressure, and especially by percussion. The sternum is more prominent than usual. The manubrium makes rather a sharp angle with the body of the bone, and two circumscribed spots can be made out on it, where there is a shallow depression in the bone; and these are intensely painful even on moderate pressure. To the finger the larger of these spots has a soft elastic feel. There is a sensation as if one were pressing the finger into a sharp-edged opening in the bone. The heads of the ribs, especially of those from the second to the sixth, are also swollen and painful on pressure. The patient complains too of tenderness on pressure over a spot corresponding to the left posterior-superior iliac spine, and also of pain on pressure and movement in the left trochanter, which, on careful examination, appears to be somewhat broader than the right. Some blood taken from the little finger of the left hand resembles chocolate made with milk. There is an enormous increase in the number of white blood-corpuscles, their proportion to the red being about as one to five; and they exhibit extraordinary variations in size, the smallest being about one-third smaller than the red, the largest twice or even four times as large as the red, the large cells predominating."

The tenderness of the bones, as well as their alteration in size and consistency at certain parts, and especially the fact that the blood contained numbers of white cells similar to those which occur in abundance in the so-called red marrow of the bones, and but sparingly in the spleen, led Prof. Mosler to the diagnosis of medullary leukæmia complicated with splenic, and with a slight degree of lymphatic, leukæmia; and his diagnosis appears to be completely confirmed by the following considerations:—In the first place, while the patient was under observation a distinct increase took place in the sternal portions of the fifth, sixth, seventh, and eighth ribs, so that on inspection those parts resembled prominent tumours. The actual increase in size of each individual rib was about three to four centimetres. The altered ribs were painful on pressure, and had an elastic feel. These changes occurred in a period not exceeding three or four weeks. In the second place, on October 13, 1876 (the day before the patient left the hospital), the sternum was explored, at the part where it appeared most altered, with a Middeldorpf's harpoon. The instrument easily penetrated through the softened bone, and could be moved about, as it were, within a cavity. When withdrawn it brought with it a substance tinged with blood, which was found microscopically to be made up of large quantities of the same large white blood-corpuscles as those in the patient's blood, mixed with a much smaller number of red corpuscles and some fat-drops. There are some interesting points connected with the treatment of this case which we may briefly summarise. In the first place, Professor Mosler tried the effect of transfusion of 210 grammes of defibrinated human blood, on July 24, into the patient's left radial artery, while at the same time 200 grammes of the patient's own leukæmic blood were allowed to escape from his right median vein. The operation itself succeeded, but any ultimate value of the transfusion seems to have been compensated for by the *tendency to bleed*, which both wounds, and especially that over the radial artery, exhibited; in fact, the patient lost altogether about 400 cubic centimetres of blood in this way. On the other hand, two cases of splenic leukæmia in which Professor Mosler performed transfusion were considerably benefited by it. The other plans of treatment adopted in the above case were—(1) faradisation of the region of the spleen, continued for many weeks in sittings of from fifteen to twenty minutes twice a day; and (2) the internal administration of pills containing piperine, oil of eucalyptus, and hydrochlorate of quinine, according to the following formula: Piperine grammes v., ol. eucalypti grs. iv., quiniæ hydrochlor. grs. ij., ceræ albæ grs. vj.—divide into 100 pills, three to be taken thrice a day. With regard to (1), Professor Mosler, although carefully following the instructions of Botkin in his work on the Contractility of the Spleen (*vide Medical Times and Gazette*, March 18, 1876, page 318) was unable to detect either a diminution in the size of the spleen, or any enlargement of the liver, or any decided increase in the amount of white blood-corpuscles in the blood. The composition of the pills (2) which the patient took depends on the following considerations:—The oil of eucalyptus globulus can, like quinine, cause contraction of the normal spleen. This has been proved by Mosler, Mees, and Schläger; and, further, it has been found to have a curative effect in intermittent fever, although large doses (even four to five grammes) of it may be necessary to produce a decided effect; and in certain cases its influence over the fever was less marked than its power of causing contraction of the spleen. In any case it is far inferior to quinine, which Professor Mosler (who is an authority on diseases of the spleen) is firmly convinced to be still, as ever, *the* remedy *par excellence* for them. The high price of quinine, however, is a great objection to its continued use for a long period, and it is for this reason that such cheaper remedies as eucalyptus oil and piperine are deserving of more extended trial. *Piperine* is an alkaloid which is most readily extracted from white pepper. When pure it has scarcely any taste. It is only slightly soluble in boiling water, and only in the proportion of one to thirty in cold alcohol, but it is more soluble in volatile oils and in chloroform and benzine. In the above-mentioned pills it is dissolved in the eucalyptus oil. Experiments made on dogs by Professor Mosler, in conjunction with Dr. Soenderop, have shown that piperine causes distinct contraction of the spleen, and also a slight fall of the temperature of the body. In the healthy human subject, however, with doses of from one-half to two grammes, the greatest fall of temperature did not exceed 0·4° C. Gramme doses cause no unpleasant effect; one and a half to two grammes cause digestive derangement, loss of appetite, griping, etc.; but it is possible that, as in the case of other anti-pyretic drugs, febrile patients might be able to take a larger dose of it without ill effect than healthy persons. Whatever the individual value of these remedies may be, there can be no doubt that the patient was benefited by their combination. Between July 19 and October 12, 1876, he had taken altogether 414 pills; his general appearance was much improved, the sense of weakness and weariness which he had earlier suffered from was much diminished, and he was neither losing nor gaining weight. Although the sternum was still painful and tender, the liver and spleen were both much reduced in size, and the proportion of white blood-corpuscles to red in the specimen of his blood was now only as one to nine. On November 4 the patient, who had been at his home in the country, and who had still continued the pills during this period, was exhibited to the Medical Society of Greifswald, and appeared to be still further improved. Professor Mosler does not touch upon the question of the treatment of leukæmia by phosphorus in his long and interesting paper, to which those who wish to see what advance our pathological and anatomical knowledge of the form of leukæmia which originates in the marrow of the bones, and which was discovered by Dr. E. Neumann in 1869, has made in a short time, cannot do better than refer.

THE WEEK.

TOPICS OF THE DAY.

The rumours which have recently been in circulation, and to which we last week alluded, as to a project for bringing the metropolitan water-supply into the hands of the Municipal Government, have at last received confirmation by the proceedings which took place last week at the meeting of the Metropolitan Board of Works. The Works Committee reported that in their opinion the time had arrived when effect should be given to the report of the Royal Commission on Water Supply, so far as the report refers to the supply of the metropolis being placed under the control of a responsible public body; and they recommended that the subject should be referred back to the Committee, with instructions to prepare a Bill empowering the Board to take under its control the water-supply of the metropolis, with power to purchase the existing companies and extend existing works, and that the Committee should be authorised to confer with the Government, and report a draft Bill to the Board. Mr. Roche, in moving the adoption of the report, pointed out that the subject had been repeatedly discussed since 1869; inquiry was, therefore, now exhausted, and all that remained was action. The Royal Commission on this subject recommended that the water-supply of the metropolis should be controlled by a central municipal authority, and stated that the provision of this prime necessity of life by private companies was a modern practice, and a departure from the fundamental principle which had always hitherto governed such matters. The Board had now resolved to take the matter into their own hands, and, with the help of Government, he trusted they would succeed.

In 1870, Lord Aberdare brought in a Bill to enable the Board to buy up the Water Companies, but the interest of those Companies was then too strong; an Act was, however, passed in the following year, under which it was found impossible to obtain a constant supply. By levying a small general water-rate, the Board would be able, in a few years, to provide a constant supply, and to secure a free and sufficient quantity to those poor dwellings where it was so urgently needed for sanitary purposes, and where, at present, it was often sadly deficient. The special objects of the Board in acquiring the control of the water-supply of the metropolis were as follows:—To increase the purity of the water, which could be done without difficulty by those who had the interests of the consumers, rather than of shareholders, at heart; to provide a constant and copious supply, and also a compulsory supply to the poorer districts; to furnish greater facilities for the extinction of fires, the cleansing of the streets, and the flushing of sewers; and to supply water to the consumer at a less cost than at present. When the Board had carefully prepared a Bill to carry out these measures, it would be necessary to wait upon the Home Secretary, and ask the support of the Government. After some discussion the report was adopted by a large majority.

Professor Garrod, F.R.S., the Fullerian Professor of Physiology, delivered a lecture at the Royal Institution last week on "The Human Form: its Structure in relation to its Contour." In the course of his remarks the Professor drew attention to the way in which artists frequently exaggerate muscles in their works. When a muscle is in action it thickens as it shortens, and to represent a thickened muscle implies motion. A beautiful effect of motion, as in the Greek statue of Mercury, can thus be given. But too often artists, instead of depicting that amount of change in contour which actually exists, draw on their imagination, and, if they have studied anatomy, give what they theoretically think ought to be correct. It is almost better for artists not to learn anatomy; or, if they do, they should subordinate their knowledge to the facts they can actually observe. The Greeks knew nothing of the contraction of muscles; they even imagined that muscles only served to keep the bones covered and warm; yet by careful observation they learnt truthfully to seize on the contour that different parts of the body assume in different attitudes and actions.

The Committee appointed by the Home Secretary to inquire into the condition and expenditure of the Broadmoor Lunatic Asylum have presented their report, which recommends that the Asylum should be retained where it is, and that alterations and repairs to the extent of £12,000 or £14,000 should be undertaken. The Committee also make a variety of suggestions as to the management of the establisment. Mr. A. B. Mitford dissents from the report of his colleagues, and recommends that the present building and site should be sold, and a new Asylum erected where ground is less valuable—say on Dartmoor; or, what Mr. Mitford appears to think is the preferable plan, that criminal lunatics should be confined in lunatic wards attached to our general prisons.

Last week a meeting of the Council of the Metropolitan and National Nursing Association was held at the Central Home in Bloomsbury-square, presided over by Mr. W. Rathbone, M.P., in the unavoidable absence of the chairman, the Duke of Westminster. Mr. Rathbone complimented the Association upon the successful work it had carried out in establishing homes for nurses in London, and in placing the Association on a firm basis. He alluded to the Liverpool system of nursing, which he himself had promoted, and said that the system adopted by this Association of having homes for the nurses under a superintendent was the system to which any national or general system of nursing must come. He expressed deep regret at the loss the institution had sustained by the lamented deaths of Drs. Sibson and Rumsey, and concluded by strongly recommending the Association to the support of the general public. In the course of the discussion which followed, the efforts made by the nurses of the Association to check the existing small-pox epidemic were warmly approved.

A more satisfactory state of affairs is at length reported from Richmond. The Water-Supply Committee has announced to the Select Vestry that the highest analytical authorities have pronounced the water now supplied to be quite fit for human use, and even superior to that hitherto furnished to the town by the Southwark and Vauxhall Company. The average daily supply is now fair in quantity.

It is announced that the report of the Registrar-General will in future contain a record of the amount of sunlight during the week. The Astronomer-Royal has undertaken to register, by Mr. Campbell's instrument, the hours of sunshine in comparison with the total number of hours the sun is above the horizon. Thus, in the week ending the 17th ult., the sun was above the horizon 69·3 hours, but its light was intercepted, and it only shone on London 9·3 hours; four days not at all, another day 5·3 hours, on the 16th three hours and a half, and on the 17th half an hour.

A deputation from the Society of Arts waited upon Mr. Sclater-Booth last week, in reference to the working of the Public Health Act in London. Lord Alfred Churchill stated that the Society of Arts had found, in Harley-street alone, thirty dwellings that had never been connected with the main drain. Such a state of things might very readily account for outbreaks of typhoid and scarlet fever, the origin of which seemed wrapped in impenetrable mystery. Sir Henry Cole remarked that the main sewers of the metropolis had cost £4,000,000, and yet not more than three-fourths of the houses were connected with them. Mr. Sclater-Booth was of opinion that, as the matter was one coming under the Metropolitan Management Act, it was for the Home Secretary to deal with rather than himself. After some conversation, he admitted that the statements now made caused him some surprise; undoubtedly, the imperfections they had pointed out arose from the want of anything like a comprehensive system of sanitary government for London, and of an authority to see to its application.

At the meeting of the managers of the Metropolitan Asylums District Board held last Saturday at Spring-gardens, a letter was read from the President of the Local Government Board, stating that he had informed the House of Commons (in reference to the late discussion upon the subject of the Small-pox Asylum at Limehouse) that so soon as Deptford and Fulham were ready, which would probably be within a week, a stop would be put to further admissions at Limehouse, the convalescents there being discharged as they recover. A discussion then arose as to the statements made to the House of Commons in introducing the matter, and with reference to the statement that persons had left their employment at Limehouse through the proximity of the Asylum. Mr. Wood, the representative from Mile-end, said he had elicited the fact that instead of the people having left their employment in alarm, as stated, they had been discharged. Mr. Ritchie's statements to the House were severely criticised, and much obligation was expressed to Mr. Walter for having taken the trouble to go and examine the locality for himself, whereby he was enabled to modify the inaccurate accounts set before the House of Commons and the public. Sir E. H. Currie also denied statements which had been attributed to him by Mr. Ritchie; and the Board agreed to the following resolution on the motion of Sir William Wyatt and Dr. Cortis:—"That the Chairman be requested to acknowledge the receipt of the President's letter, and to state that while the managers coincide with the

views therein expressed, it must be distinctly understood that should the accommodation for small-pox patients, in consequence of the extension of the disease, be insufficient during the remainder of the term for which the managers have possession of the premises at Limehouse, then the managers will make use of those premises to the extent to which it may be necessary."

Through the kindness and liberality of Mr. Arthur Sullivan and Mr. W. S. Gilbert (so well known in the musical and theatrical world), two additional beds have been added to the Victoria Hospital for Children, Gough House, Chelsea, to be called the "Sullivan" cot and the "Gilbert" cot. There are now eleven special cots in this Hospital, nine of which have been established within the last two years.

The Board of Works for the Lewisham District has recently pledged itself to accept a grant of about seventeen acres of land, and to enclose it, lay it out, and maintain it for ever as a public recreation-ground for Sydenham and Forest Hill. In this case the land is being purchased, half the purchase-money being raised by public subscription and from local funds, and half by contributions from the Metropolitan Board of Works, under powers sought for the purpose by a Bill now before Parliament.

Latest advices from India report that small-pox is very prevalent all over the town of Madras, and women are to be found walking about the bazaars and presenting themselves at people's houses with little children infected with the disease, trying to excite the charity of the public. Small-pox is also very prevalent in the city of Indore, and several cases have occurred in the neighbouring station of Mhow.

We are pleased to be able to again report favourably concerning Dr. Peacock and Dr. Basham. Dr. Peacock continues to improve, though slowly. Dr. Basham is now able to make considerable use of the affected limbs, but is still in the Westminster Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

The sixth and concluding lecture of the Annual Scientific Lectures for 1877 was delivered in the College Hall by Dr. Arthur Wynne Foot, Physician to the Meath Hospital, on Monday, February 26. The subject of "Tuberculosis" was continued. Dr. Foot observed that his principal object in the former lecture had been to draw attention to the strongly expressed views of the present day as to the unity of phthisis in the sense conceived by Laennec, and to the evidence that this unity has, since his time, been shown to have an anatomical basis in constant developments or overgrowths of the lymphatic elements, which so abundantly exist in and about the pulmonary air-cells. These small-celled overgrowths of lymphatic tissue constitute tubercles, which, when simultaneously found in great numbers, as in acute disseminated miliary tuberculosis, present such a remarkable uniformity in colour, shape, and size as to have long ago suggested the probability of their origin in lymphatic glands. On the other hand, when these tubercles are locally developed, and when lapse of time has allowed of their undergoing the nutritive modifications to which they are subject, and of becoming confused or identified with inflammatory products arising from their presence, they are often so far from being obvious to a superficial examination, that their original existence as the cause of the pathological phenomena has been denied, and the appearances observed been attributed to other causes. In the second lecture Dr. Foot took the subject two steps further, and alluded to the views that the exciting cause of the lymphatic irritation which results in the formation of tubercle is frequently the reception into the economy of the *débris* of animal products, which, under certain circumstances and in many constitutions, appears to be possessed of qualities which can scarcely be misnamed if called infective or poisonous. He also indicated that the scrofulous constitution appears to unite in itself both the means of a self-manufacture of such an infective agent, by virtue of peculiarities in its secretions, as well as a special susceptibility to its effective operation, owing to the eminent irritability of the lymphatic tissue in the subjects of that diathesis. The lecturer drew attention prominently to the possibility of milk being a means of propagating tuberculosis in consequence of the frequency of phthisis among milch-cows stabled in towns, and debilitated by the prolonged lactation encouraged among such cattle; also to the evidence that intestinal phthisis, when not prior to, or contemporaneous with, the pulmonary manifestations, may be induced by the swallowed expectoration. In reference to caseation, the influence of unusual dryness of the surrounding tissues was discussed. The peculiarities of the scrofulous inflammations, whereby their secretions are prone to caseate, and their infiltrations to be indolently chronic, were pointed out, and the view of the identity of scrofulosis and tuberculosis shown to be the most compatible with histological evidence. He held that the great danger to be apprehended in scrofula was the occurrence of tuberculosis, and that the prophylaxis of scrofula was the prophylaxis of tubercle.

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 103, 90, and 72 in the three preceding weeks, rose again last week, and reached the number of 104, which is, with but one exception, the highest weekly number recorded during the present epidemic: 42 were certified as unvaccinated, 25 as vaccinated; in the remaining 37 cases the medical certificates did not furnish any information as to vaccination, or contained statements that the medical practitioners were unable to certify whether the deceased had or had not been vaccinated. No less than 16 deaths from small-pox of children aged under five years, and certified to be unvaccinated, were registered during the week. Of the 104 deaths from small-pox, 41 occurred in the Metropolitan Asylum Hospitals, 5 in the Highgate Small-pox Hospital, 1 in the Model Prison at Holloway, and 1 in the North-street Infirmary, Poplar; the remaining 56, or 54 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 16 of the deceased small-pox patients had resided in Lambeth, 11 in Bow, 11 in Southwark, 6 in Poplar, 6 in Hackney, and 5 in Marylebone; in all, excluding two hospital cases admitted from suburban London, 6 belonged to the West, 20 to the North, 4 to the Central, 29 to the East, and 43 to the South groups of districts. The largest increase during the week occurred in the North and South districts, but the disease again showed the greatest proportional fatality in East London, especially in Bow and Poplar. The Metropolitan Asylum Small-pox Hospitals contained 916 patients on Saturday last, including 112 convalescent cases at Limehouse, against 834, 811, and 901 at the end of the three preceding weeks. The new cases admitted during the week were 205, against 194 and 238 in the two previous weeks.

THE PROPOSED CONJOINT EXAMINATION SCHEME FOR IRELAND.

This Scheme, elaborated by a joint committee of representatives of the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland, was virtually strangled, some weeks ago, by the Council of the last-named body. At the monthly meeting of the College of Physicians, in February, the Scheme was to have been considered, but the College, instead of considering it, determined to represent to the University of Dublin that the course pursued by the Council of the College of Surgeons rendered it useless for the College of Physicians to deliberate respecting the proposed Scheme.

THE METROPOLITAN WATER-SUPPLY FOR JANUARY LAST.

The report on the water-supply of the metropolis for the month of January last shows that the continued rains and floods have again seriously deteriorated the quality of the water issued by the various metropolitan companies. The records of the river books kept at the intakes from the Thames denote that the river has been in a worse state of flood during the month than has ever been noticed since the establishment of waterworks at Hampton; consequently, those companies unprovided with sufficient storage reservoirs are compelled to take in dirty water, and distribute such as they can get hurriedly through their filter-beds, imperfectly filtered. When the river is in this state there is a considerable amount of solid matter in the water, and it is too fine to settle. It is very difficult of removal by filtration, being only practically got rid of by subsidence previous to filtration. As a contrast to this source of our water-supply, and the difficulties found to exist in distributing it in a fit state for use, Dr. Frankland calls attention to the fact that the water supplied from deep wells to the inner circle by the Kent Company, and to the outer circle by the Colne Valley Water Company and the Tottenham Local Board of Health, was entirely unaffected by the long-continued rains and floods. This water was palatable, bright, and sparkling, contained only mere traces of organic matter, and was of the most excellent quality for dietetic purposes. The water of the Colne Valley Company is softened by lime before delivery, and is thus rendered serviceable for washing and bathing. Whilst the Kent and Tottenham waters had respectively twenty-eight and thirty-three and a half degrees of hardness, the Colne Valley water had only five degrees. The proportion of total solid matters in solution was also correspondingly reduced by the softening process. It was water from this source, and of this quality, which the late Rivers Commission recommended to be gradually substituted for the river-water supplied to London.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting on Saturday, February 17, among other specimens, Dr. Finny presented a striking example of "Farre's Tubercle of the Liver" in a man who had been short-winded since an attack of bronchitis two years previously. There had been no hepatic symptoms or ascites or varicose veins over the abdomen. The left lobe of the liver was specially engaged. Professor Bennett brought forward two cases of fracture of the costal cartilages—one illustrated by a cast; the other by the specimen itself, which enabled him to record for the first time the recent post-mortem appearances of the injury. The fracture of the cartilages was transverse, the vertebral fragment being displaced towards the thorax under the sternum. The perichondrium, at the site of the fracture of the costal cartilages, was torn across on their anterior aspect, but remained intact on their posterior aspect. At the meeting on Saturday, February 24, Dr. J. W. Moore showed an aneurism of the thoracic aorta which burst into the posterior mediastinum, having previously caused erosion of the bodies of the second, third, fourth, and fifth dorsal vertebræ. The intervertebral cartilages had almost escaped the effects of pressure. The heart and its valves were healthy, but the aorta was extensively atheromatous. Professor Bennett showed a very remarkable specimen of mediastinal sarcoma, which had been forwarded by Sir William Miller, of Derry. The tumour embraced or involved the root of the left lung, the arch of the aorta, the pericardium, the œsophagus, and even the muscular structure of the heart. It was an encephaloid sarcoma—the round-celled sarcoma of Virchow. The axillary and bronchial glands were in no way engaged. Dr. James Little exhibited a case of spontaneous rupture of the left ventricle of the heart. The sequel of pathological events had probably been atheroma of aorta, hypertrophy of left heart, atheroma of coronary arteries, and starving, with consequent fatty degeneration of the hypertrophied left ventricle. A false ventricular aneurism formed, and ultimately the visceral pericardium gave way.

ARMY MEDICAL SERVICE.

The following is a list of gentlemen who were successful for appointments in her Majesty's Army Medical Service at the examination held at the University of London on February 12. The names are placed in order of merit:—

	Marks.		Marks.
1. J. J. Mullen	2623	10. E. M. A. Hogan	1781
2. F. H. S. Murphy	2353	11. P. M. Ellis	1770
3. T. de Caux	2210	12. T. Kearney	1705
4. W. F. Johnston	2011	13. W. J. Kenny	1645
5. R. D. Hodson	1995	14. A. Irwin	1550
6. J. Armstrong	1945	15. P. J. O'Sullivan	1521
7. H. C. Kirkpatrick	1886	16. W. McCarthy	1465
8. A. W. Browne	1875	17. J. F. Brodie	1290
9. C. R. Powell	1808		

COMPETITION FOR INDIAN MEDICAL APPOINTMENTS.

The following is a list of candidates for her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on February 12. Forty-six candidates competed for twenty-seven appointments; all were reported qualified. (Mr. MacCarthy having withdrawn, Mr. B. L. Dutt is appointed in his place):—

	Marks.		Marks.
1. T. K. Rogers	2519	15. J. A. Nelis	2045
2. W. K. Hatch	2349	16. D. Mullen, M.D.	2043
3. W. Owen	2345	17. E. L. Robinson	2016
4. W. Coury	2315	18. A. W. Mackenzie	2015
5. H. D. Masani	2265	19. J. G. Hancock	2010
6. D. M. Jack	2220	20. A. M. Crofts	1975
7. H. A. F. Nailer	2210	21. W. Coates, M.D.	1947
8. R. J. Taaffe	2194	22. D. Elcum	1945
9. W. Gillies	2185	23. N. Clutterjie	1925
10. G. J. Kellie	2180	24. M.J.MacCarthy, M.D.	1919
11. K. R. Kirtikar	2150	25. James Crofts	1880
12. J. Mullane, M.D.	2100	26. W. B. Smyth	1853
13. G. C. Bouton	2082	27. J. Blood	1822
14. D. Basù	2065		

ROYAL COLLEGE OF SURGEONS.

Professor Parker, F.R.S., will bring his course of lectures on the Osteology of Birds to a close on Wednesday next, the 6th inst., when he will be succeeded by Professor Flower, F.R.S., who will commence his course of nine lectures on the Comparative Anatomy of Man, on Friday, the 9th inst. The following is his programme:—Introduction. History and aims of the study of physical or zoological anthropology. Materials available for the investigation. John Hunter's anthropological collection. Present extent and range of the College collection.—Variations of man in external characters; stature; proportions; physiognomy; colour; hair, etc.—Dental characters: Comparison of the teeth of man with those of the most nearly allied animals. Variations in the different human races.—Osteological characters; variations in the form and relative dimensions of the bones of the limbs in different races. The pelvis. The skull; methods of estimating the variations of its different parts, and their significance as race characters. Determination of age and sex of skulls. Pathological, artificial, and posthumous deformation of skulls. Special characters of the human skull from an anthropological point of view; relation of the various parts of the external surface of the skull to the brain. Craniometry; determination of fixed points for mensuration, and of the horizontal plane for craniography; methods and results of measurement of the internal capacity (stereometry) of skulls; diameters; curves; angles; sections; indices. The lower jaw.—Remaining anatomical characters; The brain, etc.—Illustrations of the more marked types of mankind as distinguished by their physical characters.

THE HEALTH OF BIRMINGHAM.

The quarterly report of Dr. Alfred Hill, Medical Officer of Health for the Borough of Birmingham, for the period ending December 30 last, corroborates the universal testimony that however unpleasant the present winter may have been, it has at least been especially noticeable for the low rate of mortality which has prevailed all over the kingdom. The deaths registered in the Birmingham District for the period under notice were 1842, being equivalent to a death-rate of 19·81 per 1000 of the population; in the fourth quarter of 1875 the death-rate was 24·42; and in the same quarter of 1873 and 1874, 26·95 and 28·10 respectively. This gratifying decline in the death-rate, though to some degree owing to a decrease in the number of deaths from most of the zymotic diseases, is chiefly due to the much smaller mortality from local and developmental diseases generally, but more particularly from bronchitis. The diminution in the number of deaths from bronchitis may be attributed to the comparatively high temperature which has prevailed throughout the quarter. The deaths from zymotic diseases were 282 during the quarter, representing a death-rate of 3·0 per 1000 per annum, against a rate of 4·4 in the fourth quarter of 1875, and 6·6 in the fourth quarter of 1874. Taken altogether, the report presents a very favourable statement of the sanitary condition of the locality.

THE MEDICO-CHIRURGICAL SOCIETY.

The meeting of the Medico-Chirurgical Society, on Tuesday last, was interesting as the last ordinary meeting during the presidency of Sir James Paget; and, besides a valuable paper on "Necrosis without Suppuration" by Mr. Morrant Baker, for Mr. Spencer Wells' "Report of 300 additional Cases of Ovariotomy, with Remarks on Drainage of the Peritoneal Cavity," which paper led to a lively discussion. As our usual report will appear in due course, we need only now allude to an amusing defence by Mr. T. Smith, of St. Bartholomew's, of the results of ovariotomy in the general hospitals, and Mr. Wells' rejoinder that it was the generous rivalry stimulated by the practice in smaller special institutions that had led to better results of late years in our large hospitals. This was endorsed by Sir James Paget, who, in his concluding remarks, said that Mr. Wells' services were not confined to the improvement in the practice of ovariotomy, but to the effect of his example upon "surgery for all future time."

TYPHOID FEVER IN PARIS.

From the third report of the German Sanitary Office we take the following remarks upon the late epidemic of typhoid fever in Paris:—1. The epidemic of 1876 was distinguished, not only by the large number of persons attacked, but also by the excessive mortality, namely, 35 per cent.; whereas in ordinary years it never exceeds 25 per cent. 2. The malignancy of the cases was directly proportional to the dryness of the atmosphere, for although the number of cases was largest during the prevalence of rain, the relative mortality was always less at that time. 3. An unusually large number of the cases were complicated with hæmorrhage from the bowel and lungs; and the typhoid eruption was, as a rule, distributed over the greater part of the body, and in many cases closely resembled the eruption of *typhus* fever. 4. The best therapeutic results were obtained, especially in the severest cases, by the treatment with cold baths.

PATHOLOGICAL SOCIETY.

Another interesting debate may be expected at the next meeting of this Society, to be held on the 6th inst. Mr. Godlee will show the organisms of vaccinia and variola, and explain their mode of growth; after which a Paper on Fibroid Degeneration of the Spinal Cord and its Vessels in Chronic Bright's Disease will be read by Sir William Gull and Dr. Sutton. The paper is a continuation of their doctrine of arterio-capillary fibrosis. Microscopical specimens will be on the table at 8 p.m. A large gathering of members is anticipated.

THE GERMAN SURGICAL SOCIETY.

The sixth congress of this Society will be held at Berlin in April next, from the 4th to the 7th inclusive, in the Great Hall of the University. There will be a *soirée* for the members on April 3 at the Kaiserhof Hotel. Professor von Langenbeck, the President, has expressed a wish that the approaching Congress may be utilised to a greater extent than former ones for the demonstration of surgical preparations, and for the exhibition of new instruments, bandages, surgical apparatus in general, as well as of photographs, drawings, and plaster models. He also hopes that due notice will be given of subjects for discussion, and of the titles of papers.

THE FRENCH LAW WITH REGARD TO FOREIGN MEDICAL MEN.

The following amendment to M. Roger Marvaise's *proposition de loi* will shortly be moved in the French Assembly by M. Paul Bert:—"The right to practise medicine can only be granted by the Minister of Public Instruction to foreign physicians who are furnished with degrees and diplomas which give them the right to practise in their own country."

PUERPERAL FEVER.

The Obstetrical Society of Berlin has appointed a commission to deal with the subject of the etiology and prevention of puerperal fever in Berlin. Professor Schröder is at its head.

MEDICAL PARLIAMENTARY AFFAIRS.

Cattle Plague.—Inquiries were made, both in the House of Lords and the House of Commons, on Thursday, February 22, with respect to the outbreak of cattle plague in Essex and Yorkshire. Earl Fortescue, President of the Central Chamber of Agriculture, strongly urged the compulsory slaughter of all fat cattle from foreign parts before shipment to this country, as the only reliable check upon the spread of disease and the delivery of sound meat. The Duke of Richmond and Gordon defended the present system of inspection of cattle on arrival, and referred to the regulations in force since 1833 with regard to the importation of cattle. In endeavouring to show the promptitude of the Board in dealing with a threatening outbreak, he stated that on January 15 a paragraph was published in the *Times* stating that cattle plague had broken out in Germany. Without waiting for official information, telegrams were despatched to the inspectors at the various ports, reminding them of the importance of exercising great caution in examining stock. On the following day cattle plague was discovered in a cargo of fat cattle landed at Deptford from Hamburg. This would seem to indicate either that diseased animals were passed over prior to this precautionary telegram being sent, or that the disease had manifested itself in the cattle after their arrival, and before January 15, when the *Times* correspondent was confessedly the vehicle of arousing the officials to a sense of the importance of greater caution. The shipload from Hamburg was at once slaughtered, and the ship disinfected. Subsequently an Order in Council was passed, prohibiting the landing of cattle, hides, or meat from Germany, France, and Belgium. Sheep and goats could still be received for immediate slaughter. On January 30 a cordon was placed round London, and no animal was allowed to go outside the district. Notwithstanding these precautions the disease spread throughout the districts of Hackney, Stratford, Poplar, and Bow, etc., with considerable rapidity. The disease was detected in Hull, and other cases were reported from Yorkshire. This led to an Order in Council being issued, forbidding the holding of fairs or the transport of cattle throughout the East Riding. Cattle could only now be imported alive from Norway, Sweden, and Denmark in the North, and Spain and Portugal in the South of Europe. Lord Sandon, Vice-President of the Privy Council, made a similar statement in the House of Commons.

English Practitioners in France.—The Bill now under consideration in the French Chamber of Deputies, proposing to forbid the practice of medicine and surgery in France by those possessing foreign qualifications, was commented upon by Dr. Lush. Mr. Bourke stated that the French Government

had asked for information of the law and custom in this country with regard to the practice of medicine. The suggestion of the Medical Council is now under consideration by the French Government.

Vaccine-Lymph for Ireland.—On Tuesday, February 27, Sir M. Hicks-Beach stated that the grant of £400 a year to the Dublin Cow-pox Institution had been discontinued, and in its place the Irish Local Government Board had been empowered to provide a gratuitous supply of lymph for Ireland in the same way as is done in England. From April 1 next £1200 a year would be set apart for that purpose.

Cattle Plague.—On the same day, Lord Sandon stated that no fresh cases of cattle plague had been reported since the last information was given to the House—*i.e.*, on February 20.

PROFESSOR LISTER AND THE EDINBURGH STUDENTS.

(*From a Correspondent.*)

We have received the following from a rabid unbeliever in germs. We need hardly say that the views therein embalmed are not those of this journal; but we feared that if an opportunity of disburthening his soul had not been afforded to the writer, some terrible accident might have happened:—

"Our contemporary the *Scotsman* relates, apparently in all seriousness, an occurrence in the theatre of the Regius Professor of Clinical Surgery, Edinburgh, which could only be fittingly described by a poet. A rumour had got abroad that the Regius Professor was about to be tempted away from Edinburgh by the offer of an honourable post of usefulness and distinction in London. The students of the University naturally were alarmed and grieved at the idea of such a loss to themselves and their *Alma Mater;* and they presented to the Professor an address, signed by 700 of them, in which, among other things, they declared that the loss would be irreparable—a way of complimenting the man at the expense of the University, which may very well be allowed to enthusiastic young students. Then the Professor replied, and in a strain that could not but charm his pupils and admirers. He had had no actual offer yet, and therefore it was not easy to say much on the subject, but at least he could say this, that 'there existed nothing in London at the present time which he should consider good enough to call him away from that school.' There was no professorial chair so potent for good as the chair of Clinical Surgery; but, according to the experience of his own student-days, and the opinion of every distinguished foreigner who visited their school after the schools of London, the instruction in clinical surgery in London, as compared with the system in Edinburgh, was a mere sham—it was simply neglected and slurred over. And then he went on, after some other words, to this grand climax:—'If it were certain that I should have the topmost position in London in private practice, and have to teach clinical surgery as it is taught in any London school at the present time, I would certainly not go to London.' What a theme for a good heroic ballad of the olden type! The scene—the crowd of students hanging on the answer of the Professor; the temptation—honour, fame, wealth (say some ten or twelve thousand a year), and opportunities of immense usefulness, but clogged with the stipulation that he should teach clinical surgery in a way repugnant to his conscience and his soul. Some demon suggests to his mind that he might be able to lead these poor English to better things, and that there would be a glorious missionary element in the enterprise. But all temptation is in vain; the Professor knows that the last occupant of the very clinical chair which perhaps might be offered to him was a true Scottish man, and yet he had not only failed to teach the London surgeons how to teach, but had himself fallen into their evil ways. Then up and spake the Professor with the spirit of the Covenanters, and cast the tempter behind him. Will not Professor Blackie, or some other Scottish poet, embalm the scene in immortal verse? A critic might object that the tempting offer had not yet been made, and that it was ludicrously incredible to suppose that, if made, even those 'fule'-bodies the English could add to it the imagined condition. But no poet would care for that. If, however, no poet will oblige us, we must be content to record the incident as a striking proof of the contagiousness of enthusiasm."

FROM ABROAD.

Prof. Hebra on the Influence of Water on the Skin. Prof. Hebra commences a paper published in the first two numbers of the *Wiener Med. Woch* for 1877 with the motto, "Gutta cavat lapidem non vi, sed sœpe cadendo"; and goes on to say that both in scientific works and in verbal statements assertions are made with respect to the influence of water, which are justified neither by scientific principles nor practical observation. In the observations he wishes to make on the matter he confines himself to the influence exerted on the skin, without going into the general question of the merits or demerits of hydrotherapeutics. And first as to its *influence on the healthy skin*, it is the general opinion that frequent cold and warm baths, and washing the skin with cold water, followed by friction, are conducive to health and do no harm. This conclusion cannot be admitted; for, on the one hand, millions of men take no baths of any kind, and at most only slightly wash their face and hands once a week, and yet live to old age in the enjoyment of good health; while, on the other hand, no one is able to prove that the use of the various forms of baths wards off disease, or that washing in cold water furnishes any protective power against catarrh, rheumatism, etc.—diseases supposed to arise from catching cold. A comparison of the frequency of disease in towns where baths are frequently resorted to, and in the country, where they rarely can be got, says but little for their prophylactic power. And although it cannot be said that their frequent employment in towns is a cause of the greater mortality therein, neither can it be said that baths, and especially washing the body "all over" with cold water, is any protection against disease. As long as this "water manipulation" is accompanied by an agreeable general sensation, and no eruption on the surface of the skin results, it may be pursued as a pastime or amusement; but as soon as the skin reacts against the repeated irritation, and great itching, or erythema, urticaria, eczema, etc., are produced, the bathing and washing should at once be stopped, if we do not wish to induce skin diseases which may require months or years for their cure, and cause the subjects of them immense inconvenience. Much will depend upon the nature of the water used, and the mode of its employment, as simple warm and cold baths do not induce the same irritation of the skin as when they are accompanied by friction, douches, etc., or when the action of the vapour-bath is rendered still more intense by shampooing, brushing, etc. The consequences of such irritation sooner or later show themselves in the shape of permanent redness, a sensation of burning or itching, and the production of nodules and furuncles, which precede the formation of pustules and abscesses. These appearances, which formerly were regarded as critical and of good omen, should be attributed, as as they are really due, to the mischievous effects of water. Every physician attached to large hospitals is familiar with the eczematous condition of the hands and arms of those of the working classes whose occupations compel them to manipulate water. To this class of affections belong the so-called bath-eruptions, the *phydracia thermalis*. So also the affection termed by Prof. Hebra *eczema marginatum* is often induced by the prolonged application of wet bandages to the body, and surrounds the abdomen or back like a girdle, proving most obstinate in treatment, and causing violent and incessant itching.

If the reaction consequent on the prolonged employment of water will induce these effects on the apparently healthy skin of persons in good health, we may judge how much more frequent and intense will be its irritating effects on the skin *when in a diseased condition*. The skin does not first become "diseased" only when the redness and swelling of the numerous eruptions appear, but when its power of resisting injurious influences is diminished. Experience teaches us that those portions of the skin which, by reason of the pressure of articles of clothing, bandages, etc., or of the application of mustard-plasters, etc., become reddened, are the parts at which on the subsequent occurrence of diseases of the skin (as scabies, variola) the eruption shows itself in much greater quantity than in the other parts where neither pressure nor other irritant has been applied. The application of cold or warm compresses, and other proceedings of hydrotherapeutics, render the skin

in the same way more sensitive and less able to resist noxious influences. How far the condition of other organs may be benefited by the manipulations that are injurious to the skin is another question. It is very commonly supposed that the effects of these applications may differ in their influence on the skin accordingly as they are used cold or warm—*i.e.*, between 5° C. and 40° C. But, as regards compresses, everyone must have observed that, at whatever temperature they may be applicd, they soon are equalised to that of the skin, unless they are frequently renewed. In an inflamed state of the skin, as in erysipelas, anthrax, furuncle, etc., it matters little whether they are treated with ice or hot cataplasms, as regards the progress of the disease; and in deciding upon the temperature to be employed, we should be guided by the subjective sensations of the paticnt. Everyone must be aware that the different sensations felt after leaving a warm and a cold bath are due to the difference in the temperature of the surrounding air, and are of very short duration, as such temperatures soon become equalised; and, in fact, the irritating effect of water cannot be attributed to the temperature at which it is employed.

In searching for other properties to which this may be due, we have to consider the softened and macerated state of the epidermis which baths induce, separating the old layers, which are removed by the subsequent rubbings, considerable quantities being held also in solution in the water of the bath. The cutis thus becomes exposed to the irritating effect of the water. Upon this are based the indications as to the use of water in treating diseases of the skin. Its employment is *contraindicated* in all sensitive, irritable persons whose skin is liable to prolonged redness, the production of rashes, and itching; in all cutaneous affections accompanied by acute swelling and serous infiltration; and in all chronic dermatoses in which the horny layer of the epidermis—either through the effects of disease or of remedies—has been removed, exposing the layer beneath. Thus it is not proper to employ water soon after using stimulating substances externally, as arsenic, iodic mercury, etc. By avoiding water, and employing starch or other inert powder, the healthy state of the surface will be much sooner restored. Water, on the contrary, is *indicated* in those diseases where its macerating and irritating effects are useful—viz., in chronic dermatoses, such as psoriasis, lichen, ichthyosis, pityriasis rubra, old eczema, prurigo, etc. Water also exerts the most beneficial effects when different secretions—the products of inflammation, and the remains of dead tissue—have to be removed, as in abundantly suppurating wounds, ulcers, and gangrene. It is useful also in favouring the formation of new epidermis in pemphigus, and after extensive destruction of the skin by burns or caustic substances.

After some observations upon the time which patients can continue in baths without ill effect on the skin, and for the purpose of obtaining its therapeutical effects, Prof. Hebra terminates his paper with the following conclusions:—1. Water is not an indifferent body in its action on the skin, but excites in it considerable irritation, which may give rise to diseased conditions of the organs. 2. Temperature does not play the chief part in the employment of water, which is due to the macerating action, and consequent irritation. 3. In prescribing compresses, ablutions, baths, etc., so far as the temperature is concerned, we should be guided by the subjective sensations of the patients. 4. General ablutions or baths, whether cold or warm, do not serve in any way as prophylactics against disease of the internal organs, while they frequently give rise to a diseased condition of the general surface. 5. If baths are to prove useful in diseases of the skin, they must bo continued for a long period, *i.e.*, not under an hour at least. Warm baths in appropriate cases may be continued uninterruptedly day and night for months.

Epilepsy and Epileptic Vertigo in Children.

Prof. Bouchut recently gave a clinical lecture on two cases of epilepsy (*Gaz. des Hôp.*, January 23 and 25) at the Hôpital des Enfants-Malades, of which the following is an abstract:—

Epilepsy in children is of very frequent occurrence, and differs greatly both in its etiology and prognosis from epilepsy in adults. It shows itself in two forms—epileptic vertigo (or *petit mal*), and epileptic convulsion (or *haut mal*). Of the 118 cases which Prof. Bouchut has met with, thirty-six were examples of epileptic vertigo, and eighty-two of epileptic convulsion. *Epileptic vertigo* presents itself under the most varied forms. Always of short duration, there is a fugitive loss of consciousness of a few seconds or a minute, during which the face preserves its colour, the eyes are fixed and turned upwards, and the head is immovable, being sometimes thrown backwards or turned to the right. The arms cease to act without becoming convulsed or rigid, and the lower limbs are immovable. If the child is sitting, he does not move beyond bending forwards or on one side, and then recovering the vertical position, like one asleep while sitting. If standing, ho may bend and recover himself in the same way, or remain motionless. Sometimes speech is cut short by the crisis, and is resumed after the interruption. In rare cases there is emission of the fæces or urine. These vertigos, rare at first, become more and more frequent, and are often unperceived by reason of their short duration or of their occurring at night. They may occur only every month, fortnight, every day, or very many times in a day, so that in one case 180 were counted in one day. These crises may last for several months in this form, infinitely varied, and then pass into the regular epileptic convulsion. In other cases they cease spontaneously or yield to treatment.

Convulsive epilepsy is characterised by sudden and violent convulsive paroxysms, or may be preceded by premonitory symptoms known as the *aura*. Numerous well-marked instances of this aura arising at the extremities are on record, which also show the influence of its destruction on the cure of the epilepsy, and the possibility of arresting a paroxysm by a ligature or forcible compression applied in the track of the aura. When this premonitory symptom does not exist, the instantaneousness of the attack is characteristic. There may be pallor of the face with blanched lips, or this may be red or violaceous, with black lips and swollen neck. To the ophthalmoscope the fundus of the eye is pale in the one case, while in the other its veins are very red and very dilated. The convulsive paroxysm may only last for some minutes, or, subsiding for a moment, it may recommence and thus continue for one or several hours. When a calm has at last become established, the child falls into a more or less comatose sleep, which lasts from one to three hours, awakening with a sense of excessive fatigue. It is rare for these epileptic paroxysms to recur several times in a day, and they usually reappear at irregular epochs; and when they do exceptionally occur periodically, this is especially in girls arrived at the age of puberty, and at the menstrual period.

The diagnosis of epileptic vertigo is easy, but the convulsive form may be often confounded with eclampsia, and, in girls, with hystero-epilepsy. The mere accidents of the attack do not enable us to distinguish *eclampsia* from epilepsy, our diagnosis being derived from the accessory circumstances of the onset and the return of the convulsions. When the convulsion comes on suddenly and is followed by fever it is eclampsia, and is the indication of a pneumonia, angina, eruptive fever, or other acute malady. When albuminuric œdema is present, it is also eclampsia, due rather to cerebral œdema than to uræmia. So also when the convulsion is the result of heat, the overcrowding of children, or indigestible aliments, it is due to eclampsia; as it is when it comes on without known cause, in a passing manner and without ulterior repetition. So similar are the intrinsic phenomena of the two diseases, that eclampsia might almost be termed a fugitive epilepsy. In distinguishing *hysteria* from epilepsy, the form of the convulsive accidents has to be taken more into account. Thus, when the loss of consciousness is not very complete, when there is some amount of recollection, and when the attack is announced by some intimate sensation other than aura, and is accompanied or followed by a sense of choking, and cries and laughter, with analgesia or cutaneous anæsthesia, it is hysteria; but when, as in some cases, there is absolute loss of consciousness, without tears or laughter, and profound sleep after the attack, it is hystero-epilepsy. This form is not very frequent in children, and affects chiefly girls after their twelfth year. One point is always a difficult one in the diagnosis of epilepsy—the decision as to whether the diseaso is essential (*i.e.*, caused by a temporary disturbance of the cerebro-spinal circulation), or whether it is symptomatic of an organic nervous lesion. This difficulty has, however, almost ceased to be one since Prof. Bouchut's researches in cerebroscopy, which are described at length in his recently published "Atlas d'Ophthalmoscopie Médicale et de Cérébroscopie." If with the convulsions there is papillary œdema, with hyperæmia, neuro-retinitis, or tubercles of the choroid, the epilepsy is certainly dependent upon a cerebral or spinal sclerosis, a partial encephalitis, or some deposit in the nervous substance. If there is no changed condition found in the fundus of the eye, we may believe (without,

however, being quite certain) that the epilepsy will only prove temporary.

After a disquisition on the reflex and direct causes of epilepsy, for which we have not space, Prof. Bouchut passes to the prognosis, which he observes is very different in children and adults. Before the age of fifteen epilepsy is generally curable; and the aphorism of Hippocrates, that the epilepsyof childhood is cured after puberty, is entirely true. That it is so probably arises from the fact that the majority of such epilepsies have their origin in the second dentition, when the teeth of a man are placed in the jaws of a child. After puberty they more easily assume their proper places, and the epilepsy ceases with the reflex action which produced it. Epilepsy from direct causes, as from sclerosis or other cerebral or spinal lesion, however, call for a very different prognosis from those of reflex origin, for although they are sometimes ameliorated they are rarely cured.

In the treatment of epilepsy, wherever there is an aura we should endeavour to destroy it, as arrest of the attacks has been proved to follow the disappearance of this peripheral neuralgia. Thus, deep cauterisation in neuralgia of a branch of the intercostal nerve cured the epilepsy in two cases. When the epilepsy is dependent on worms, appropriate vermifuges must be had recourse to; and the dyspepsia with which it is sometimes connected in children should be met by a vegetable and milk regimen, pepsin, small doses of bicarbonate of soda, the waters of Plombières, etc. In irregular second dentition, the removal of teeth which are too long in falling is often attended with advantage. Besides the rational treatment of causes, we may have recourse to antispasmodics which regulate the movements of the capillary circulation, such as belladonna, bromide of potassium, oxide of zinc, ether, chloroform, etc.; but of all these none possess the same efficacy as the bromide. It may be given united with belladonna in the following formula, but it is upon the bromide that we should chiefly rely:—Simple syrup 240, syrup of belladonna 60, and bromide of potassium 20 parts; of this doses of one gramme may be given two, three, four, and even to six times in the day, according to the case. The bromide does not in children produce the ill effects which it sometimes does in the adult, the only accidents that have been observed, even in doses of six, eight, or ten grammes per diem, prolonged for some time, being stupor and hebetude, which disappear on diminishing the dose. If it be given in reflex epilepsy, in progressive doses of three or four grammes to children from five to nine years, and of from four to ten grammes to children of ten to fourteen, most of the cases will be cured. When the epilepsy arises from an organic cause, the most that can be done is to render the attacks less frequent. The application of cold externally by means of frequent douches is a useful auxiliary, tending by the cutaneous revulsion it induces to restore the equilibrium of the capillary circulation.

The Dover Town Council and Small-pox cases.—The Town Council of Dover not having forgotten that the scourge of small-pox which visited the town in 1871 was introduced by the landing of a seaman stricken with the disease from a passing vessel, decided at their meeting last week that a sailor suffering from small-pox on board a German schooner lying in the bay, whom the captain intended to send ashore, should not be permitted to land.

Tearing out the Eyes.—Prof. Leidesdorf exhibited a man at the Vienna Medical Society, who, under the influence of religious insanity, had committed the rare self-mutilation of tearing out both the ocular globes. He is only aware of one such instance being on record—viz., the case of a woman, related by Dr. Bergmann, who, acting on the phrase of the Bible, "If thine eye offend thee, pluck it out," committed the same act, the consequent blindness being accompanied by a return of her sanity. The young man under Prof. Leidesdorf's care had for some time past exhibited excessive religious devotion, and having set off for the seat of war in order to convert the infidels, he was seized and confined to his room. Being heard praying very loud, his room was entered, and he was found weltering in blood, with his right eye lying on the floor, and the left one hanging on his cheek. He was taken to an asylum, and in two months the wounds had entirely healed, but he was detained, as symptoms of insanity persisted. The eyes had been removed without any instrumental assistance, and without the man having felt any pain.—*Wien. Med. Zeit.*, January 30.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

February 20.

The Infirmary Question: Attempts at a Compromise; Real Points at Issue—Preparations for the British Medical Association: Names of the Presidents of Sections—Manchester Medical Society.

The Infirmary question has assumed a new and somewhat more hopeful phase. There are signs of an attempt at compromise. It is evident to every impartial on-looker that each side has overstated its case. Feeling has entered largely into the discussion, and it is well that action has been delayed so as to give opportunity for time to exert its sobering influence. The more recent of the many letters which have appeared in the columns of the local papers bear traces of a desire to regard the subject dispassionately. What is still needed is a fair and unprejudiced *résumé* of the arguments on both sides. Dr. Renaud volunteered, at a recent meeting of the Weekly Board, to draw up a statement of the kind, but he is too strong a partisan to put the case with absolute fairness. Indeed, at the next meeting, when the statement was read, the absurdity of the situation became apparent to everyone in the room. It is not from a party leader that we can reasonably expect a perfectly unbiased account of the arguments in a question under discussion. Yet such an account would be of the greatest value at this juncture; and, inasmuch as the government of the Infirmary is being reconstituted, and no definite action is likely to be taken until the new governing body comes into power, there is a sufficiently long breathing-space before us for something of the sort to be prepared and issued. One thing appears perfectly certain, namely, that the present hospital accommodation in Manchester is wofully insufficient. Whether the 19,880 square yards which constitute the whole of the present site will be sufficient for such an enlargement of the existing hospital as is absolutely necessary, or for the building of a new hospital which will afford the requisite amount of accommodation, and yet fulfil the requirements of modern science, remains to be seen. This question of accommodation, and the money question, are, after all, the two strongest motives for advocating a change. As to the unhealthiness of the town atmosphere, the bad drainage, the noise of the street traffic, the distance from the School of Medicine, and the original faulty construction, all are points of quite secondary importance in comparison with the two I have named; and some, as, for instance, the unhealthiness of the atmosphere and the noise of the traffic, are, so far as regards any injurious effects upon the patients, entirely matters of opinion. If the two parties will consent to allow these arguments of minor importance to disappear from the discussion, and will narrow the field to the two questions that really require settling, there will be some hope of a definite result.

The preparations for the meeting of the British Medical Association in August are making rapid progress. Already the principal Manchester firms have expressed their willingness to throw open their factories and warehouses for the inspection of members. The proprietors of the Botanical Gardens have promised to hold a flower-show on one of the days during the meeting, and, what is still more likely to prove interesting and attractive, have undertaken to open a special exhibition of British medicinal and dietetic plants. Owens College has opened its arms to receive us, and in the many and spacious lecture-rooms and class-rooms all the sections will find ample accommodation; while the Medical School buildings adjoining will be almost entirely devoted to museum purposes. The invitation of distinguished guests from America and the Continent is to be a special feature, and I hope soon to be able to give you the names of some who have promised to honour us with their presence. The Manchester representatives authorised to act with the Committee of Council as an arrangement committee have reflected the unanimous wish of the profession here in avoiding the appointment of a large number of local men to the various posts of honour in the Association. Thus, only one of the three addresses will be read by a Manchester physician—viz., that on Medicine by Dr. William Roberts; while of the six sections, four will have for their president men of the highest eminence in their respective departments, and entirely unconnected with Manchester. To our great delight,

Sir W. Jenner has accepted an invitation to preside over the Medical Section. The chair in the Surgical Section will be occupied by Mr. Lund, the leading surgeon in this city; and that in the Physiological Section by Dr. Arthur Gamgee, Brackenbury Professor of Physiology at Owens College, the able and accomplished translator of Hermann's "Physiology." The post of president of the Obstetrical Section has been accepted by Dr. Priestley, that of the Psychological Section by Dr. Bucknill, and that of the Public Health Section by Dr. De Chaumont.

As a proof of the vitality of the Association in this part of the country, I may mention that at the last council meeting of the Lancashire and Cheshire branch no fewer than eighty-four new names were submitted for election.

The annual meeting of the Manchester Medical Society was held last month, when Dr. Arthur Ransome was re-elected president for another year—an exceptional honour thoroughly merited. The number of members, notwithstanding the recent removal of the library from the centre of the town to Owens College, continues steadily to increase, and has now reached 193. Mr. Thomas Windsor continues to devote a great deal of time and energy to the improvement of the library, and it is mainly due to him that the past year witnessed the large addition of 2353 volumes.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, FEBRUARY 7.

CHARLES WEST, M.D., F.R.C.P., President in the Chair.

THE following gentlemen were elected Fellows of the Society:—Nathaniel H. Clifton, F.R.C.S.; James Crawford, L.K.Q.C.P.I. (Sevenoaks); Samuel H. Darson, M.D.; James Ford, M.D. (Eltham); Samuel Johnson, M.D. (Stoke-upon-Trent); and George Walker, L.R.C.P. Professor Holtz, M.D. (Nancy), and Professor E. Randolph Peaslee, M.D. (New York), were elected Honorary Fellows; and William Goodell, M.D. (Philadelphia), and Horatio Storer, M.D. (Boston, Mass.), were elected Corresponding Fellows of the Society.

TWO-HEADED MONSTER.

Dr. PALFREY showed a monster with two heads, three arms, one trunk, and pair of lower extremities. The heads were nearly on a level, and the two passed through the vaginal outlet at the same time.

Dr. PRIESTLEY asked what amount of traction was necessary to effect delivery, what degree of laceration was caused, and what was the state of the mother afterwards.

Dr. TIPPLE, who attended the case, replied that the woman had had local peritonitis and a large ulcer behind the left iliac crest.

Dr. BARNES said that the lower head fitted into a concavity in the other.

Dr. HEWITT said it was evident that one head came down somewhat before the other.

The PRESIDENT referred the specimen to Dr. Hayes and Dr. Playfair for report.

DELIVERY COMPLICATED BY EPITHELIOMA.

Dr. GODSON showed a fœtus at full term of which he had delivered a woman suffering from extensive epithelioma of the cervix. The patient was seen at the commencement of labour, and it was decided to deliver *per vias naturales* in preference to Cæsarian section, as affording a better chance of recovery to the mother. Dilatation by Barnes's bags, turning, perforation at the occiput and cephalotripsy were subsequently adopted. The os uteri appeared to have escaped laceration, and the woman was doing well.

Dr. EDIS referred to a case in which he had delivered *per vias naturales*. He thought, however, that in most such cases Cæsarian operation was preferable.

Dr. HEYWOOD SMITH showed three new points for Paquelin's Petroleum Cautery, and "Bailey's Patent" Abdominal Belt. The peculiarity in the belt was two slits to embrace the crista ilii so as to prevent rucking.

Dr. SMITH showed also a portable pelvimeter, which could be equally used for internal and external measurements.

The new volume of *Transactions* was presented to the Society.

The PRESIDENT delivered his address.

TWO CASES OF INVERSIO UTERI.

Mr. R. HICKMAN (Newbury) read notes of two cases of inversio uteri. Both cases were attended by midwives, and the cause of the inversion in each was uncertain. In both the uterus was readily returned to its normal position. In one the woman did well; in the other the patient died soon after the reduction.

SPONTANEOUS INVERSION OF THE UTERUS.

Dr. F. R. ELKINGTON (Brookville, Ontario) contributed particulars of a case in which labour was natural. On the third day the uterus became suddenly inverted, owing apparently to the exhibition of a large dose of castor oil. It was easily reduced, and the patient did well. The author thought that unequally distributed pressure on the fundus of the uterus after expulsion of the placenta occasionally gave rise to partial inversion.

CASE OF INVERSIO UTERI.

Dr. CLEMENT GODSON related the particulars of a case occurring in a patient, thirty-one years of age, who had an easy labour with her first child two years and a half ago. From that time she felt a lump in the vagina, which appeared to be lower during the menstrual epochs. She was very weak and anæmic. On examination, the uterus was found to be inverted. Dr. Greenhalgh and Dr. Godson made four different attempts at reduction by taxis, but without success. A plug of glycerine of tannin and an air-ball pessary were introduced into the vagina with a view to gradual reduction, but they had to be removed, owing to profuse hæmorrhage. Finally, the uterus was removed by the écraseur. The patient lost but little blood, and made a rapid recovery. Another patient had had a long and difficult labour two years and a half ago. She lost much blood after the labour, and off and on until she came under observation. On examination the uterus was found inverted. Repeated attempts at reduction by taxis were made, but they proved unsuccessful. Owing to the persistence of the hæmorrhage, and the gradually increasing exhaustion consequent on it, amputation was decided upon. This was done by the écraseur without loss of blood. The patient made a good recovery.

CASE OF INVERSION OF THE UTERUS.

Dr. HEYWOOD SMITH read notes of a case occurring in a patient aged thirty, who was delivered of her first child by forceps three months previously. The placenta was removed with some force; the bowels remained unrelieved for eleven days. An enema was administered, and during the straining which followed the womb appeared to have become inverted. From that time she had a more or less constant sanguineous discharge. On examination the uterus was found inverted, the orifices of the oviducts being felt. The patient was put under the influence of chloroform, and reduction was attempted in the way generally recommended by constriction at the neck of the uterus, and pressure at the point of flexion. Pressure was then made on the fundus, while counter-pressure was exercised above the pubes, but although a deep depression was made by this means, it failed of success. The whole organ was then pressed so as to squeeze the blood out of it, and the tip of the finger was passed into the right oviduct. Reinvagination commenced under the tip of the finger, and in a short time the uterus was restored to its position. The patient made a good recovery. The author was of opinion that the only rational method of reduction is to begin at the insertion of an oviduct.

CASE OF INVERSION OF THE UTERUS.

Mr. W. H. MABERLEY also read notes of a case. The patient, aged twenty-one, had had one child. The labour was easy, but was followed by profuse hæmorrhage. Afterwards she was the subject of menorrhagia. Dr. Greenhalgh found the vagina relaxed and capacious, and the uterus inverted. Three attempts at reduction were made by Drs. Greenhalgh and Godson, but without success. The uterus was removed by the écraseur. The night after the operation profuse hæmorrhage took place, which was arrested by the application of ice to the abdomen and vagina. Recovery was slow.

Dr. SMITH asked what method of manipulation was adopted by him.

Dr. GODSON said that general pressure was first used to expel the blood from the organ, and then pressure on one spot by the thumb. In one case the orifices of the oviducts could not be found; in the others they were extremely small.

Dr. Aveling thought that in returning inverted uteri it was a point of great importance what part of the fundus should receive the upward pressure. He had, in a case of only ten days' standing, been unable to force the fundus through the cervix until that portion which corresponded with the insertion of the Fallopian tube was specially selected for pressure.

Dr. Braxton Hicks said that the difficulty lay in the fact that the uterus was in most chronic cases shrunken and small, and its tissue so dense that it was not possible to indent it. Sudden reduction was not free from danger, for he had seen collapse take place while pressure was being made. He thought the slow method of reduction the best.

Dr. Robert Barnes said that recent cases could be reduced by the hand. It was advisable to swab the interior of the uterus afterwards with a styptic. Chronic cases are best treated by the slow method of constant elastic pressure, and not by brute force. Placing an air-bag in the vagina is not enough. An elastic ring should be placed round the uterus, and pressure exercised from the lower part of the vagina. If this fails, small incisions should be made in the constricting part, and elastic pressure applied again. Amputation is not without danger to life, and it is a mutilation of the woman.

Dr. Storer, of Boston, said that in America the inverted uterus was looked upon not as a fibroid or a polypus, the removal of which, if possible, was a duty, but as an important part of the body to be replaced and preserved; and that operations for its removal were had recourse to only when cure had proved impossible. Dr. Storer thought that Dr. Thomas's operation (dilatation of the cervical ring from above after abdominal section) had proved to be based on sound reasoning, and Emmet's employment of metallic sutures to preserve the gain obtained at one operation for the following one, and thus render it possible to complete the operation successfully. Inversion was occasionally complicated by the presence of a fibroid. This fact threw some light on the causation of inversion, otherwise doubtful. When such existed, uterine contractions after labour would be almost necessarily irregular, and might force the fundus downwards. It would also impede reduction after long displacement. Irregular contractions, even from slight causes, might cause inversion.

Dr. Edis called attention to the comparative frequency of cases of inversion. Judging from the cases recorded, this greater frequency is comparatively of recent date. He thought this was probably due to the employment of too much, or of ill-directed, force in the expulsion of the placenta. The treatment would vary according to the length of time which had elapsed since the inversion took place, and other circumstances; but amputation should only be done as a *dernier ressort*, when all other means had failed.

CLINICAL SOCIETY OF LONDON.

Friday, February 9.

George W. Callender, F.R.S., President, in the Chair.

Aortic Aneurism treated by Ligature of the Left Carotid Artery.

Mr. Christopher Heath showed a specimen of aortic aneurism from a man, in whom he had tied the left carotid artery in February, 1872, and who had been brought before the Society both in 1872 and 1873. He died in September, 1876, from bursting externally of the aneurismal sac, which proved to have sprung from the ascending portion of the arch of the aorta, and not, as had been supposed, from the transverse portion. Mr. Heath remarked that, though the relief from the operation had been marked and undoubted, it was difficult to explain its *rationale*, since the case did not support the view which had been put forward that the branch next beyond the aneurism should be tied. Unfortunately, the clot had been unavoidably removed, so that it was impossible to say whether it had extended for any distance down the aorta from the left carotid, but this vessel was completely filled with clot, which was adherent to the lining membrane of the artery only at the point of ligation. No trace of the catgut ligature was discoverable, and it was remarkable that the coats of the artery showed no evidence of having been divided by it. Mr. Heath said he did not attempt to theorise on the case, but contributed it in order that a complete record might be made of a case in which undoubted benefit had accrued from the application of the distal ligature.

Aortic Aneurism treated by Ligature of the Left Carotid Artery.

Mr. Holmes exhibited the patient on whom he had performed this operation, the case having been brought before the Society a year ago. (See *Transactions of the Clinical Society*, vol. ix., page 114; and the *British Medical Journal* for 1876, vol. i., page 414. The patient, a young woman twenty-one years of age at the time of operation, had a large aneurism, probably connected with the transverse part of the arch of the aorta towards its termination. The left common carotid was ligatured on October 21, 1875.) Mr. Holmes remarked that it was the only other case, so far as he was aware, in which the suggestion had been carried out, and he had been led to do it by the improvement which followed Mr. Heath's operation in Dr. Cockle's case. The aneurism was supposed to implicate the innominate and the carotid, but turned out to be aortic. The case was one of the worst cases of aortic aneurism he had ever seen; there was a loud bruit audible at some distance; the patient had profuse hæmoptysis, and, in Mr. Holmes's opinion, could not have lived a month. Prolonged rest, followed by Tufnell's treatment, caused great improvement; in half a year she was sent to Wimbledon, where exertion led to renewal of the symptoms. The aneurism appeared to be extending up the neck, which was, Mr. Holmes thought, the indication for the operation. Immediate marked benefit followed the operation, and the tumour subsided considerably, the dyspnœa diminished, and hæmoptysis nearly ceased. She was now in comparative comfort, though still in a state in which any exertion might easily cause death. There was still a constant hacking cough. Mr. Holmes thought that the only reasonable explanation of the action of ligature was that a clot was produced in the vessel tied, and that this extended down into a part of the aneurism. Wardrop's explanation left out of sight the circumstance that the collateral circulation increased directly after the ligature. Though prolongation of life could not be anticipated, the girl owed, he thought, a respite to the operation.

Mr. Callender thought the subject not only of great practical importance, but interesting also from the doubt as to the exact results produced in the sac. Mr. Holmes's explanation was probably the correct one, and on this hinged the class of cases to be thus treated. Other important points were—the precise relations of the vessel, the employment of carbolised catgut, and the condition of vessel produced by the ligature.

Mr. Bryant related a case in which he had acted on the suggestion of ligaturing the carotid. Three weeks ago he had been asked to see a case of aortic aneurism in a man fifty-six years of age, under the care of Dr. Wilks, to ascertain if anything could be done for him surgically. The aneurism involved the aorta and innominate artery, projecting from above the clavicle, pressing on the larynx, and interfering with speech and deglutition. He had already been treated for some weeks on Tufnell's system, but without effect. Mr. Bryant hesitated on account of the age of the man and the fact that the aneurism was obviously aortic; but, encouraged by Annandale's case, where ligature of the right carotid gave great relief, he resolved to operate. Having placed before the patient the danger of the operation and the inevitable result if left alone, the man consented to the procedure. The right carotid was therefore ligatured about a fortnight ago with carbolised catgut, the artery proving to be remarkably large and thick-walled. The patient went on well for some days. From the second day he seemed better, and the pulsation had much diminished; some, however, continued above the clavicle and sternum, but it was altered in character. He went on well till the ninth day; no suppuration occurred; he took food well: but he then rather suddenly changed, and died on the tenth day. At the post-mortem examination, the right jugular vein was found to be filled with thrombus, and there were some secondary deposits, which Dr. Goodhart believed to be pyæmic in nature; and the spleen was softened. There was enormous dilatation of the ascending and transverse portions of the arch of the aorta, with extensive atheromatous degeneration and calcareous plates. The ligatured artery was completely plugged; the ligature had disappeared, but the coats of the vessel were cut through and separated a line apart. The left subclavian artery was also completely occluded. The left radial pulse could not be felt before the operation. There was no coagulation whatever in the sac. The operation had, therefore, done no good, although he believed it to have been perfectly justifiable.

Dr. Burney Yeo said that physicians saw more of the cases of aortic aneurism than surgeons. He had had himself several

cases under his own care during the past three or four years, but he had not been led to recommend the operation proposed by Mr. Heath in either of them. He would be glad to know if Mr. Heath and Mr. Holmes had arrived at any definite conclusion in their own minds as to the class of cases of aortic aneurism in which ligature of one or other of the carotid arteries was likely to prove useful. So far as his own observations had extended, he should be inclined to regard the operation as decidedly counter-indicated in those cases where there was obvious general degeneration of the arterial system, as, for instance, in the case mentioned by Mr. Bryant. But, in cases where the disease was limited to a definite portion of the aortic surface, and where the rest of the arterial system was fairly healthy, he could understand that this operation might be of advantage.

Mr. Maunder said that Dr. Yeo had stated that physicians had a larger experience than surgeons of aortic aneurism. Surgeons might, therefore, very justly look to their brethren practising medicine for the indications for operative interference or not, to which Dr. Yeo alluded. Without doubt, this was one of the chief difficulties to be overcome. He said the subject under consideration was of a grave nature and full of pitfalls. On a former occasion, when Mr. Holmes brought forward his case, he (Mr. Maunder) had ventured to say that the distal operation for aneurism at the root of the neck was in great measure experimental, but was, under certain circumstances (as when the disease was progressing in defiance of approved methods of treatment), perfectly justifiable, even though the precise origin of the tumour could not with any degree of certainty be recognised. He still adhered to this opinion, because his own personal experience of the distal operation, the records of such by other operators, observation of museum specimens, and, lastly, Mr. Heath's preparation now before them, while they all, more or less, upset the *theory* upon which those operations were undertaken, supported the practice.

Dr. Mahomed expressed his regret at having to appear as the advocate of a special instrument; but thought, after the remarks that had fallen from the President and Mr. Maunder as to the importance of accurately diagnosing the position of aneurisms before determining on an operation, that he was justified in again drawing the attention of the Society to the great value of the sphygmograph for this purpose. He stated that he believed more valuable information could generally be obtained regarding the situation of thoracic aneurism from this instrument alone than from a combination of all other physical signs. He exhibited tracings taken, by permission of Mr. Heath, from the patient upon whom he had lately proposed to operate, and whose heart and aorta were exhibited to the Society, in which, by the sphygmograph alone, he had diagnosed an aneurism implicating the innominate and extending into the transverse arch, and in which was found a small aneurismal dilatation of the commencement of the innominate, which was also pressed upon by the chief aneurism situated on the anterior wall of the transverse part of the arch. He also showed tracings from another case of Mr. Heath, in which an aneurismal dilatation of the aorta before the innominate and an aneurism beyond that vessel were diagnosed by means of the sphygmograph; and also from one in which a diseased ascending arch and an aneurism of the transverse arch which just included the commencement of the innominate (the vessel itself being unaffected) were found after death. Tracings from the case exhibited by Mr. Holmes indicated the freedom of the aorta before the innominate from aneurismal disease, and its presence beyond that vessel.

Mr. Mac Cormac related a case which bore upon the other cases mentioned that evening. It was that of a man having a large aneurism of the axillary artery, who greatly objected to a cutting operation. Rest, Valsalva's method, Mr. Tufnell's mode of treatment, pressure on the distal side of the sac (both digital and by metal weight), were all tried unsuccessfully. Mr. Mac Cormac then bandaged the arm from the fingers upwards with Esmarch's elastic bandage, and tied the circular band (that acts as a tourniquet) just beyond the aneurism. The sac then pulsated faintly. The pressure was continued for two hours; and, at the same time, the vitality of the limb was maintained by the application of cotton-wool and coils of hot-water tubing, in order to keep up its temperature. Upon the removal of the bandage, however, no improvement was manifest in the aneurism.

Dr. Greenhow desired to bring back the discussion to the original point before the Society. Hitherto, he had tried Mr. Tufnell's treatment only; but, if Mr. Heath's treatment succeeded fairly well, it should be tried in suitable cases. He himself had last session mentioned a case in which there existed an aneurism of the arch of the aorta, with great obstruction to the passage of blood through the left carotid and subclavian arteries, and in which a spontaneous cure of the aneurism had nearly resulted, when death from empyema ensued. In that case, nature had nearly accomplished what Mr. Heath endeavoured to imitate by art. Dr. Greenhow would like to know accurately what points guided Dr. Mahomed in performing his diagnosis in these cases.

In reply to Dr. Greenhow, Dr. Mahomed stated that the signs of aneurism observed in a sphygmographic tracing were—1. Diminution in volume of the pulse-wave; 2. A sloping upstroke; 3. Impairment or annihilation of the percussion-element; 4. Partial or complete obliteration of the dicrotic and other secondary waves; 5. General diminution, but sometimes increase, of the amount of pressure required to develope the tracing. If all or some of these characters were found in the pulse on the right side, and not on the left, the aneurism was of the innominate; if in the right and partly in the left side, it was of the innominate and transverse arch; if in the left only, it was of the transverse arch or root of the subclavian; if the signs were only partially present and equal on both sides, it was an aneurism of the ascending arch; if all were strongly marked and only on one side, it was probably directly in the course of the subclavian artery, and would not be found involving the aorta.

Dr. Edmunds remarked that, from Mr. Heath's description, the very first part of the aorta seemed to have given way. Mr. Heath had not designated the "aneurism" sacculated, but it appeared to have been such, coming up into the sternal notch. The supposed condition of things upon which the theory for the treatment had been based was not borne out by the result; the innominate artery came off between the sac and the artery ligatured. He would like to suggest that the benefit accruing from the ligation of an artery in aneurism might possibly be due to the change in situation which it caused to the nodal points in the vessel's wall, whereby they were perhaps thrown from weak points where the sac was inclined to give way to stronger portions of the sac-wall. He then gave particulars of an aneurism of the right carotid in a woman aged forty-five. All observers had been struck with the perturbability of the action of the heart in these cases; that instability was not due to the size of the aneurism nor to its situation. Could anyone throw any light upon that fact? It might be due to some reflex action on the sympathetic nervous system of the heart produced by the pressure of the bulging aneurism.

Mr. Heath said he had already guarded himself by stating that, although a favourable result was produced in his case, it did not square with the theory upon which the operation was performed. Neither had Dr. Cockle, in his case, said why the benefit resulted. On looking carefully at the preparation, it seemed difficult to believe a clot extended down to the aneurism without occluding the vessel altogether. It was new to him that, in aortic aneurism, one should ever find the disease so localised as Dr. Yeo had seemed to suggest. What decided the point at which the aneurism came off, he did not know. It was certainly thought, before the operation in his case, that the aneurism had sprung from the transverse part of the arch. However, there was the case, which would stand for what it was worth.

Mr. Holmes said that, in the main, he agreed with Mr. Heath. He thought that the more the operation was limited to cases in which the disease was localised, the better the results would be likely to prove. In cases where it seemed that the patient had a large amount of disease, his life would be likely to be prolonged by his being left alone. He thought the best cases for operation were those of aneurism springing from the arch of the aorta and bulging up into the neck. He thought it hopeless to believe that an aneurism of the aorta could be cured by ligature of the carotid.

Tracheotomy performed Four Times within a few Years upon the same Patient.

Mr. Pugin Thornton brought forward a case of syphilitic laryngitis, in which the operation of tracheotomy had been performed four times. The case was remarkable also from the skin of the patient's face presenting a discoloration very similar to that produced by the long-continued administration of nitrate of silver. The patient, aged sixty-seven, a foreman

in large horse-stables, contracted a chancre in 1867. This was followed shortly afterwards by a secondary rash. In 1869, concurrently with a rupial eruption, he had sore throat, the voice being affected, followed some months after by difficulty of breathing. In 1870 the dyspnœa was so great that his medical attendant informed him that in all probability tracheotomy might have to be performed. This by treatment was avoided, it not being until 1871 that the first operation was performed. From some impediment, believed by Mr. Thornton to be in consequence of the tracheal cartilages having become ossified, it was impossible to insert a tube, and the wound was allowed to close in four days. The man, however, experienced great relief from the operation, and was able to return to his work in a fortnight, continuing at it until 1874, when tracheotomy was for the second time performed. It was at this time the face began to get the bluish appearance the man presented at the Society, but whether it was before or after the operation he could not remember. Again, in the following year, recourse was had to tracheotomy, Dr. Dukes, of Spital-fields, being the operator in these last two instances. He on both occasions experienced great difficulty in the insertion of the tube. When the canula had been worn about a month after the last operation, it slipped out one night, and it was not for many hours that another (Fuller's bivalve) was put in. At the end of a fortnight this had worked its way out through an abscess at the lower end of the operation-wound. At this time the patient came under Mr. Thornton's care. He was then suffering from considerable dyspnœa, which, with his lividity of countenance, gave the impression that the man was in an alarming condition of asphyxia. On examining his larynx, Mr. Thornton found that, though the stenosis was very great, yet, by enforcing absolute rest in bed and with specific treatment, an operation might be avoided. It turned out so, and the man left after a short stay in hospital. In July, however, of last year he came with such urgent dyspnœa that tracheotomy had to be at once performed. The ossification of the cartilages was so great that they were sawn through with much difficulty. The tube, on this account, was not removed for the purpose of cleansing until the eighth day. It was removed for good after it had been worn a little over two months. Mr. Thornton then explained that the stenosis was caused by thickening and ulceration of the vocal cords, the ventricular bands, and the epiglottis. He drew attention to the peculiar character of the discoloration of the face, and to the fact that it did not extend below the neck. The supposition was, that it was due to former imperfect aëration of the blood and non-recovery of the cutaneous vessels afterwards. Mr. Thornton also took occasion to remark upon the advisability of always having a fine saw at hand for use in similar cases.

Mr. Maunder said: Curiously enough, the man who had been just seen had for many years, while he resided in the city, been under his care from time to time for syphilis in all its stages. More than once, as a consequence of laryngitis, tracheotomy had been imminent, but had been averted until the occasion first mentioned by Mr. Thornton. It illustrated very forcibly one of the accidents more or less inherent to the operation—severe hæmorrhage from a vein, probably opening directly into the internal jugular, the bleeding occurring at the moment respiration was impeded by the introduction of the canula into the trachea on a pilot, the patient not being under the influence of an anæsthetic, and not under physical control. The bleeding relieved the apnœa, and the tube was not necessary on this occasion, the patient becoming quickly convalescent.

Mr. Casson said that he had practised in Derbyshire for seven years, and had there seen several cases of goître pressing on the trachea. In such cases, the expression of the face often did change to a great extent as years went on, though not to so great an extent as in Mr. Thornton's patient.

Mr. Bryant said he thought the man did not take in sufficient air for respiratory purposes. He nine years ago had divided the trachea of a man who had stricture of that tube due to contraction of a scar, and who had permanent blueness of the features from sufficient air not entering the lungs. Probably, if this man were always to wear a tracheotomy-tube, he would get rid of much of the discoloration.

The President inquired if there were any change in the man's appearance after the operation performed by Mr. Thornton.

Mr. Thornton replied that he thought there had been some improvement produced by it.

Dr. Burney Yeo suggested that perhaps hyperoxygenation might, if tried, be found of service.

Mr. Howard Marsh agreed with Mr. Bryant, instancing a case in St. Bartholomew's Hospital. A cabman with a blue countenance had a kind of fit and suddenly died. It was then found that a papillomatous growth almost completely blocked the passage of the trachea.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 22:—

Black, James, Ayton-road, Brixton,
Poland, James Harry, Blackheath-villas, Blackheath.

The following gentlemen also on the same day passed their primary professional examination:—

Hooker, Joseph Stenson, Guy's Hospital.
Michell, Henry Slyman, King's College.
Scott, William George, London Hospital.
Shepherd, Thomas William, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Hellier, Jno. B., M.R.C.S., M.B.—House-Physician to the Hospital for Women, Soho-square, *vice* S. W. Iorwerth Joseph, M.R.C.S., etc., resigned.

Hogg, Richard Bowen, M.R.C.S.E., L.S.A.—Junior Assistant Medical Officer to the Kent County Lunatic Asylum, *vice* Arthur Young, B.A., L.S.A., resigned.

Feltham, W. Parson, M.R.C.S.E.—Junior House-Surgeon to the Cheltenham General Hospital and Dispensary.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet Surgeon John Gray has been placed on the retired list of his rank.

War Office.—Medical Department.—Deputy Surgeon-General Henry Lionel Cowen retires upon half-pay; Surgeon-Major James Fraser, M.D., retires upon half-pay; Surgeon-Major Robert Gillespie, M.D., from half-pay to be Surgeon-Major; Surgeon Jeremiah James O'Grady resigns his commission. The surname of the gentleman appointed a Staff Assistant-Surgeon, in the *Gazette* of September 19, 1871 (and now Surgeon), is "Anthonisz," and not "Authonisz," as therein stated.

Brevet.—Deputy Surgeon-General Henry Lionel Cowen, who retires upon half-pay, to have the honorary rank of Surgeon-General. Surgeon-Major James Fraser, M.D., who retires upon half-pay, to have the honorary rank of Deputy Surgeon-General. The undermentioned officers of her Majesty's Indian Military Forces to be granted a step of honorary rank on retirement:—To be Surgeons-General: Deputy Surgeon-General Gilbert George William Maitland, Bombay Army; Deputy Surgeon-General Thomas Blackadder Johnstone, Bombay Army; Deputy Surgeon-General George Banister, Bengal Army. To be Deputy Surgeon-General: Surgeon-Major David Young, Bengal Army.

BIRTHS.

Dickson.—On February 24, at 3, The Crescent, Kensington, the wife of Surgeon-Major Lindsay Dickson, M.R.C.S.E., of a daughter.

Gayton.—On February 26, at the Homerton Small-pox Hospital, the wife of William Gayton, M.D., M.R.C.P.E., Medical Superintendent, of a daughter.

Huddart.—On February 22, at Greenhithe, Kent, the wife of C. H. C. Huddart, M.B., of a son.

Hulke.—On February 19, at Admiralty House, Deal, the wife of Frederick Thomas Hulke, M.B., M.R.C.S.E., of a daughter.

Larkin.—On February 14, at Trinity-square, Southwark, the wife of F. G. Larkin, M.R.C.S., of a son.

Sweeting.—On February 23, at Basingstoke, the wife of Thomas Sweeting, M.D., of a daughter.

Walters.—On February 21, at Reigate, the wife of John Walters, M.B., J.P., of a daughter.

MARRIAGES.

Ffolliott—Lillie.—On February 20, at the parish church, Preston, Sussex, William Ffolliott, L.K.Q.C.P.I., L.R.C.S.I., Surgeon-Major Army Medical Department, to Blanche, youngest daughter of Joseph Lillie, Esq., of Manchester.

Piggot—May.—On February 22, at Maldon, Allen Piggot, M.R.C.S., L.R.C.P., of Beckenham, Kent, eldest son of James A. Piggot, of Beckenham Hall, Essex, to Rosa Emma, eldest daughter of Edwin May, Maldon.

DEATHS.

Britton, W. S., M.R.C.S.E., L.S.A., at 53, Wellington-road, St. John's-wood, on February 25.

Sewell, William Mallett, M.R.C.S., eldest surviving son of William Cooper Sewell, of 17, Euston-square, and Eaton House, Aldborough, Suffolk, at Cheriton, North Devon, on February 24, aged 40.

WALTON, BESSIE, wife of Haynes Walton, F.R.C.S., of 1, Brook-street, Hanover-square, W., on February 25.

WHITFIELD, RICHARD GULLETT, L.S.A., M.S.A., F.Z.S., late Medical Secretary of St. Thomas's Hospital, at 89, Wandsworth-road, S.W.. on February 21, in the 77th year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

FARRINGDON DISPENSARY, BARTLETT'S-BUILDINGS, HOLBORN.—Resident Surgeon. Candidates must be Members of the College of Surgeons, London, and Licentiates of the Honourable Society of Apothecaries, London, or Licentiates of the College of Physicians, London. Applications, with testimonials, to Mr. Samuel Green, Honorary Secretary, 10, St. Swithin's-lane, London, on or before March 6.

ROYSTON UNION.—Medical Officer. Applications, stating age and medical qualifications, with testimonials and references, to Thomas Shell, Clerk to the Guardians, Royston, on or before March 13.

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer. Applications, with testimonials and statements of age and qualifications, to Talfourd Fly, M.A., Secretary to the Council of University College, on or before March 10.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Physician's Assistant and Pathologist. The qualifications of candidates must be such as shall be satisfactory to the Medical Committee. Applications to be sent to the Hospital, addressed to the Chairman of the Medical Committee, not later than March 6.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Ashton-under-Lyne Union.—The Eighth District is vacant; area 18,835; population 6547; salary £20 per annum.

Chelmsford Union.—Mr. John Thorp has resigned the Tenth District; area 10,083; population 2486; salary £88 per annum.

Thrapston Union.—Mr. Spurgin has resigned the B District; area 16,295; population 3441; salary £82 10s. per annum.

Tynemouth Union.—Mr. James R. Lownds has resigned the South Longbenton District; area 959; population 8858; salary £40 per annum.

APPOINTMENTS.

Builth Union.—Hugh Bennett, M.R.C.S. Eng., L.S.A., to the Workhouse.

Dore Union.—George Dale, B.M., M.C. Glasg., to the Kentchurch District and the Workhouse.

Gower Union.—John I. Young, M.B. & C.M. Edin., to the Eastern District.

Leek Union.—Hugh Orr, L.A.H. Dub., L.R.C.P. Edin., L.R.C.S. Edin., to the Longnor District.

North Bierly Union.—Joseph Jackson, L.R.C.P. Edin., L.R.C.S. Edin., to the Eleventh District.

Southampton Incorporation.—James Oliver, M.R.C.S. Eng., L.S.A., to the Third District.

West Ham Union.—George Yeates, M.D., M.C. Aber., M.R.C.S. Eng., to the Walthamstow District.

Whitehaven Union.—Charles A. Parker, M.B., C.M. Edin., to the Gosforth District.

Wigton Union.—Wm. A. Tennent, L.R.C.P. Edin., to the Allonby District; John Leitch, B.M.&M.C. Edin., to the Abbey Holme District.

Yorkshire.—Thos. Fairley, F.C.S., as Analyst for the North Riding.

WE have received from the well-known photographers Messrs. Barraud and Jerrard, of Baker-street, a copy of an excellent portrait of the late Sir William Fergusson. It is so good that we can well believe that he himself and his family considered it the best photo-portrait that had been taken of him. It is published in carte-de-visite, cabinet, and larger sizes; and some of our readers may be glad to have their attention directed to it.

THE LATE SIR WILLIAM FERGUSSON.—We understand that the freehold house in George-street, Hanover-square, together with its contents, including the valuable library and pictures, will shortly be disposed of by auction. No doubt many of his friends will be glad to secure *souvenirs* of the great and popular surgeon.

SCHOOLS OF COOKERY.—We are glad to observe that Schools of Cookery are being established in several of our provincial towns. The Mayor of Bolton presided at a meeting last week, preparatory to opening one of these useful institutions there. We hope the support of the chief magistrate of the borough augurs well for its future success.

WOUNDS IN SUBJECTS OF CARDIAC AFFECTIONS.—In continuation of former papers relating to the influence of prior morbid conditions upon traumatic lesions, Prof. Verneuil related, at the Académie de Médecine, two cases illustrating the relations of disease of the heart in this point of view. He laid down these propositions—1. Pre-existing cardiac affections appear capable of retarding or preventing the healing of certain wounds by giving rise to local accidents, among which are hæmorrhages and diffuse inflammations. 2. Wounds by the same local accidents and their consequences are liable to react on prior cardiac affections so as to aggravate them, and prematurely induce symptoms which in general only appertain to their ultimate period.—*Gaz. Hebd.*, February 23.

PUERPERAL FEVER.—The Berlin Obstetrical Society has appointed a committee for the purpose of reporting upon the etiology and prophylaxis of puerperal fever in Berlin. The committee (Drs. Schroeder, Boehr, Fasbender, Löhlein, and Martin) has just issued a circular to the profession in Berlin, in which all the particulars supposed to be able to throw light on the subject are indicated.—*Berlin. Klin. Woch.*, Feb. 5.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

*** We have received the following, with a request for its publication :—

IN MEMORIAM.—W. F., BART.

MOURN ye, who, justly prizing what is great
And good in man, know how to estimate
True sterling worth—a heart imbued with love,
Aided by God-like talent to improve,
To guide, and to direct. Ye who rejoice
To count the stars that circle Genius' throne,
Mourn o'er the closèd eye, the now hushed voice—
A hero 's gone!

Mourn o'er the gentle heart, the well-stored mind;
Ever so thoughtful, so humane, so kind,
Seeking with patient and untiring zeal
The enfeebled frame, the stricken limb to heal;
Ne'er to miscalled "heroic" actions given,
Careless of empty praise; his highest joy
To save, preserve, and spare the works of Heaven,—
Not to destroy!

Mourn o'er the skilful hand—Oh! dexterous hand,
Who has not watched with fixed and wondering eyes,
Responsive to necessity's command,
Thy marvellous, unequalled exercise!
Great master of thine art, great in design,
Perfect in operation, thou didst tower
Above thy peers, teaching the truth divine—
Knowledge is power!

Mourn o'er the friend so full of tenderness—
Tenderest to those most needing sympathy;
A thousand tongues thine honoured name will bless,
Ten thousand hearts revere thy memory.
Now, o'er thy grave breathe we one parting word;
Thus, humbly, reverently, devoutly say—
God grant thou mayst find mercy of the Lord
In the great day! J. S. L.

Ash Wednesday, 1877.

S. I. H.—As soon as possible.

W. L., Colchester.—The Medical Faculty of Zürich University were, we believe, the first in Europe to grant the M.D. diploma to women-students.

An Old Member.—There is a very good collection of medical portraits in the library of the College of Surgeons, but only a few autographs; and, curiously enough, not a single letter of John Hunter's. Some of his manuscripts are preserved. Mr. Stone has been engaged for many years in illustrating the life of Hunter with portraits, autographs, etc., but we much doubt whether Sir James Paget could afford the time to write a life of Hunter, much as it is desired.

Archæologist, Gateshead.—Sir William Knighton, M.D., was private secretary to George IV. The secret of his appointment was this:—He happened to be alone with McMahon, the King's confidential man, when he died so suddenly. Knighton took possession of all McMahon's papers, and then wrote to the King to say he had got them. The King was caught, and, like a sensible man, he put Knighton into McMahon's place; but he never really forgave him; he hated, because he feared him. Yet Knighton served the King faithfully; and this, says Haydon, in his Memoirs, should redeem him, though his first act was questionable; but the temptation must have been enormous. It would have been more upright to have sealed up the drawers and written to the King for instructions.

Dr. Johnson.—The first Hunterian Oration was delivered by one of its founders, Sir Everard Home, in 1814. Sir William Fergusson was the Orator in 1871. It has been delivered biennially since 1859, when Mr. Bishop was the Orator. The last *annual* Oration was delivered by Mr. T. Wormald.

A Fellow, Southampton.—The vacancy in the Council of the College of Surgeons, caused by the death of Sir William Fergusson, will not be filled up until the annual meeting of the Fellows in July next, when Mr. Prescott Hewett, the President of the College, will take the chair. Write to Mr. Wm. Allingham, the Honorary Secretary.

Mr. Williams.—You will find the lectures of the distinguished surgeon in the *Medical Times and Gazette*, vol. xxxi.

F.R.C.S. (exam.).—We have heard with regret, which will be shared by many—especially those who have obtained the distinction after hard work,—that there is truth in the rumour which has reached you, and to which we shall presently allude.

COMMUNICATIONS have been received from—

Dr. Ainslie Hallis, Brighton; The Honorary Secretary of the Throat Hospital, London; Mr. S. J. Hutchinson, London; The Military Secretary of the India Office; The Registrar of the Apothecaries' Hall, London; Dr. Barlow, London; Dr. Edis, London; Dr. Elliott, Cardiff; Mr. Whitebread, Manchester; Dr. Sparks, Mentone; Mr. Lowndes, Manchester; Dr. Sutherland, London; Dr. Cayley, London; Mr. Golding Bird, London; Mr. Spencer Wells, London; Dr. M'Craith, Smyrna; Mr. W. W. Reeves, London; Mr. Body, London; Mr. Thomas Duke, Rugby; Mr. Becher, London; Dr. Moore, Dublin; Mr. W. E. Poole, London; Mr. B. R. Wheatley, London; Mr. John Chatto, London; The Secretary of the Pathological Society, London; Dr. George Johnson, London; Dr. John Williams, London; Mr. T. M. Stone, London.

BOOKS AND PAMPHLETS RECEIVED—

Savernake Cottage Hospital Annual Report, 1876—Spencer Thomson, M.D., Torquay Past and Present—Edward R. Squibb, M.D., The American Medical Association and the Pharmacopœia of the United States of America—Cornelius B. Fox, M.D., The Disposal of the Slop-Water of Villages—H. Franklin Parsons, M.D., Third Annual Report on the Sanitary Condition of the Town of Selby during 1876—H. D. Littlejohn, M.D., F.R.C.S. Edin., On the Compulsory Intimation of Infectious Diseases—George Vasey, Individual Liberty—The Disease of Sleeplessness—Intemperance: Extracts from Pike's History of Crime—Cassell's History of India, part 15.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Home Chronicler—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Richmond and Louisville Medical Journal—The Tatler—Enciclopedia Médico-Farmaceutica—American Practitioner—Monthly Homœopathic Review.

APPOINTMENTS FOR THE WEEK.

March 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Prof. Henry Morley, "On the Effects of the French Revolution upon English Literature."

5. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London (Election of Officers and Council, 7½ p.m.), 8½ p.m. Dr. Edmunds, "On Questions suggested by Vegetarianism, with Personal Evidence by Vegetarians."

Royal Institution, 2 p.m. General Monthly Meeting.

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Greenhow, "Chronic Interstitial Pneumonia, associated with Hæmorrhage into the Supra-Renal Capsules." Mr. Godlee, "The Organisms characteristic of Vaccinia and Variola." Sir William Gull and Dr. Sutton, "Fibroid Changes in the Spinal Cord and its Vessels, associated with Chronic Bright's Disease, with Contracted Kidney (Arterio-Capillary Fibrosis)." Microscopical specimens and drawings will be arranged for inspection at 8 o'clock.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

7. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Specimens. Dr. Edis, "On the Forceps in Modern Midwifery." Dr. Playfair, "On Fibroid Tumour complicating Pregnancy." And other Communications.

Royal Microscopical Society, 8 p.m. Meeting.

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

9. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. Godlee, "Three Cases of Gas in the Peritoneal Cavity." Dr. Burney Yeo, "A Case of Exophthalmic Goître, with New Phenomena" (a living subject). Mr. Lowne, "A Case of Retinitis, with observations on the Perception of Colour."

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. Frederick J. Bramwell, "On the Future of Steel."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 24, 1877.

BIRTHS.

Births of Boys, 1229; Girls, 1221; Total, 2450.
Average of 10 corresponding years 1867-76, 2347.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	755	740	1495
Average of the ten years 1867-76	811·8	791·9	1603·7
Average corrected to increased population ...	...	...	1716
Deaths of people aged 80 and upwards ...	...	...	62

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	5	...	3	2	1	...	...	1	1
North... ...	751729	43	2	2	2	13	...	4	...	4
Central ...	334369	1	4	1	...	1	...	2	...	1
East	639111	20	3	3	1	14	...	3	...	2
South	967692	35	5	7	—	9	2	2	3	6
Total	3254260	104	14	16	5	38	2	11	4	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·607 in.
Mean temperature	40·4°
Highest point of thermometer	50·5°
Lowest point of thermometer	33·0°
Mean dew-point temperature	34·4°
General direction of wind	W.S.W. & N.N.W.
Whole amount of rain in the week...	0·68 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 24, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Feb. 24.	Deaths Registered during the week ending Feb. 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2450	1495	50·5	33·0	40·4	4·66	0·68	1·73
Brighton	102264	43·4	57	42	51·2	33·4	40·8	4·89	0·70	1·78
Portsmouth ...	127144	28·3	85	36	53·0	35·6	42·7	5·95	0·43	1·09
Norwich	84023	11·2	45	31	52·0	31·0	40·0	4·44	1·00	2·54
Plymouth	72911	52·3	41	27	52·5	33·0	42·8	6·00	0·44	1·12
Bristol	202950	45·6	157	82	49·6	30·7	41·4	5·22	0·58	1·47
Wolverhampton ...	73389	21·6	50	46	51·2	26·1	38·2	3·44	0·61	1·55
Birmingham ...	377436	44·9	305	157	52·0	30·8	40·8	4·89	0·59	1·50
Leicester	117461	36·7	110	50	51·0	33·2	40·8	4·89	0·59	1·50
Nottingham ...	95025	47·6	81	33	51·1	30·5	40·1	4·50	0·58	1·47
Liverpool	527083	101·2	425	228	48·8	33·7	41·2	5·11	0·64	1·63
Manchester ...	359213	83·7	288	191	51·5	30·0	40·6	4·78	1·08	2·74
Salford	141184	27·3	125	63	49·6	27·2	39·6	4·23	1·08	2·74
Oldham	89796	19·2	67	40	...	...	...	...	...	...
Bradford	179315	24·8	130	82	49·0	30·8	40·0	4·44	0·49	1·24
Leeds	298189	13·8	215	127	51·0	32·0	40·8	4·89	0·45	1·14
Sheffield	282130	14·4	207	124	51·0	31·0	40·6	4·78	0·83	2·11
Hull	140002	38·5	121	62	52·0	31·0	39·2	4·00	1·02	2·59
Sunderland ...	110382	33·4	77	48	56·0	31·0	42·5	5·84	0·55	1·40
Newcastle-on-Tyne	142231	26·5	120	67	...	...	...	...	...	...
Edinburgh	218729	52·2	145	83	49·7	28·0	39·3	4·06	0·35	0·89
Glasgow	555933	92·1	397	274	...	...	...	...	...	...
Dublin	314666	31·3	177	164	54·5	32·3	42·3	5·73	0·35	0·89
Total of 23 Towns in United Kingdm	8144940	38·3	5875	3552	56·0	26·1	40·7	4·83	0·65	1·65

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·61 in. The highest reading was 29·93 in. on Sunday, the 18th, and the lowest 29·38 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XV.

WOUNDS.

(*Continued from page* 169.)

Before proceeding to notice the more severe consequences of blows, I shall here discuss those more strictly *local effects*, which I mentioned at the outset, as the second of the threefold results of strokes with blunt bodies, viz. :—

(2.) *Contusion.* Such forcible contact may, of course, involve solution of continuity of the surface of the body, though the term contusion is usually restricted to injuries not attended or complicated with such external wounds; and, this being the case, it may be advisable to limit my observations, in the first place, to these last, reserving what I have to say of the former class of injuries under the head of contused *wounds*.

First, then, of *contusions*, strictly so-called. The idea of contusion, as thus restricted, involves in it the previous application to the body of sudden pressure, necessarily accompanied with concussion or commotion, or *pressure* continued for some time. It may be effected without involving the rupture of the capillaries of the part struck; or it involves injuries of these minute vessels. In the former case the contusion may not manifest itself by any sonsible phenomena; the part struck is painful; the meshes of the tissues of the skin have been compressed, and it is only some minutes after that the part swells slightly and reddens, the redness and swelling disappearing in from twenty-four to thirty-six hours, leaving no trace of the injury. But if, at the time of the receipt of such a contusion, death was the immediate consequence of some other cause, this part struck (in which the cellular layers of the skin have momentarily suffered compression, and from which the greater part of the liquids which traverse it have been driven back) undergoes by evaporation a loss of its fluids, which causes its very speedy *desiccation*, and the dried skin becomes brownish and hard, presenting very much the appearance of *parchment*. This last effect, it must be remembered, however, may be as readily produced on *the dead* as on *the living;* and where it may not be possible for the examiner to determine satisfactorily, from the appearances alone on the dead body, whether *the parchment-like state of the skin* in any given case is to be ranked as a vital or a cadaveric phenomenon. The pressure, which has sufficed to expel the fluids from the areolar tissue, either shortly before or soon after death, will be followed by this state of the skin on its exposure to the air in the corpse. Thus, the parchment-like skin has been observed, on the one hand, where ligatures have been applied to the wrists or other parts of the limbs by the murderer to facilitate his purpose; from the effects of the cord by which a hanged person has been suspended; or from the pressure of the thumbs or fingers on the neck employed to stifle or strangle; while, on the other hand, the same appearance has been equally witnessed where ligatures have been applied to the wrists or ankles in laying out the dead body, or where it has been suspended after the extinction of life.

Of the readiness with which the appearance in question may be imitated in the corpse, we have two illustrative instances represented in Caspar's "Atlas." One exhibits the groove and the parchment-like skin on the front of the neck in the body of a person suspended by a ligature after death. In the other we have the appearance produced artificially on the forearm of a woman's corpse by a flannel roller.

Before leaving these local effects of compression of the surface of the body, it may be useful to notice a mistake unaccountably fallen into by Tardieu, and from which he has drawn an inference, which appears to me decidedly erroneous. While clearly admitting that the parchment-like state of the skin is as readily producible in the dead as in the living body, he assumes that, in order to its production, the pressure must have been not only direct and considerable, but *kept up persistently for some time;* and on this supposed test he founds a distinctive diagnosis betwixt cases of suicidal hanging and of strangulation.—(*Ann. d'Hygiène*, 1855, page 358.) This, however, is entirely at variance with my own experience, I having met with the parchment-like skin in cases where the pressure had been only momentary, as in the case of the wheel of a cart having passed over the body, and producing sudden or instantaneously fatal injury, fractures of the bones, or ruptures of viscera.

Where the stroke has involved the rupture of the capillaries, the contusion is accompanied with *ecchymosis*, or infiltration of blood into the areolar tissue of the part. *Ecchymosis*, then, is one of the phenomena of contusion; but it is not an invariable or necessary one; for as a contusion may be produced without ecchymosis, so, likewise, ecchymosis may occur without contusion, as is observed after some diseases with lowered vitality; and more especially in scurvy and purpura. The so-called vibices in these two diseases are, in fact, ecchymoses in the living.

As regards the diagnosis of contusions, strictly so-called, not a little difficulty and confusion have arisen from the use of the terms ecchymoses, vibices, suggilations, contusions, discolorations, lividities, and hypostases, as purely *synonymous terms*,—which is unfortunate since, as we have seen under a former subject, *discolorations*, *lividities*, and *hypostases* are cadaveric phenomena, depending on the stagnation or gravitation of the blood in the capillaries, while the tissues themselves are unaffected. Again, the term *suggilation*, in the same loose way, is employed as the synonym of both *ecchymosis* and *hypostasis*,—the one usually *a vital*, and the other *a post-mortem* phenomenon.

At the autumn circuit of 1838 I was employed on the defence, in a capital charge, where the examiners of the victim's body certified in their report that certain cadaveric lividities or hypostases on its dependant parts "must have been the consequence of a heavy fall" during life. Nor is this the only case where I have known such serious mistakes to have been made.

Some distinctions have been made in classifying ecchymoses, which are rather fine-drawn, and liable to mislead, though useful to be kept in mind. Thus, we have ecchymoses *limited to the skin;* ecchymoses *extending to the areolar tissue without*, and ecchymoses in the latter tissue *with*, *rupture of its texture:* or, as they are called, *ecchymosis simply*, *ecchymosis by infiltration*, and *ecchymosis with effusion*. In those well-marked forms of ecchymosis with which we have mostly to do we have the three characters combined.

When such ecchymosis has its seat, as is usual, on or near the surface of the body, the integuments in a short time assume a blackish or deep violet colour. At a later period this violet gives place to a bluish colour; the blue to a green; this last to yellow; and the yellow yielding to the natural hue of the skin: the succession of these phenomena occupying a space of several days. It is, however, impossible to assign any fixed period to these appearances, because these shades of colour appear sooner or later, according to the depth the ecchymosis extends below the surface. It may be stated generally that the blue colour appears about the third day; the green from the fifth to the sixth day; the yellow from the seventh to the eighth day; and the complete disappearance of the mark from the tenth to the twelfth day, or even later.—(Devergie, vol. iii. page 56.) Though ecchymoses occur, as we have seen, most readily on the surface of the body, it is well to be aware of the fact, that in some cases the ecchymosis may not involve or affect the skin at all. In other words, there may have been contusion, and yet the discoloration may not be visible on the surface of the body. The ecchymosis may be confined to the subcutaneous areolar tissue without the skin participating in it. In this case the discoloration of the skin does not appear till from twenty-four to thirty-six hours, or even later. I was much struck with this in a case of assault with intent to commit rape, tried here (Aberdeen) in 1838, where the marks of pretty severe blows on the limbs were not discovered for the first three days after their infliction.

Again, an ecchymosis may exist among the deeper-seated muscles of a limb, without any trace of it becoming observable on the surface. In such a case all that can be noticed is tha at the end of forty, fifty, or sixty days, yellowish or green andt bluish spots of irregular figure appear over the injured part.

Further, it is important to be aware that age and enfeebled constitution have a remarkable influence upon the time necessary for the complete resolution of ecchymoses. This remark we owe to Mr. Watson, who states that he has found the clot "distinct when cut into" in such a case, "though probably

much lessened in size, several weeks after the infliction of an injury. In the case of an old man," he adds, "I found it distinct five weeks after."—("On Homicide," pages 23, 24.) In the case of an old woman injured here (Aberdeen) in 1838, the sloughing of a portion of the skin of the leg first revealed an extensive subcutaneous ecchymosis about three weeks after the receipt of a severe bruise.

Again, the discoloration depending on a contusion may spread to a very considerable extent during the first few days after the accident, giving the idea of a very large ecchymosis, while it is in reality very limited. This is observable after sprains of the ankles, where the lower half of the leg becomes blue or green.

It should also be known to the medical jurist that, in contusions of different parts of the body, the infiltrated blood spreads over portions of the surface in a direction and to an extent not proportionate to the severity of the blow alone, but chiefly to the density of the tissues, and their resistance to the effusion of the blood. In this way, as first pointed out by Velpeau, we explain the fact, frequently verified, that the ecchymosis does not constantly appear in the situation which the seat of the contusion would indicate. In a contusion of the armpit, for instance, the discoloration appears *below* the injured part; while in the iliac and hypogastric regions the discoloration, on the contrary, appears *above* the point struck. This latter arises from the areolar tissue being more closely adherent to the brim of the pelvis than it is either above or below this part. The same remark applies to the knee, the shoulder, the chest, and other parts of the body. Thus, a contusion over the smaller trochanter of the femur will be followed by an ecchymosis below the contused spot. When the inner head of the tibia is struck, the ecchymosis makes its appearance higher up the limb. When the blow is received in the calf, the effused blood spreads along the side of the joint. When the contusion is on the inner or outer surface of the leg, the effusion spreads equally upwards or downwards; when on the nates, the ecchymosis is on the outside of the thigh; when on the back, the loins, or sides of the chest, it extends in preference towards the iliac fossæ. When the seat of the contusion is on the sides of the neck, the ecchymosis is more forwards and downwards; when on the forehead, the eyelids are discoloured.

The bearing of these remarks on medical jurisprudence will be readily seen, when it is sometimes of importance to know if the seat of the contusion is that in which the ecchymosis is detected. It may be necessary, for example, to determine in a scuffle whether the position of an assailant was such that a certain blow could have been inflicted by him or otherwise.

Some evidence has been brought forward to show that the effect of a blow may manifest itself, not at the part struck, but *on the opposite side of the limb*, for instance; or again, in case of injury of the leg, *above the knee.*—(Taylor, pages 211, 212.) The proof of this is not, however, so clear as could be wished.

It should be kept in view by the medical jurist that "*ecchymosis may* sometimes *proceed from causes irrespective of the direct application of violence to the skin;*" as in certain states of the body, such as scurvy, purpura, etc., or from strong muscular efforts, or sudden and severe strains on the tendons. Once more: It is a remarkable fact, but one repeatedly attested, that *internal injuries* of the most extensive kind are sometimes sustained after blows or falls, without leaving any *external mark* on the body. This occurrence is well illustrated by an instance related by Dupuytren, quoted by Devergie (vol. iii. page 57).

A French soldier in 1814 was brought from under the walls of Paris to Dupuytren in an ambulance, but, as no marks of violence could be discovered on his body, he might have become the laughing-stock of his companions, if that surgeon, on examining the lumbar region, had not found it fluctuating and disorganised under the integuments to a great extent. The man sank in a few hours. On inspection, the subcutaneous cellular tissue, the abdominal parietes, and the left kidney were all found reduced to a pulp, the lumbar muscles torn, and the lower ribs, as it were, worm-eaten (*vermouillé*), and the abdominal cavity on the left side of the chest filled with black blood. The skin alone had escaped the action of the bullet. In a case of homicide from Kincardineshire, tried here (Aberdeen) in 1832, a man had his bladder ruptured by a kick with the toe of a heavily-loaded shoe in the hypogastrium from a fellow-labourer in the harvest field, where dissection left no indication in the abdominal wall of the precise part struck. In another case of homicide, to be adverted to more fully afterwards, the liver was ruptured and the gall-bladder detached, from a person having come down with all his weight on the epigastrium of his victim. Here, too, though the death was not immediate, there was left no discoloration, and no effusion of blood immediately under the integuments. It is not, however, alone in injuries of this sort applied to the yielding walls of the abdomen that ecchymoses of the skin and muscles may be looked for in vain.

In the case of a man at Insch (Aberdeenshire), in September, 1838, pitched from the top of a cart piled high with furniture, several ribs were fractured, and one lung extensively lacerated, without injury to the integuments or muscles.

In March, 1832, an old woman's body was found in a court in Upper Kirkgate (Aberdeen). Quarrelling had been heard in the house, and, from the legal investigation which took place, it could not be ascertained whether she had fallen from, or been pitched out of, a window on the third floor, below which she was found. Here, on inspection, I found the pelvis comminuted, eleven of the ribs and three of the lumbar vertebræ fractured, and the spleen ruptured, but the exterior showing no sign of contusion.

These cases, it should be borne in mind, however, form but *exceptions* to the general rule; and the fact that in one of them death must have been immediate, goes far to explain their peculiarities.

Ecchymosis confined to the skin, and, *à fortiori*, when extending to the cellular tissue, is followed by *swelling* of the part. The resulting tumour is firm and compact in ecchymosis *with infiltration;* it is soft, fluctuating, and above all elastic, in ecchymosis *with effusion.* These tumours become denser and firmer in proportion as the absorption of the fluid parts of the blood proceeds, but they subside gradually, and soon disappear if not followed by inflammation. The size of these tumours is regulated by the vascularity of the part, or by the size of the vessel ruptured, rather than by the extent or severity of the blow. On cutting into one of these tumours, the blood, though it may be found partly fluid, partly coagulated, is most frequently in the latter state.

The same characters belong to contusions with ecchymoses, in all *the soft parts;* only their margins are better defined when they occur in mucous or serous membranes.

In the parenchymatous viscera, however, some of these characters are wanting. Thus, in *the brain* the blood is mixed with the substance of the organ, in the form of a pulp, particularly when the effusion is extensive, and the contusion severe. In *the liver*, the brown colour and the granular texture give it a peculiar appearance. In contusions of *the kidneys*, the tissue, on account of its density, is rarely disorganised.

Ecchymosis is most readily produced in *cellular* tissue; less so in *the skin and muscles*, on account of their elasticity, and in *soft parts resting on solid bones*, particularly the flat bones. Hence the readiness of its production in *the scalp.* In some persons a very slight force is sufficient to produce ecchymosis. The harder and denser the body employed to strike with, the more marked the effects which follow the blow.—(Devergie, *op. cit.*, vol. iii. pages 34-63 *pass.*)

Under Identity I had occasion to remark that the assailant had on one occasion been discovered by the impression of a key, wherewith, in an attempt at murder in the dark, the intended victim, in self-defence, had struck him on the face, the contusion corresponding with the wards of the key, which was of an unusual form. It may be proper, therefore, to state here, that such correspondence is rarely to be met with, the mark of contusion being almost always larger than the instrument which has inflicted it; while its seat, as we have already seen, often does not indicate the seat of the blow.

In the case of *contusions*, as in that of *incised wounds*, a question of considerable interest, in a medico-legal point of view, not unfrequently arises, when such injuries are found on the dead body, viz., *whether the contusions had been inflicted during the life, or after the death of the party?* In cases of contusions inflicted two or three hours *before death*, no difficulty is encountered in deciding to that effect in the vast majority of instances. *The change of colour* in the bruised part cannot be confounded with any post-mortem appearance in the ordinary state of the body. Besides, the effects of a blow on *the dead* body, at a like distance of time *after death*, would not be attended with *the tumefaction*, or *the escape of blood into the cellular tissue*, which takes place in the previous instance, unless in the rare exception of a large vein having been ruptured, and the blood having remained in a fluid state.

The difficulty usually consists in distinguishing a bruise

produced *immediately* or *almost immediately before death*, from one produced *in the body* a *few minutes*, or at most a *very few hours*, *after death*. It has been proved, in fact, by the experiments of Sir Robert Christison, that some strokes *shortly after death* produce marks which, *as far as their colour is concerned*, do not differ at all from the effect of blows during *the last moments of life*. Sir R. Christison has observed that, in general, the discoloration is produced in this case in the same manner as in certain cadaveric lividities, by the effusion of an excessively thin layer of the fluid part of the blood on the surface of the true skin under the cuticle, and that this colouration cannot be confounded with true *ecchymoses*, which are caused by blood extravasated into the subcutaneous cellular tissue. Christison's experiments prove, however, that sometimes, in consequence of blows after death, the effused blood may form a sensibly thick layer within *the tissue of the cutis vera;* and that occasionally, also, blood may be effused into the subcutaneous cellular substance, so as to discolour that tissue over a *limited* space. The following, notwithstanding, may be considered as the characteristic marks of blows inflicted *during life*:—1. *Swelling of the part*, the consequence of the blood effused. "This," he states, "is certainly never produced in the dead body." 2. *Coagulation of the blood* effused into the subjacent cellular tissue, with or without tumefaction. "This appearance," says Sir Robert, "I have never seen accompanying contusions caused in the dead body; but it may be doubted," he adds, "whether clots might not be formed if the injury was inflicted soon after death, and had the effect of lacerating a considerable vessel in the neighbourhood of loose cellular tissue." 3. "The most characteristic sign of contusion during life" Dr. Christison considers to be "*incorporation of blood with the whole thickness of the true skin*, rendering it black instead of white, and increasing its firmness and resistance." This sign is not always present, as a blow, it is well known, may occasion extensive effusion below the skin without affecting the skin itself; but when present Christison considers it decisive.—(*Edinburgh Medical and Surgical Journal.*)

After the full consideration we have found it necessary to bestow upon *contusions proper*, it will not be necessary to say much on *contused wounds* or contusion *with laceration or division of the skin and superficial tissues*, the remaining branch of this subject.

The co-existence of a wound with a contusion does not much affect the character of the latter injury, most of the characters of a contusion *without*, continuing the same as a contusion *with*, *a solution of continuity*. In the latter case, however, though there may be hæmorrhage into the surrounding tissues, there is rarely, if ever, much escape of blood outwardly. The mode in which the bloodvessels are divided favours, in this case, the formation of the intra- and extravascular clots, which tend to arrest the bleeding; while in some instances it is believed to act much as torsion as performed by the surgeon.

The aspect of wounds of this class is too characteristic to require description. Unless over the cranium, as formerly noticed, their uneven and irregular edges, and less acute angles, sufficiently distinguish them from incised wounds; but, beyond this negative opinion, it is sometimes impossible to go in determining the mode of their production, often due, as they are, to accident, and seldom presenting any peculiarity by which the use of a weapon can be positively inferred, while an opinion can rarely be given, from the mere inspection of the wound, as to the cause of the injury. In such instances it must be borne in mind that a contused wound may be equally the effect of *the party coming forcibly against a blunt body*, as of the *blunt body coming forcibly against the party—i.e.*, the wound may have been produced by *a fall* or *a blow*. In such cases the only safe criterion is deduced from the relative position of the parties at the time of the receipt of the injury, where this had been ascertained. Where an instrument is shown, the medical jurist, in addition, may be enabled, from its character and position, to state the *possibility* or *probability* of the wound having been made by a blunt instrument similar to that produced at the trial.—(Wharton and Stillé, pages 548-9, *pass.*)

The *third and last result* which is enumerated, following a stroke with a blunt body, is *the disorganisation of the part* struck. This is termed *attrition*, and differs both from contusion and laceration—from *contusion* because here the structure is preserved, while in attrition it is more or less completely destroyed; from *laceration*, because in this form of injury the tissues are, as the word implies, torn, while in attrition they are broken down.

Attrition is necessarily followed by ecchymoses, the broken-down tissue forming a pouch or cavity for the effused blood, the consequence of which is—at least as far as the internal soft parts are concerned—a tumour, similar to an ordinary contusion, but with *a feeling of fluctuation* at the part. Attrition is usually met with in the limbs, in the thicker parts of the walls of the cavities of the body, or in the parenchymatous viscera. The hollow viscera and the membranous parts are in such cases more liable to laceration than to attrition.

Attrition may take place in the deep-seated parts without involving the integuments, in the same way as we have noticed in the case of mere contusions.

Such, then, are the three leading forms which injuries, caused by blows or falls on the surface of the body, may occasion, either singly or in combination, and which wo have regarded almost wholly from their more obvious aspects, as *local* and *direct forms of violence*. Injuries of this sort, however, are not always confined to the mere concussion or shock; the contusion or disorganisation alone of the part to which the violence has been applied; or the derangement or arrest of the functions of the organs sympathising with the part. Such injuries, in addition, may involve distant parts by the mechanical impulse transmitted to them through the intermediate structures.

The consideration of these, however, must be reserved for my next lecture.

ORIGINAL COMMUNICATIONS.

TWO CASES OF FEVER WITH HYPERPYREXIA.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

Case 1.—*Rheumatic Fever—Hyperpyrexia—Failure of Iced Bath—Diarrhœa—Death.*

M. K., aged fifteen, admitted June 22, 1876. Ill about a week. Has pain in right hip, knee, and ankle, and in left wrist; stiffness in neck and left leg. Right knee is swollen. Tongue red and denuded. Pulse 144. Nothing abnormal about heart. Temperature 104·8° at 4 p.m. Acid. salicylic. gr. xx. o. horâ, ad vices iv.

23rd.—Temperature at 2 a.m. 101°, at 11 a.m. 104·4°; pulse 144. Was delirious in the night, got out of bed; was stupid this morning, but is rational now at 3 p.m., and has been so for several hours. Heart's sounds free from murmur, but first like second. Salicylic acid recommenced at 12.30 p.m. Temperature at 3.30 p.m. 102·8°. Rept. acid. salicylic. o. h.

24th.—Had the powders o. horâ for six times; temperature then was 101·6° at midnight. Since then she has had none, and the temperature at 11 a.m. was 104·1°; pulse 152, not very weak; tongue red and smooth, and moist in all the dorsum except the edges. She seems uneasy; cannot speak freely; is conscious, but does not seem to be in full possession of her mental faculties. Was delirious in the night. Rept. pulv. acid. salicylic.

25th.—Was very delirious in the night, and is hardly rational now. Had twenty grains of quinine at 10 p.m. last night, in two doses. Bowels relaxed very much; stools very light-coloured. Much tenderness in lower abdomen on each side; some papulose heat-eruption at lower sides of chest. Tongue moist, slightly coated; temperature at 5.30 p.m. (24th) 103·4°, at 8 p.m. 105·2°, at 10 p.m. 103°, at 11.30 p.m. 102°, and pulse 168. At 2 a.m. of 25th, temperature 102°, at 9 a.m. 104·4°, at 11.30 a.m. 101°, directly after pack; at 1 p.m. 102·6°; pulse 144. Seems more comfortable since pack. Bowels have acted five times and copiously. No salicylic acid given.

26th.—Has been very delirious all night; got very little sleep. Tongue moist, slightly furred; bowels loose; stools yellow and watery. Is conscious enough to put tongue out when asked. Face flushed. Takes nourishment well. At 6 p.m. (25th) temperature 102°, at 8 p.m. 101°, at 10 p.m. 103·6°, and pulse 136. Temperature at 1 a.m. 101°, after five hours' pack; at about 3 p.m. 104·4°, and pulse 120.

27th.—Had a pretty good night; is tolerably rational to-day, but easily wanders; lips unsteady; hands twitching; tongue clean. Temperature at 11 a.m. 102°, at 2.30 p.m. 103·5°; much

sweating. Ordered five grains of quinine four times a day. In afternoon had cold pack from 3 to 9 p.m. Temperature 103° at 9.30 p.m., at 11.30 p.m. 104°.

28th.—Was very delirious in the night; in morning seemed more rational, took her nourishment much better. Temperature at 10 a.m. 105·6°, at 3 p.m. 103·8° after five hours' cool pack, at 6 p.m. 104·8°.

29th.—Very restless and delirious all last night, though she had an iced bath in the evening. At 3.10 p.m. temperature 104·6°, at 3·30 p.m. 100°, and soon after 98°. This cooling was the effect of another iced bath. At 4.20 p.m. temperature 101·2°, at 8.30 p.m. 105°, at 9.10 p.m. 102°, at 9.30 p.m. 101°. at 9.50 p.m. 100°. Bath given from 9 p.m. to 9.50 p.m.

30th.—At 9 a.m. temperature 103·3°, at 1.45 p.m. 103·8°, at 3 p.m. 104·6°. Acidi salicylici gr. xx. given o. horâ since 3 p.m of 29th. Two iced baths were given to-day.

July 1.—Had a quiet night; much diarrhœa all this morning. Temperature at 4.20 a.m. 104·4°, at 9 a.m. 102·8°, at 12 (noon) 104°, at 1 p.m. 105°. An iced bath was given at 2 p.m. Temperature at 2.35 p.m. 98°. The pulse has become feeble, and sixteen ounces of brandy have been given in the last twenty-four hours.

2nd.—Died at 5.30 a.m. At midnight her temperature was 106°, three hours after the last bath; she was quite conscious then, but her breath was very short. Her face became very dusky, and she lost very much the power of swallowing. She was unconscious about half an hour before death. Diarrhœa had quite ceased some hours.

Post-mortem.—Lungs much engorged with blood; lower part of right was covered on its pleural surface with false membrane. Heart was perfectly flabby and uncontracted; its muscular tissue pale, with granular degeneration of fibres in progress, and transverse striæ indistinct; no vegetations on valves. Spleen rather large and soft. Liver very pale; its cells were coarsely granular, and showed a tendency to break up; no bile in gall-bladder. Kidneys appeared healthy, but the renal tubes were infarcted in the cortex with epithelial particles more than usually distinct.

Case 2.—Typhoid Fever—Hyperpyrexia—Beneficial Effect of Salicylic Acid.

E. W. J., aged twenty-one, admitted July 14, 1876. She had been feeling ill two or three weeks. Catamenia said to occur every fortnight, and to last nine days; no flow has occurred now for three weeks. Aspect pretty healthy; malar flush on both sides; lips fully red; tongue red at tip and edges, dorsum coated; surface pungently hot. Temperature at 4 p.m. 105°. Pulse 114, of good size and volume; tracing gives a high rise; is very hyperdicrotous. No diarrhœa; no delirium; intellect is now clear. No marked prostration; can sit up; some dulness at lower right back, but air enters most of this lung well, as it does all the left. First sound of heart weak. Acid. nitrici ℥ij., aq. ʒj. 4tis horis. Iced bath. Simple diet.

15th.—Temperature before bath was 105°; towards the end of it was 104·4°, and remained so over three hours. She was in the bath forty minutes, and shivered much. Had a pretty quiet night; no delirium. Bowels open once. Temperature to-day 103·4°. Aspect tranquil. Takes nourishment very well. Temperature at night rose to 105·4°.

16th.—At 10 a.m. temperature 104°; had iced bath in night. At 3 p.m. temperature 104·6°; at 7 p.m. 106·6°, pulse 132; iced bath at 8.30 p.m. for half an hour, at 60°. Temperature reduced to 102·6°. Not much delirium in night. She commenced acidi salicylici gr. xx. o. horâ at 1 a.m.; at 9 a.m. temperature 101·6°, at 11 a.m. 100·4°. Six doses of the acid were given. Head shaved.

17th.—Seems drowsy. Tongue coated, moist. Pulse 112, weak, but distinct. Some rose spots seen (four). Same doses of salicylic acid recommenced at noon. Some gurgling in iliac fossa. Temperature at 3 p.m. 101·8°, at 7 p.m. 100·4°. Up to this time she had had salicylic acid powders; at 10 p.m., after one dose of salicylicate of soda, temperature 98·4°; dose repeated at 11 and 12 p.m.

18th.—Was very delirious in night, getting out of bed. Takes nourishment well. Bowels open once. At 10 a.m. temperature 98·4°, at 2 p.m. 100·8°. A dose of soda salicylicate at 1 and 2 p.m. Says she has less pain in head. Pulse 108, weak, indistinct. First sound of heart weak. Temperature at 12 p.m. 103°. Ordered four ounces of brandy.

19th.—Had a very quiet night, with a quarter of a grain of morphia subcutaneously. Temperature at 9 a.m. 100·4°, at 2 p.m. 100·8°; at 11.30 p.m. 100°, pulse 93. She had six doses of salicylicate of soda in the night, the last at 6 a.m. Some sickness. Tongue moist.

20th.—Good night with morphia subcutaneously. Urine of dark colour, albuminous, deposits lithates copiously. At 11 a.m. temperature 101°.

21st.—At 9 p.m. temperature 103·6°; good night.

22nd.—At 11.30 a.m. temperature 103°; good night; no delirium, only complains of feeling so tired. Pulse 112, of good size, soft. Tongue moist. Has had some doses of salicylic acid in powder, but it caused sickness. Acidi salicylici gr. xx., sod. carb. gr. xx., tinct. aurant. ℥xx., aq. ʒj.; o. horâ, ad vices vi.

23rd.—Complains of waking up in a fright. Temperature at 11 p.m. 102·6°.

24th.—Temperature at noon 103°; pulse 144, soft, open. Has lately become delirious about 2 p.m., and is talking now very wildly. Takes nourishment well; is very thirsty. Tongue half dry. Temperature at 11 p.m. 102°. Rept. mist. salicylicatis sodæ ad vices vi. Brandy ʒvj.

25th.—Had a very good night with morphia. Is wandering a good deal to-day. Pulse 120. Tongue dry and coated. No sickness. Temperature at 11 a.m. 101°. Rept. mist. 2dis horis.

26th.—Temperature 99·4° at noon; at 10 p.m. 100·4°. Good night without morphia.

27th.—Temperature 101·4° at noon. No delirium. No rose spots are to be seen, but there are some *quasi* pustules on face and forehead. Urine less albuminous; deposits some phosphates. Temperature at night 102·8°. Rept. mist salicylicat.

28th.—Temperature 100° at noon; at night 101·6°.

29th.—Temperature 99·6° at noon; pulse 100, soft. Nights are quiet.

30th.—At 10 a.m. temperature 102°; at 10 p.m. 104·2°. Mixture discontinued, as it caused sickness.

31st.—At 10 p.m. temperature 104°. Had ten grains of quinine.

On August 1 the temperature was 102·6°; 2nd, 101°; 3rd, 102·4°; 4th, 100·8°; 5th, 104·2° (rept. quinæ gr. x.); 6th, 100·2°; 7th, 100·6°, at 10 p.m. 102·6°; 8th, 100·2°; 9th, 99·6°; 10th, 102·6°; 11th, 104°; 12th, 103° (ten grains of quinine again); 13th, 100·2°; 14th, 103° (quinine repeated.)

August 15.—Temperature 103°. Tongue pretty clean. Intellect much clearer; feels very weak. Pulse 112, small and weak. She has had mist. acid. tonic. ʒj. et quinæ disulph. gr. ij. ter die since August 4.

September 16.—Is now quite convalescent, up and dressed. Has been improving steadily since August 15. Temperature has never risen to any formidable height.

Hyperpyrexia occurring in cases of fever such as those narrated is, I believe, to be regarded as a functional nerve disorder, analogous to coma, delirium, or convulsions, and dependent on paralysis of the temperature-regulating centres. The existence of such centres seems to me undeniable, in the face of such evidence as will presently be adduced. It may, however, be questioned whether pyrexia is necessarily dependent on paralysis, more or less complete, of these centres, or whether it may not be brought about independently by chemical changes induced in the tissues and protoplasm of the body by some deleterious agent. Dr. Burdon-Sanderson, in an excellent paper on the "Process of Fever" (vide *Practitioner*, April, May, June, 1876), states that "two possibilities are open to us. One is that fever originates in disorder of the nervous centres: that, by means of the influence of the nervous system on the systemic functions, the liberation of heat at the surface of the body is controlled or restrained, so that 'by retention' the temperature rises; and, finally, that the increased temperature so produced acts on the living substance of the body so as to disorder its nutrition. The other alternative is that fever originates in the living tissues—that it is from first to last a disorder of protoplasm, and that all the systematic disturbances are secondary." To these two possibilities I add a third, in the form of a modification of the first, which will be stated subsequently. It is almost identical with that long ago propounded by Virchow. Dr. Sanderson thinks the facts and considerations adduced in his paper "sufficient to justify the definitive rejection of the first hypothesis in all its forms: for, on the one hand, we have seen that no disorder of the systemic functions, or of the nervous centres which preside over them, is capable of inducing a state which can be identified with febrile pyrexia; and, on the other, that it is possible for such a state to originate and persist in the organism after the influence of the central nervous system has been

withdrawn from the tissues by the severance of the spinal cord." This latter averment will be noticed subsequently. As to the first, I submit that it is directly opposed to the testimony of Mr. Hutchinson, who uses the term "paralytic pyrexia" to denote the "state of feverishness which is so marked a feature in the stage of reaction after severe injuries to the head or spine. Throbbing, relaxed arteries, and great heat of skin are its chief features; but, in greater or less degree, the other constitutional symptoms usually included in the term pyrexia are present—a furred tongue, dryish mouth, distaste for food, with thirst and scanty urine." In a gentleman, well known to me, whose nervous system is in a feeble state (perhaps in consequence of a strain of his spine), a very little over-fatigue has been for several years certain to be followed by well-marked pyrexia, lasting two or three days. The attacks were attended with shivering and fever, and severe dyspepsia, especially for farinaceous substances. A similar case has been mentioned to me, where the derangement consequent on fatigue was regarded as typhoid fever.

As to the view that fever is from first to last a disorder of protoplasm, and that all the systematic disturbances are secondary, it may be remarked that occasionally cases of typhoid occur where there is no rise of temperature. One such occurred at St. Mary's, under the care of Dr. Sibson. The temperature never exceeded 98°, nor the pulse 90. There were rose spots. Dr. Broadbent had a similar case at the Fever Hospital. Dr. H. Thompson records a severe case, where the temperature did not exceed 101·2°, and the typhoid symptoms were prolonged into a period of normal temperature for nearly seven days. Dr. Johnson (Washington) relates some instances of these low readings when there was no reason to doubt that the patient's disease was typhoid fever. Wunderlich says, page 201 "Medical Thermometry":—"But even when very painstaking observations are made, cases of abdominal typhus do occur, in which, so to speak, the disease remains latent, and where the nature of the fatal illness is first recognised in the dead body. With regard to all these instances it seems certain that the protoplasm of the body is infected, yet fever does not ensue. Its absence seems to me most reasonably accounted for on the assumption that the temperature-regulating centres, being endowed with unusual resisting power, do not succumb to the morbific agent. The same explanation seems to me the most probable that can be given of those disorders, either non-febrile or but slightly so—as diarrhœa, sore throat, nephritis—which affect occasionally persons who have been exposed to the contagion of scarlet fever, yet who have remained exempt from the specific malady. Again, it is well known how much mental depression or *ennui* promotes the liability to sicken from fevers, and how much the resisting power to morbific influences is increased by an opposite state. The system may be thoroughly impregnated with malaria, yet no fever ensue unless some mental perturbation arise. Sir Samuel Baker says of African remittent fever that any severe action of the mind, such as grief or anger, is almost certain to be succeeded by fever in that country. The part played by the nervous system in many conditions of this kind is sufficiently apparent. It may, so to speak, hold down the temperature if strong and stable, or if weakly and failing allow combustion to run riot. In the latter case it may be greatly aided by the administration of quinine, which is both a nervine and an antipyretic, and the latter because the former. Binz, however, disputes this. Further evidence to the same effect is afforded by intermittent and relapsing fever, and by pyæmia. Here we have paroxysms of pyrexia, with intervals of varying length more or less completely apyretic.(a) It is impossible to suppose that the essential cause of the malady is absent or inoperative on protoplasm during the fever-free intervals; but it is in accordance with what we know of the behaviour of the nervous system to believe that it resists disturbing agencies up to a certain time, and then gives way suddenly. Thus a permanently existing irritation gives rise to sudden explosions of epilepsy, or attacks of asthma, or (as in cases narrated by Trousseau, vol. ii., page 317) to periodic neuralgia.

Murri considers that his experiments have disproved Virchow's doctrine that fever is the result of paralysis of an inhibitory centre situated somewhere in the intracranial nervous system, and Dr. Sanderson seems disposed to agree with him. Murri states that after section of the cord in dogs the skin is less warm, and gives off less heat than normally. This was the case in large as well as in small dogs, and in an atmosphere of 86° Fahr. as well as in a cool one. Even when the temperature of the rectum rose above the normal, in spite of repeated measurements the skin was never observed to become warmer. As the result of certain experiments in which the heat given off from the bodies of dogs with divided cords (cervical) was measured, he states that in spite of the diminished giving-off of heat the interior of the animals became colder. He accounts for the diminution of production of heat by the paralysis of the muscles, by the slackening of the circulation (the blood stagnating and accumulating in the abdominal and other vessels), by the diminished work of the heart, and by the diminution of the internal friction of the blood-current. When fever was produced in his dogs *before* the division of the spinal cord, the operation had not the above-mentioned cooling influence. Also when the cord was first divided (which produced cooling), and putrid pus then injected, the temperature rose just as in animals not operated on. Murri maintains on all these grounds the biochemical theory of fever, according to which pyrogenic substances produce abnormal chemical decompositions.

I have examined the details of Murri's experiments as given in his essay, "Sulle Teoria delle Febbre," and am inclined to go further than Dr. Sanderson does, though he considers them hardly conclusive. His first experiment certainly shows that section of the cord between the sixth and seventh cervical vertebræ may produce very decided fall of the temperature, both in the rectum and under the skin of the thigh. The temperature of the rectum fell in two hours 3·4° C., of the skin 2·3° C.; in six hours the rectum fell 5·5° C., the skin 3·9° C.; in twelve hours the rectum had lost 6·7° C., and the skin 5·5° C. The temperature of the room throughout was 23·5° C. But in Experiment 14 the rectal temperature rose in five hours 0·4° C., while the cutaneous remained the same; in fourteen hours the rectal temperature had fallen 0·4° C., and the cutaneous 0·3° C.; in twenty-six hours the rectal temperature had fallen 1·2° C., and the cutaneous 1·2°; in thirty-six hours the rectal temperature had risen again, and was only 0·3° C. below the reading before the section of the cord, the cutaneous being 0·6° C. The temperature of the room throughout was 21° C. In Experiment 13, after the lapse of more than twelve hours, the rectal temperature had risen 2° C., and the cutaneous 1·8° C. Here, however, the temperature of the room was higher, varying from 25° to 30° C., and this may have hindered the cooling. But in Experiment 14 this could not have been the case, as the room was colder than in Experiment 1, and yet the fall of temperature was comparatively trifling. It certainly does not appear proved that section of the cervical cord necessarily causes a notable lowering of the temperature. But a much more potent objection to Murri's conclusion is that in the human subject the temperature of both skin and rectum are often raised very much indeed by destruction of the cervical cord. Moreover, it may be that in Murri's experiments the section—which was always between the sixth and seventh cervical vertebræ — was made too low down, for both Tscheschichin and Schreiber agree that a narrow area near to the junction of the medulla oblongata and the pons is the part where injury is specially effective in producing high temperature.

Murri's experiments relative to the amount of heat given off by animals whose cervical cord has been divided seem to me more conclusive. He shows that a sound dog placed in a box not only kept up his own temperature, but warmed the air of the compartment 6·7° C. in one hour and fifty minutes; while the same animal when his cord had been divided lost in one hour and forty-five minutes 2·1° C. of his own temperature, and only warmed the air of his box 5° C. This certainly seems to prove that a sound organism gives off more heat than a paralysed one. Yet, on the other hand, it seems hard to believe that a human body whose surface marks a temperature of 110° does not give off more heat than one at 98°.

In support of the statement that, when fever was produced in dogs by the injection of pus, the subsequent division of the spinal cord did not cause cooling, Murri gives two experiments. In Experiment 15 the temperature of the rectum rose 0·6° C. after pus was injected, and 0·5° C. more after the cord was cut, then gradually declined in six hours to 39·8° C. This was 0·8° C. above the starting-point before pus was injected, but is not a febrile temperature for dogs necessarily (*vide*

(a) A patient now under my care in St. Mary's for pyæmia has since the disorder was fully established at least twice had a normal temperature, within a few hours of considerable rises. Once he had a temperature of 104·7° in the forenoon during a rigor; in the evening the temperature fell to 97·9°. On another occasion the forenoon temperature was 105·2°, the evening 99°.

experiments 14 and 11). The temperature of the skin of thigh rose after the cord was cut 0·5° C., then fell. The total loss in six hours was 3·6° C. A further fall in the temperature of both rectum and skin might have occurred had the experiment been prolonged. The temperature of the room was 20·5° C.

In Experiment 16 the rectal temperature was raised 0·8° C. by injection of pus, then 3° C. by struggling. After section of the cord it fell in four hours to 38·6° C., while the posterior paralysed limb fell to 31·7° C., and the anterior to 29·8° C. The loss in the rectum was 0·8° C., in the posterior limb 0·5° C., and in the anterior 4·6° C. The temperature of the room was 19° C.

These results do not seem to me to warrant the above statement.

Again, Murri avers that putrid pus produces fever when injected subcutaneously after the cord has been divided, and cooling thereby occasioned. Experiments 18 and 19 are given in proof. In the former the temperature of rectum fell from 38·5° to 36° C., and the cutaneous in thigh from 36° to 33·5° C. in three hours (pus was injected one hour and a half before the end of this time). The temperature then rose and kept at 38° C. or a little above for thirteen hours in the rectum, and at 34° C. or a little over in the skin. The temperature then fell, and in eight hours descended to 33·5° C. in the rectum, and 30·2° C. in the skin of thigh. The temperature of the room was 19° to 20° C. In this instance, though some elevation of temperature followed the injection of pus, yet it never reached fever height in rectum or skin, and soon fell again considerably. The highest point reached was 38·9° C., and this only once.

In Experiment 19 the cord was cut at 10.15 a.m.; at 10.20 temperature of rectum 40·3° C.; of thigh (subcutaneous) 38·2° C. At 11 a.m. fetid pus was injected. Temperature of rectum fell to 38·9° C.; after 2.15 p.m. began to rise, but did not reach 40° C. till 9.50 p.m.; it remained at 40·1° to 40·4° C. till 5 a.m. of second day, when it fell 4° or 5° C. for five hours, then rose again, and reached 40·7° C. (its highest point) between 11 and 12 a.m.; again fell some tenths until 5.30 p.m., again rose and remained at 40° or 40·1° C. till 8.45, when the experiment closed. The temperature of skin of thigh at 1 p.m., 36·1° C.; at 9.50 p.m., 37·3° C.; at 10.30 a.m. of second day, 37·4° C.; at 11.25, 38° C.; and continued at same figure, or a little above, till 2.20 p.m.; then declined a little, rose again at 5.15 p.m. to 38° C.; at 7.45 p.m. reached 38·8° C. (its highest point), and fell to 38·1° C. at 8.45 p.m., when the experiment was concluded. Temperature of room 24° to 25° C. In this instance the further fall of the temperature, which had commenced after section of the cord, was checked by the injection of pus, but the temperature produced by this was only 0·4° C. in the rectum, and 0·6° C. in the skin above that noted five minutes after division of the cord. These are the maxima, but, reckoning from three hours after the injection of pus, the average height of eighty-four observations made in thirteen hours amounts to 39·5° C., and that of ninety-seven made in the succeeding seventeen hours to 40° C. for the rectum. The corresponding amounts for the skin are 36·7° and 37·9° C. If these are compared with those of the starting-point—viz., 40·3° C. for the rectum, and 38·2° C. for the skin of thigh, it is seen that there is a decline during the first period of 0·8° C. in the rectum, and 1·5° C. in the skin. In the second period the decline for the rectum is 0·3° C., and for the skin 0·3° C. It is clear, therefore, that the pyrogenic effect of the pus did not avail to bring up the temperature to the normal, and consequently the result was not such as in animals with sound cords. Murri says that the dog in this experiment continued to live for four days more, the temperature still remaining high. This leads one to question whether the injected pus was the cause of the rise in temperature, for the pyrexia produced by pus in dogs usually lasts about two days. Perhaps the section of the cord was the real cause. This last point, then, like the preceding, seems to me by no means made out.

(To be continued.)

ON THE USE OF

PEROXIDE OF HYDROGEN FOR THE PREVENTION OF THE SPREAD OF SCARLET FEVER AND SMALL-POX.

By JOHN DAY, M.D.

In October, 1875, by request of the Mayor of Melbourne, I drew up a report, which was subsequently published by order of the Local Board of Health, on fifty-one cases of scarlet fever which had been treated by me between April, 1873, and April, 1875. These comprised all the cases of scarlet fever which had come under my charge during that period. They were all treated in a similar manner. Each patient was freely rubbed over the whole surface of the body three times a day with a preparation composed of one part of ethereal solution of peroxide of hydrogen (erroneously called ozonic ether) and seven parts of pure lard, well incorporated without the aid of heat. The inunctions were continued for about three weeks. No other remedies were prescribed, except in a few cases where the throat symptoms were severe, when a gargle, composed of two drachms of ozonic ether in eight ounces of water, was ordered to be used every second hour.

These fifty-one cases occurred in thirty-eight different houses, and in four houses only was there any extension of the disease. There were no deaths. Since the above-named period I have attended sixty-four cases, occurring in fifty different houses, and in three houses only was there any extension of the disease after I had commenced my treatment. I have been less fortunate, however, in my results, having had six deaths.

Peroxide of hydrogen contains a larger amount of oxygen than any other known substance, and, moreover, one-half of its oxygen is loosely combined and in a highly active condition, ready to combine with any organic matter with which it may be brought in contact: so that it would appear to be an agent specially suited for the destruction of the poison-germs of scarlet fever, small-pox, and other epidemic diseases. Dr. William Squire, in an excellent paper "On Sanitary Precautions against the Infectious Eruptive Diseases," read before the National Association for the Promotion of Social Science, says—"It [infection] cannot be carried far in the air, for fresh air oxidates and destroys it, so that for the most subtle diseases the infecting distance is small." Now, the loosely combined atom of oxygen in each molecule of peroxide of hydrogen is infinitely more potent as an oxidiser than the oxygen of the atmosphere; consequently I think it is reasonable to infer that by coating the body of a person suffering from scarlet fever or small-pox—diseases in which most of the poison is eliminated by the skin—with peroxide of hydrogen in combination with lard, cacao butter, cold cream, or any other substance which will conveniently retain it, we are reducing the danger of infection to a minimum. I have recently slightly modified my formula for the external application, and now generally prescribe it as follows:—Ozonic ether, four drachms; pure lard, four ounces; benzoic acid, twenty grains; otto of roses, four drops; to be carefully mixed without the aid of heat. The benzoic acid, in addition to its being a powerful antiseptic, possesses the property of allaying cutaneous irritation, a symptom often very distressing to scarlet fever patients. The otto of roses gives an agreeable odour to the preparation.

I now also prescribe, throughout the whole course of the disease, a mixture composed of two or three drachms of ozonic ether in half a pint of water; the dose ranging from a teaspoonful for a child twelve months old, to a tablespoonful for an adult, to be taken every second hour. This is used for the double purpose of benefiting the throat symptoms and disinfecting the breath.

I have so much faith in the disinfecting properties of peroxide of hydrogen that I recommend all my friends and patients who are in a position to afford it to use freely that which, for want of a better name, I call oxygenated perfumery. It is made by adding ozonic ether, in the proportion of about a drachm to the ounce, to any kind of perfume, according to individual taste. I give the preference either to Rimmel's toilet vinegar or eau de Cologne. Letters, newspapers, and articles of clothing may be disinfected by sprinkling them over with oxygenated eau de Cologne, or with any other oxygenated perfume.

With regard to any power that peroxide of hydrogen may possess of destroying the poison-germs of small-pox, I must confess myself to be merely a theorist, for we have not yet had small-pox in its epidemic form in Australia. In 1871 a vessel arrived at Melbourne with small-pox on board, and shortly after the passengers were landed a few cases broke out in different parts of the colony; but through the energetic measures adopted by Dr. McCrea, our Chief Medical Officer, the disease was soon stamped out. At that time, however, it first occurred to me that it might be possible, by a process of oxidation, to destroy the poison-germs of small-pox as rapidly as they were given off from the body, and in a paper "On a

Means of Arresting the Spread of Small-pox," read before the Medical Society of Victoria, July, 1871, I suggested the use of peroxide of hydrogen for that purpose.

From a theoretical point of view it might be supposed that peroxide of hydrogen would act more powerfully as a disinfectant in small-pox than in scarlet fever, in consequence of the curious property that pus-cells possess of exalting its chemical activity and giving it the oxidising powers of ozone.

Geelong, Australia.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF MALIGNANT DISEASE OF RECTUM—LEFT LUMBAR COLOTOMY—RELIEF OF SYMPTOMS FOR EIGHT WEEKS AND NINE WEEKS RESPECTIVELY.

(Under the care of Mr. MARSHALL.)

[For reports of these cases we are indebted to Mr. F. Davies, F.R.C.S., House-Surgeon.]

Case 1.—E. P., a young man, aged twenty-seven, upholsterer, transferred by Dr. Ringer to Mr. Marshall, July 26, 1873. Patient gave the following history:—Four months ago he suffered from diarrhœa, which lasted one day only. It was accompanied by great pain in the lower region of the abdomen, and throbbing in the rectum. From that time up to the date of admission his bowels were constipated, the stools being generally very small, and their evacuation excessively painful; sometimes he passed matter streaked with blood. No history of syphilis could be made out, nor of tumour in other members of his family.

At the time of admission he had not at all the aspect of malignant cachexia, and he was able to walk about fairly well, except when he suffered pain. The pain was spasmodic in character, commenced just above the pubes, and diffused itself through both groins. His abdomen was distended and tympanitic, but not tender on pressure. There was no tumour to be made out on external examination. On examining the rectum, nodules were found about an inch and a half from the margin of the anus. The nodules were hard, smooth, and about the size of currants, with soft intervening mucous membrane. A little higher there was an aperture, which extended upwards for half an inch; through this the finger could be made to pass, and then came in contact with the mucous membrane above, which was not quite smooth.

The only therapeutic measures adopted in the medical ward were that copious enemata of gruel and oil were given under chloroform, and a rectum bougie was passed every other day. At the end of a week no fæcal material had passed, only a little mucus at various times. He was in a great deal of pain of spasmodic character, and he began to suffer from vomiting, which on the 26th was coffee-ground in character, but not fæcal.

It was considered that, with a view to relieving the symptoms and giving the patient comfort, colotomy was justifiable, and this was performed by Mr. Marshall in the left lumbar region. On opening the gut there was a free escape of flatus, but no fæces until a quarter of an hour after the operation, when a steady and continuous expulsion of a very considerable quantity took place.

Some hours after the operation the patient was feeling greatly relieved, and his general condition improved very much during the next few days, there being no vomiting, very slight abdominal tenderness, the temperature normal, and the pulse 120 to 130. For the first four days a free evacuation of fæces took place through the lumbar aperture, and on the third day a small stool also was passed by the rectum. On the fifth day no motion passed through the lumbar aperture, which seemed to be blocked up, but four stools were passed by the rectum, which, however, did not give him much pain. A dose of castor oil was given, and from this time up to his death he passed some fæces through the rectum as well as the lumbar region. The anterior part of the wound in the lumbar region united by first intention; the rest granulated up slowly. By August 14 his general condition was so much improved that he was able to eat meat and bread-and-cheese without any inconvenience, but after a time he began to get weaker, diarrhœa appeared, bedsores formed on the sacrum and great trochanters, tympanitic distension of the abdomen occurred, sickness set in, blood was passed by the rectum; and on September 23 he died, having lived eight weeks and three days after the operation.

At the post-mortem, diffuse secondary growths were found scattered over the peritoneum and the pleura; in the liver and supra-renal body of the right side; none in the spleen, kidneys, lungs, heart, or brain. The intestines and other viscera were matted to each other. The omentum was matted together, and dragged down into the right side, forming a large indurated mass infiltrated by the growth. The lower eight inches of the rectum were found to be affected by the growth, the canal of the upper three inches of which was almost occluded by a nodular mass, one inch and a half thick, invading it from behind. The mucous membrane passed over the mass entire, except at its lower half-inch, where it was roughened and nodular; below this to within an inch of the anus the rectum was ulcerated away, leaving an irregular cavity which burrowed up around the bladder by a thin layer of tissue. The lower inch above the anus was entire, but reddened and nodulated. Part of the sigmoid flexure that dipped down into the pelvis was the seat of a mass of the new growth about the size of a hen's egg. The rest of the intestines did not contain any new growth. The mucous membrane of the bladder was very much inflamed, and its walls half an inch thick. The colotomy aperture into the intestine was found to be in the posterior surface of the colon, and the edges of it were found firmly adherent to the edges of the wound.

Case 2.—T. H., aged forty-nine, a coal-porter by occupation, was admitted, under the care of Mr. Marshall, on April 20, 1876. Patient dated the commencement of his illness at five months before admission to the hospital—*i.e.*, to about the middle of November, 1875. During the preceding month he thinks he "overstrained" himself, for he occasionally passed a little blood with his motions; his appetite was impaired, and he lost flesh. In November, diarrhœa of a most persistent kind, and attended with great pain in the lower part of the bowels, set in. The stools were generally liquid, and often contained blood, more or less, up to the time of his admission. When formed stools were passed the masses were very small, and their evacuation did not relieve him of the feeling of wanting to defæcate.

On admission to the hospital he was extremely emaciated, very anæmic, and presented a dull, heavy appearance. On examining the rectum, Mr. Marshall found a group of nodules projecting into it about one inch above the anus, and extending so far up, that healthy gut could not be felt above them. These nodules were ulcerated on their surfaces. No fistula was present. No solid mass was to be felt in the iliac regions or elsewhere. Liver-dulness not increased. For the next few days patient's condition continued in the same state as on admission; his bowels were very frequently moved, but the amount passed each time was very small, and gave no relief. Morphia suppositories gave some relief to the pain, and a starch and opium enema, which was repeated once or twice, was followed by copious stools, and lessened the severity of the diarrhœa for the next couple of days, after which it returned again.

On May 2, Mr. Marshall did colotomy in the left lumbar region. The intestine was found to be sacculated, slimy, and two-thirds of its circumference was green. Six hours after the operation, fæculent matter was found in the oakum poultice that had been applied. On the day following the operation the patient's temperature was 100·7°, but the next day it fell to the normal, and continued so afterwards. The general condition was much improved. There was no pain in the abdomen or anus, and only slight tenderness in the left lumbar region. For the first seven days after the operation, patient passed, on an average, one stool by the lumbar aperture and one through the rectum each day; after that he passed his motions entirely through the artificial aperture, and on an average his bowels were moved twice a day, the motion being unformed. The gut prolapsed considerably at times. The incision healed partly by first intention, partly by granulation. Four days after the operation an ischio-rectal abscess which had formed was opened, and continued to discharge a very offensive sanious fluid from that time onwards. By May 22 patient had improved so far as to be able to get up each day for a short time. Later on, however, he got gradually weaker; bedsores formed, œdema appeared in the lower limbs, aphthæ

in his mouth, his urine became muco-purulent; and on July 8 he sank, having lived nine weeks and four days after the operation.

Post-mortem.—The body was greatly emaciated. The gut was distinctly narrowed at the place where it passed out through the abdominal wall in the lumbar region. The walls of the intestines were very thin, and some patches of congestion were found in the cæcum. The descending colon along its lower six inches was dilated to twice the size of the gut above, but the thickness of its walls was not less than that above. The sigmoid flexure was very small and quite empty; it twisted over almost at right angles, lying against the back of the bladder. The recto-vesical pouch was obliterated, and its place taken up by a nodular mass. On removing the pelvic organs, the rectum was found to present, some distance from the anus, an irregular, thickened, congested margin. Above this the mucous membrane was covered with enlarged follicular glands; below it there was a large excavated cavity, surrounded by breaking-down nodules, but showing no vestige of mucous membrane. Lower still than this, just above the anus, the mucous membrane was entire again. The cavity of the bladder was very small; its base, which was firmly adherent to the mass beneath, was deeply congested. The tissue of the new growth cut with a fibrous feel, though no bands could be seen in it with the naked eye. Microscopically it was seen to be a scirrhous growth, as had been diagnosed during life. The cells were about twice the size of white blood-corpuscles, and the stroma was not by any means excessively developed. The lymphatic glands in the pelvis and front of the lumbar vertebræ were slightly enlarged, and the lymphatics between them were more apparent than normal. Microscopically the glands showed that their tissue had undergone a slight fibroid thickening, and here and there a couple of cells identical with those in the new growth in the pelvis could be made out. No secondary growths were found in any other part of the body. The only point of interest in the other viscera was that there were only two aortic valves, right and left, each of which measured two inches between the extreme points of their cornua; from the pouch behind one of them both coronary arteries took origin. One of the cusps contained a small calcareous plate.

LONDON HOSPITAL.

HÆMOPHILIA—PURPURA—RETINAL HÆMORRHAGES (PURPURA) OF RETINA)—DEATH.

(By Dr. STEPHEN MACKENZIE.)

After the case of purpura with retinal hæmorrhages, published in last week's *Medical Times and Gazette*, was in print, I heard of another case which had been in the Hospital, in which also retinal hæmorrhages had been observed in connexion with purpura. The patient was under the care of my colleague Dr. Andrew Clark, who, with his usual kindness, has allowed me to publish it. For the notes and valuable observations I am indebted to Mr. Roland D. Smith, Senior House-Physician.

Alice D., aged thirteen, was first admitted into the London Hospital in August, 1875. The history given, and her condition generally, upon that occasion was as follows:—Measles when a child of twelve months; whooping-cough soon after; chicken-pox when five years old. For four or five years she had suffered from frontal headache, which of late had become so severe as to necessitate her lying in bed a whole day at a time. She always vomited as the headache passed off, but had never experienced any ocular phenomena. Frequently she vomited in the morning before breakfast, even though free from headache. For about two years before her first admission, after receiving a slight blow, or after having been merely touched, the part that had suffered had turned black—jet black—and so easily had she bruised that frequently she could not call to mind in what way she had been injured; causes so slight as to be passed over unnoticed have caused large bruises. Sometimes after having been struck she had noticed a lump, and some marks had remained for three or four months. During her whole life she had bled freely after having been cut. She had even thought the wound almost healed up, when it would burst out bleeding again and again from the very slightest knock. About April, 1875, she pulled out the stump of a decayed tooth, and her gums bled for about three weeks afterwards. Menstruation commenced in the autumn of 1874, when she had a hæmorrhagic discharge from the nose and mouth: it began at the nose. She has bled from the nose and mouth at intervals of two or three weeks up to three weeks ago. Always had pains in the head at these times, and frequently vomited. When hæmorrhage from the nose had ceased, several "black boils" came out on the thighs. Some of the boils were larger than five-shilling-pieces; they broke in a fortnight from the first appearance, nothing but blood and clots escaping. First menstruated *per vias naturales* three weeks before admission, and that is supposed to be the commencement of her present illness.

Family History.—Father is living; a strong, healthy man, who eats, drinks, and sleeps well; is not troubled with any illness, and does not bleed easily. Mother is living; she first menstruated when she was thirteen quite naturally, and has always been regular both as regards time and quantity ever since, except when pregnant. She does not easily bleed after a cut; has never bled from the nose; has occasionally had slight hæmoptysis after catching cold. She has had five children; no miscarriages; all labours have been protracted; always been weak and sick whilst pregnant; always lost much blood during confinements. Brothers and sisters are living and healthy; one sister died from dysentery. No history of syphilis, phthisis, fits, or rheumatism.

Present illness commenced three weeks before admission, when she commenced to menstruate properly. The discharge has continued up to the present time, except for two or three hours during the end of the first week when the flow ceased, and then "blood rushed from the nose and mouth." During the past week the flow has increased in quantity, and she kept passing "solid pieces of considerable size"; pieces kept getting larger, and patient had a good deal of pain. The day before admission, patient passed two large clots; she had much pain at the time, and fainted directly afterwards. On account of shooting neuralgic pains, she had been unable to hold her head up for a few days preceding admission. She had eaten nothing; had been constipated and had vomited very much for the past week. For four days she had been unable to leave her bed.

On Admission.—Patient was poorly nourished, and her frame not very well developed; extremely anæmic; pupils dilated. Dark eyes and hair. Surface of body covered with petechiæ and bruises; she was unable to account for many of the latter. Breathing shallow; tongue furred and dry. Vagina normal; uterus normal; clot hanging from the os. Temperature 101°; pulse 132; respirations 24. No evidence of coarse change in lungs or heart; no hæmorrhages in retina. Ordered one grain of ergotin to be injected subcutaneously. Diet: Milk and beef-tea, to be taken cold; and ice, to be sucked.

September 24.—10 a.m.: Temperature 100°; pulse 112; respirations 28. Passed a restless night; vomited much. Hæmorrhage very much diminished; ergotin repeated. 7 p.m.: Temperature 104°; great thirst.

25th.—Still vomits. Temperature 101° a.m., 103·5° p.m. Ordered effervescing mixture, ergotin hypodermically, and ice to suck.

26th.—Scarcely any hæmorrhage to-day; evening temperature still high; still vomiting. Ordered one-sixth of a grain of morphia every four hours, to be followed by a meal of iced milk.

27th.—Patient much better; no hæmorrhage, but little vomiting.

From this time patient improved up to the date of discharge. She was sent from the hospital to Dover for a month, and during that and the succeeding month she seemed quite well. She did not, however, menstruate again until January 14, 1876, when all the previous symptoms returned; and on January 19 she was readmitted into the hospital in the following condition:—Fairly well nourished; rather anæmic, with pink lips. Considerable circumorbital ecchymosis, with great discoloration; and on the outer half of right sclerotic there is a subconjunctival effusion of blood. This, she said, was the result of a very slight blow, scarcely enough to take notice of. On the arms and legs there were a number of small purpuric spots. There were several bruises on different parts of the body, especially a large one over the left inner malleolus; its cause was unknown. The vessels in each fundus oculi pulsated most markedly; but no retinal hæmorrhages were seen.

January 22.—Clots still passing; ergotin was administered subcutaneously.

24th.—Ergotin repeated.

26th.—Ergotin subcutaneously twice a day. Milk and beef-tea diet; everything cold.

30th.—Little or no improvement having taken place under this treatment, the ergotin was discontinued and half a grain of opium ordered every three hours.

31st.—Patient has now been in the hospital eleven days, and has not ceased to menstruate. Yesterday a clot was removed from the uterus, and to-day another. Iced water ordered to be injected frequently into the uterus. She is now not only blanched, with pale lips, but has that peculiar alabaster appearance which almost startles one on account of its death-like pallor. She vomits constantly, and does not always keep down the brandy she is ordered. Pulse extremely feeble and very rapid. Discs very anæmic.

February 2.—Since the iced water injections have been used there has been a considerable diminution in the amount of hæmorrhage, and to-day it has almost stopped. She has been fed by nutritive enemata for the last three days, and seems improving.

8th.—This morning patient complains of loss of sight in the right eye, unassociated with pain. Acuteness of vision is very fair with left eye, but almost *nil* with right eye. With the Snellen test-types she can with the left eye read $\frac{20}{20}$, and $1\frac{1}{2}$ at twelve inches. She distinguishes colours properly. With the right eye she can distinguish shadows passing between her and the light; cannot count fingers; cannot read anything.

Ophthalmoscopic examination reveals a large hæmorrhage in the right fundus, situated chiefly below and to the outer side of the disc, and involving the macula. It is irregular in shape, and appears unevenly pointing forwards, as if pushing into the vitreous; it is several times larger than the disc. The disc itself is normal, very pale, and the vessels are not now seen pulsating. In the left fundus there is a hæmorrhage, evenly rounded, and about twice the size of the disc; it is situated directly above the disc. The hæmorrhages completely obscure the vessels. The vessels, especially the veins in the remainder of the fundus, are tortuous. No optic neuritis.

February 12.—Vision with right eye has slightly improved. There is but little alteration in the appearance of the fundus.

15th.—Left eye, V = normal. Right eye, V = $3\frac{1}{2}$ Snellen at twelve inches.

16th.—There is a hæmorrhage beneath the mucous membrane of the lower lip, nearly as large as a threepenny-piece. Slight hæmorrhagic oozing from the gums this morning. The blood about the macula of the left eye is clearing up.

22nd.—V left eye = $\frac{20}{30}$, and $2\frac{1}{2}$ at twelve inches. Yesterday patient was not so well; felt sick from midday, and during afternoon and evening she vomited. She says the food returned in an undigested condition.

From this date the patient seemed to get lower. She had no return of the hæmorrhage. She died early in March. The necropsy was forbidden.

Remarks.—I saw this patient during her first visit, but not on the second. The case is chiefly valuable to me on account of the retinal extravasations. I think it justifies the inferences I drew from the appearances of the retinal hæmorrhages in the case of the little boy, where there were small hæmorrhages on the main arterial and venous trunks (described last week). My chief reason for regarding these as indicative of some intracranial disease (of which there was other evidence), rather than as local purpuric manifestations, was that they had not the characters common to purpuric hæmorrhages elsewhere seen. They were small hæmorrhages, which might easily be overlooked, surrounding the vessels as with a collar. In the case above they had a very different appearance, resembling more the hæmorrhages observed in the skin, and deserving the title "purpura of the retina." The hæmorrhages were of large size, and gave rise to subjective symptoms corresponding to the amount of interference with functions of the retina. Mr. Roland Smith's exact observations on the degree of vision are of very great interest. It could not be determined in this case whether the sources of the hæmorrhages were venous or arterial, but, bearing Sir William Jenner's remarks in mind, the retina may afford some assistance in determining their origin in other cases. The patient was evidently "a bleeder," and the hæmorrhages owed their origin to this circumstance. It is to be regretted that, owing to the necropsy being refused, it cannot be stated whether other nervous structures participated in the extravasations. There were, however, no symptoms referable to the nervous centres which would lead to the conclusion that such was the case. A point of interest is the sex of the patient. It is much the most common for females to transmit the diathesis to their offspring without themselves displaying any signs of a hæmorrhagic tendency.

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Medical Times and Gazette.

SATURDAY, MARCH 10, 1877.

THE SANITARY CONDITION OF THE WAR OFFICE.

The report of the Special Committee appointed to examine into the sanitary state of the War Office has been made public, and, as we three weeks ago intimated would be the case, they have in effect utterly condemned the whole of the buildings. The report states that the Committee have examined the buildings from basement to roof, and that the sources of impurity of the air have been traced to—1. Water-closets in the area, within a few feet of doors opening into rooms residentially occupied, and passages. 2. A laundry, vapour from which passes into the passages with sufficient freedom to be perceptible at some distance. 3. A canteen. 4. Kitchens. 5. Rooms occupied by families, both for living and sleeping. 6. A printing establishment, which, as well as the passages, is lighted by gas, often during the whole day. The passages of the basement are narrow, dark, and tortuous, with scarcely any means of ventilation, except from the areas in which are the water-closets. Communicating with the passages are several rooms, dark, unoccupied, and without ventilation. On the several floors above are a considerable number of water-closets, placed within the building, and having no efficient means of ventilation. They are close to the rooms occupied by the clerks. The odour of them is in many cases complained of. The Committee believe that noxious gases must from time to time escape from the pipes of the several lavatories, which, although trapped, open into the drains. The urinal accommodation is altogether defective. The overflow-pipes of the cisterns supplying the water-closets open, in most cases, directly or indirectly, into the soil-pipes. Some

of the cisterns which supply the water-closets have taps, which have been habitually used for drinking and domestic purposes, although a special order directed the use of a particular cistern for these ends. The rooms, with one exception, generally contain sufficient cubic space for the clerks employed in them; but the ventilation is most defective. The Committee add that they had no evidence of special outbreaks of disease having originated from the sanitary defects they describe, yet they had no doubt that a daily exposure for several hours to their influence must tend to deteriorate the general health of the persons exposed. And then, while saying that they are satisfied that these defects are inherent in the structure of the buildings, and that they cannot by any alterations be rendered sanitarily satisfactory, they suggest the adoption without delay of the following means for the purpose of mitigating some of the present defects:—"1. The closets in the area should be removed, with the exception of those needed by the families resident in the building, which should be thoroughly ventilated. 2. The laundry should be removed. 3. If it be impossible to remove the printing establishment, or greatly reduce the staff, ventilating shafts should be introduced into the second and third rooms, as has already been done in the first. 4. The whole of the gas-burners throughout the building should have hoods and tubes. 5. The condemned water-closets ought to be removed at once. 6. The waste-pipes of the lavatories, and the overflow-pipes of the cisterns, should terminate in the open air, and be cut off from all direct communication with drains. No traps will efficiently supply the place of open-air termination. 7. All taps communicating with cisterns which supply water-closets should be removed, so that there may be no possibility of the water being used for drinking purposes. 8. The building has been so cut about and altered that we cannot recommend any one system of ventilation as applicable to the whole office. The ventilation of each room and passage should at once be taken in hand, every case being treated specially. We would, however, recommend in every instance that the ventilators introduced should be of such a nature as to be beyond the control of the occupants of the room, and so constructed as not to create draughts. To render the air of the rooms less foul, we advise that rooms be set apart for luncheons, and that a special hour be fixed for the meal. The windows of the rooms should be freely opened by a porter during the absence of the occupants." The report is signed by Sir William Jenner, Sir W. M. Muir, M.D., Dr. E. C. Seaton, and Mr. Mitford; and they say in conclusion—"It must be borne in mind that these suggestions, if carried out, will, in our opinion, only mitigate evils, not remove them." In answer to a question on the subject in the House of Commons, Mr. Gerard Noel stated that plans and estimates were being prepared with a view to carrying out the recommendations of the Committee; but it is evident that the only real remedy is the erection of a new War Office.

THE HASTINGS WATER-SUPPLY.—HATCHARD *v.* PARSONS.

A CASE was tried at the recent Lewes Assizes which in a certain way deserves our attention. The Rev. Mr. Hatchard, a retired clergyman, who possesses a large amount of property in St. Leonard's, has taken a very keen interest in the water-supply of Hastings and St. Leonard's. His views have, unfortunately for himself, been, like those of a good many others, in advance of his time. It had been proved to his satisfaction that the supply of good water availablo for the two towns was inadequate, and likely to be so until new gathering-grounds were tapped. His views he endeavoured to impress on his townsmen, but they, taken as a whole, seem to have been unwilling to encounter the expense of a large scheme, and to have preferred what might be called "tinkering," at the present water-supply. The opposition culminated in a violent attack on Mr. Hatchard in one of the local papers—the *Observer*—of which it seems a Mr. Parsons is the proprietor. This attack was signed—heaven save the mark!—"Tristram Shandy," and the question to be tried at Lewes was whether this article, which it was admitted verged on a libel, was such in law. The case was tried before Mr. Justice Brett and a special jury, who gave their verdict for the defendant. The summing up of Mr. Justice Brett, of which we regret we have not seen a perfect copy, was one, we believe, of great interest to all public writers, and especially to the real author of the alleged libel, Mr. "Tristram Shandy."

The judge pointed out that the jury had two questions to decide. The first was, whether the alleged libel was true. But even if it was not true, it would not necessarily be a libel if written in *bona fide*, and the person said to be libelled was attacked on public grounds and as a public character. Any attack on private character would have a totally different complexion. Thus the jury had to decide whether the alleged libellous matter was true, and also whether, if untrue, it was really libellous. The essence of a libel, as the judge laid it down, was, to hold up a man to his fellows so as to produce in their minds "odium, contempt, or hatred," this being of course altogether apart from any actual loss sustained by the plaintiff; and, as we have seen, in this sense the jury decided against the plaintiff, and for the defendant. The writer of the alleged libel, the *soi-disant* "Tristram Shandy," was not, however, let off with impunity, for the judge said that he considered the worst part of the whole alleged libellous article to be the assumption on the part of the writer of the name of "Tristram Shandy." From any writer assuming such a name or title they might expect a sparkle of wit, but this was only a common-place, vulgar production.

We should not have felt called upon to say a word on the subject of this trial had it not been put forward in certain quarters that Mr. Hatchard was the means of inducing us to publish a report on the Hastings water-supply, and that he also lent us the spectacles whereby we discovered the badness of the Hastings water. Nay, more, we believe it was openly hinted that a certain pecuniary consideration, in vulgar language commonly called a bribe, had been the special means of securing this respect for Mr. Hatchard's views.

To such statements, openly expressed or privately hinted at, no contradiction is needed by those who know the character of this journal. But to the *quidnuncs* of Hastings, and for the sake of Mr. Hatchard himself, we distinctly state that Mr. Hatchard had nothing to do, directly or indirectly, with our visit to Hastings, or with our report on the quality of its water-supply. It was fain hoped by certain worthy gentlemen in Hastings, that by pitting one medical journal against another the authority of the one would counterbalance that of the other; but the report of the *Lancet* Commissioner, carried out in perfect independence of our own, was even stronger in its views than was ours. The views expressed in that report we are by no means inclined to modify. What we said then—nearly a year ago—we are prepared to say now, and to repeat it when necessary. The essence of these views was that the present water-supply of Hastings is dangerous in the extreme; that this danger chiefly arises from the admixture of surface-drainage water—nearly always dangerous, and especially so at Hastings—with good deep-well water. This admixture ruins the good water, and does no good to the bad. The deep-well water, with certain exceptions, is good, but it is altogether inadequate to the supply of the town. Until, therefore, means be taken to give a due supply of unobjectionable water to the town, our opinion must remain unchanged. But these opinions have no more to do with Mr. Hatchard than with the Mayor of Hastings.

HOSPITAL ELECTIONS IN LIVERPOOL.

It is with much regret that we have to announce that the plan for limiting the number of electors to the honorary posts at the Royal Infirmary, Liverpool, has fallen through. But in the face of the action of the Committee we do not see that any other end was attainable or, indeed, desirable. The Committee's plan was that they (the Committee) should be the sole electors to all posts of honour in the Infirmary. This Committee consisted almost entirely of laymen, and, as was roundly stated at the last meeting, showed strong tendencies to become merely a snug family party. This is something very different from what we wished to see inaugurated; we desired to see a fairly representative committee, and not a close borough, as the electoral body. But it is here where it seems to us that the medical men of Liverpool were wrong. They set up no alternative scheme of their own; they merely opposed the scheme of the Royal Infirmary Committee. In this they were perhaps justified in one way, for this Committee had never thought it worth their while to consult their medical officers as to the value of the scheme—whether it was likely to be acceptable to the profession as a body; in point of fact, they entirely ignored the whole body. Now, this was not of good augury for the future. To be neglected and overlooked in the fundamental proceedings towards introducing a new style of things was hardly likely to induce trust and confidence in future transactions. Thus wounded in their *amour propre*, we do not wonder that the medical officers and their friends opposed the proposed scheme; but we do wonder that they did not propose such amendments as would have secured the consideration of a better matured scheme. At the annual meeting the original motion of the Committee was lost, and an amendment that the meeting do adjourn for one month was carried. Again, however, the Committee seem to have ruled with a high hand. They held that at this adjourned meeting the voting could only be in favour of or against their motion—that is to say, that the only rival schemes admissible were either election by the existent body of Trustees, or by the existent Committee. The great bulk of the Trustees had already declared, before the adjourned meeting, for the former. In this way there seems to us to have been lost, at least for the present, the chance of a valuable measure of reform. And the mode in which it has been lost is not particularly creditable to either side. At this last meeting signs of temper were shown, both by those in authority and by members of the medical profession, which were hardly in good taste; and it is just possible that the result may be the postponement for years of a measure likely to save men who seek honorary posts from much dishonouring canvassing.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

Many of our readers must be aware that the Council of the College of Surgeons have for a long time had under consideration certain very important alterations in the regulations relating to the education and examination of candidates for the Fellowship; and that the belief that the Council have all but finally determined on enacting the proposed alterations has given rise to very great dissatisfaction and remonstrance. The subjoined memorial is being presented to the Council as we go to press. It was very largely signed, and was supported by strong remonstrances from honorary and elected Fellows, as well as Fellows by examination, and old Members of the College; and we believe we shall not err in saying that among the earliest signatures to it were the names of all those members of the Court of Examiners who are not also members of the Council. The memorial is temperately, though strongly, worded, and the subject is unquestionably one of extreme importance, for any actual lowering of the value and significance of the Fellowship of the College would be most deplorable. The Council of the College passed the new regulations in December last, but they have still to be confirmed, and as the Council will undoubtedly, in view of the opposition offered, postpone the question of confirmation to a special Council meeting, we will defer comment on the matter to our next issue.

"We, the undersigned Fellows of the Royal College of Surgeons, have learnt with regret that it is the intention of the Council to reduce the present standard of the examination for the Fellowship in favour of Members of the College of ten years' standing.

"The proposed alteration appears to us to be objectionable on the following grounds, and we beg leave to lay them before the Council:—

"It must materially impair the value of the diploma. The Fellowship is the highest title which the College of Surgeons confers, and we submit that it ought, therefore, to be at least on a level with any surgical title which can be obtained elsewhere. At present this diploma is equal to any surgical qualification in the country. If the alteration now proposed be carried out, it must inevitably sink in intrinsic value and professional esteem.

"To reduce the standard of the examination will be an act of injustice to a large number of existing Fellows, who especially of late, at the cost of much time and trouble and at considerable expense, have studied for and passed the examination. All this work has been done by them upon the understanding that it was necessary, and in view of the present value of the diploma. Surely it will be unfair to these now to admit upon easier terms others who have not thought it worth while to encounter the difficulty.

"The admission to the Fellowship of Members of ten years' standing by a much easier examination will tend still further to hinder the progress of surgical education, by encouraging too many to avoid the more searching examination, and to wait for an examination which will be to them easier than that for the Membership. Several instances are already within our knowledge in which men who would otherwise have presented themselves for the present examination have decided to wait a few years longer for the proposed one.

"Finally, we fail to discover any adequate ground for the proposed alteration. We cannot ascertain that there is any valid reason in the future for having a larger number of Fellows than the present examination supplies. Certainly, we can see no reason for increasing the number by such a sacrifice.

"But, even assuming the existence of strong reasons why the number of Fellows should be increased, we would suggest that this end might be accomplished by means less inconsistent with the efforts which have now been made for many years to improve the character of the examination."

THE WEEK.

TOPICS OF THE DAY.

The report of a departmental committee has recently been laid before Parliament, on the most desirable site for a College for Naval Cadets. The Committee advise the selection of Mount Boon, Dartmouth, of which they say that, except in the moisture of the climate, it is the finest site they have seen for the College, and that it may be considered perfectly healthy, though not so invigorating for young lads destined to a sea life as might be desired. The Committee further observe in their report, that if a site in important respects equally eligible with that of Dartmouth could be found on the banks of the Solent, it would be preferable to select the latter.

It is satisfactory to be able to record that the prosecutions

of illegal "medical practitioners" continue in various provincial towns. At Birmingham, last week, Jesse Key was summoned, under the fortieth section of the Medical Act, for falsely assuming the title of a legally qualified medical practitioner. The case was proved by a detective-sergeant; and the defendant was fined the full penalty of £20. At Hull, also, two herbalists, named Armstrong and Rayner, were prosecuted for a breach of the Medical Act by wilfully and falsely acting as medical men. The defendants denied any deception, and submitted that they were acting under Philadelphia diplomas. The defence was not accepted, and they were fined £20 each.

A paper which has caused some attention recently appeared in *Blackwood's Magazine*, imputing some want of energy to the British National Society for Aid to the Sick and Wounded in War. The Society, it appears, is possessed of the very handsome balance of £70,000; and it is argued that, in view of the possibility of war, its organisation should be fully completed for rendering aid to our own army, more especially if, as is more than hinted, our military medical arrangements are far behind the requirements of active service. It would certainly seem that the public who subscribed this large sum of money have a right to demand that the Society should not wait until war actually breaks out to organise its operations, but that it should rather possess a scheme, sanctioned by the War Office, to act upon any emergency. The author of the paper in question, who claims to have an intimate knowledge of the Society's operations, asserts that no such organisation exists; and should such really prove to be the case, we think he is deserving of much commendation for making public such a state of things. The question having now been ventilated, however, we may reasonably expect to hear what the Society has to say in reply.

One night last week a second torchlight demonstration of anti-vaccinators was held in one of our respectable country towns, in which several hundred persons took part, and the proceedings were terminated by burning the effigy of Dr. Jenner, which had been carried in the procession, in a field near the town. This occurrence is almost rivalled by the fact that at a recent meeting of the Sedgley School Board the school officer reported that a so-called phrenologist had been examining the children in the district, and advising the parents not to send them to school, as they would never learn. This information was believed, the phrenologist received his fees, and the children were strictly kept from attending the school.

A very bad case of spreading infection was heard at the Hammersmith Police-court last week. Lewis Samson, of Elgin-crescent, Notting-hill, was charged at the instance of the Kensington Vestry with exposing infectious clothing. In December and January last several persons had small-pox in the defendant's house, one case, that of a child, proving fatal. During that time the washing was regularly sent to the laundress; and to show the danger attending such a proceeding, it was proved that the disease was thereby spread to other persons. A soldier, who had been stopping at the house of the laundress, on furlough, left on January 15 for Birmingham, and died from small-pox on the 18th, three days afterwards. A woman who washed the clothes was also attacked with the disease. The Vestry did not press for a heavy penalty, but wished to show the public that it is impossible to stamp out an epidemic like small-pox if clothes are sent to be washed in such a reckless manner. The defendant, a foreigner, said at first he did not know the illness was small-pox; and both he and his wife deposed that chloride of lime had been used with the clothes before they were sent to the laundress. The magistrate observed that this was a most important case; it was the first which had been brought before that court, and as defendant was a foreigner he would mitigate the penalty, but in future he announced his intention of inflicting the full fine. On the 2nd inst., at the Manchester Assizes, a woman was charged with having caused the death of her son, aged eighteen, by neglecting to procure proper medical aid for him. The lad was suffering from small-pox, and his mother, fearing that he would be removed to the small-pox hospital if it were known that he was affected with the disease, kept the secret until the possibility of recovery was hopeless. She was sentenced to two months' imprisonment without hard labour.

An action was tried last week in the Chancery division of the High Court of Justice, in which the Corporation of Wisbeach was proceeded against in its capacity as a Local Board of Health. The action was rather an unusual one, the plaintiff complaining that, through the acts and neglect of the local authorities, a ditch which exists on his property had been fouled to such an extent as to be dangerous to health. It appeared from the evidence that the Corporation had laid down drain-pipes, with gully-holes opening into them from the road, to carry surface drainage into the ditch in question. The Corporation is now carrying out a scheme for sewering the town, under which the sewage is to be taken some six miles away; but the houses in a portion of the town have not yet had their drains connected with the new sewers, and consequently the inhabitants have no way of getting rid of their slops but by throwing them down the gully-holes which communicate with the ditch the state of which was complained of. The defence set up was, that the Corporation were not the doers of the mischief, which arose from the wrongful acts of certain persons over whom they had no control, and who could be as well prosecuted by the plaintiff as themselves. Vice-Chancellor Bacon said the defendants were actively guilty of occasioning the nuisance, for they afforded the inhabitants, who had no other means of getting rid of the filth, the means of discharging it into the ditch. He therefore granted an injunction, which, however, should not be put in force for two months—a period which the Corporation had themselves shown to be ample to enable them to properly drain the rest of the town.

The *Pall-mall Gazette* says the official statistics as to the number of killed and wounded in the German army during the last war with France have just been published at Berlin. The number of officers killed and wounded was 3919, and of soldiers 60,978. The numbers of officers and soldiers who were either killed or died of their wounds were 1374 and 16,877 respectively. The proportions of the killed to the wounded were 1 in 3·44 for the officers, and 1 in 5 for the men. As a matter of course, the great majority of the killed and wounded belonged to the infantry, which lost 37,943, as compared with 2236 in the cavalry, and 4266 in the artillery. Only 5034 were killed or wounded by artillery fire, as against 55,862 by musketry fire; and although artillery had never been so much employed as in the Franco-German war, 21 losses out of every 23 on the German side were due to infantry fire. These figures are interesting, for they seem to confirm the theory that the effect of artillery fire upon the battlefield is moral rather than material—that it frightens more soldiers than it kills. These returns do not give the losses from disease.

At the recent York Assizes, Dr. Titus Deville, late Medical Officer of Health for Harrogate, sued the Harrogate Improvement Commissioners for one quarter's salary—viz., £25. It will be remembered that Dr. Deville, in his capacity of Vice-President of the Yorkshire Association of Medical Officers of Health, read a paper at a meeting of the Association at Leeds in April last. There was nothing in this paper injurious to the town of Harrogate, but the Urban Sanitary Authority there were annoyed by the subject-matter of it, and called a meeting asking Dr. Deville to attend and explain his conduct. Dr. Deville did not attend the meeting, and the authorities accordingly gave him notice to terminate his connexion as

their medical officer. After hearing voluminous evidence, Mr. Justice Lopes said it was impossible then to decide the various points raised, which involved intricate questions of law; they could be argued before him in London. A nominal verdict was therefore entered for the plaintiff for the amount claimed, judgment being reserved, and the cause to be argued in a superior court.

The Medical Officer of Health for Chatham reports that the small-pox epidemic, which had subsided in the town, has broken out afresh, there having been several fresh cases and some deaths. He strongly urges upon the sanitary authorities the importance of providing a hospital for the isolation of the cases, as the only means of stamping out the epidemic.

The annual collections in aid of the medical charities of Birmingham, inaugurated by the working-classes, were made for the fifth time on Saturday last in the various workshops and factories. A slight change in the manner of collecting has been made this year. At some of the manufactories, instead of making the collection on Saturday, the men have for a time past been laying aside weekly instalments, and at others a certain amount of the "overtime" has been worked on behalf of the fund. The total amount received in the course of the day was about £2100, or about £800 less than on the corresponding day last year; but considerable additions are expected to be made to the amount when the returns from the outlying factories are received.

THE ARMY MEDICAL DEPARTMENT.

On Monday evening last the Secretary for War introduced the Army Estimates in the House of Commons, and in the course of his speech touched on the subject of the Army Medical Department; but his statement will certainly not appear encouraging, either to the army medical officers themselves, or to those who are alarmed at the present state of the Department. He said that the subject had proved very troublesome since he had been in office, and would, he feared, long continue to be so. "He found a great deal of discontent and dissatisfaction, and from the moment of his taking office he had received deputations, and had been bothered by memorialists in a way in which, no doubt, all his successors would be." He had done his best, he could assure all medical men, in the army and out of it, to arrive at a knowledge of their grievances, and if possible to meet them. But medical men themselves were divided in opinion as to the relative merits of the regimental system and the staff system; and, moreover, a mixed system existed, which was not at all satisfactory. He had made up his mind in favour of a unification of system; and he considered it only reasonable that his plan should have a fair trial, to see whether, under it, medical men will enter the service in sufficient numbers, whether it would work well in practice, and whether any such grievance exists as requires alteration. He spoke of the boons that have been granted—such as earlier promotion, the system of retirement, and so on; and he declared that the present system is answering well, and appears satisfactory to the heads of the department. Colonel Alexander, however, objected that one of the Service newspapers spoke of the Medical Department as being in a state of "suppressed revolt"; and Dr. Lush remarked on the "startling fact" that, while the number of recruits to the army had largely increased during the past year, the number of medical officers had diminished by twenty-five; and he observed that "the Royal College of Surgeons in Ireland had passed a resolution in open Council, advising their students not to enter into her Majesty's service, on the ground that the position of the medical officers in the army was such that they were practically outlawed." The expression is, perhaps, rather too strong; but it is difficult to understand the satisfaction of the Secretary for War, and of the heads of the Army Medical Department, in the face of the state of things shown by the last two "competitive" examinations for entrance into the Service, when only fifty-six candidates appeared to compete for 100 appointments, and when, on the last occasion, out of the twenty-three candidates for fifty vacancies, only seventeen could be accepted. We trust that Dr. Lush will keep his promise of showing on a future occasion that the medical officers have still real grievances to be redressed; and that he will try to impress on the Secretary for War that there is urgent need for change, when the Indian Medical Service, though it means exile in a tropical climate, can get many more candidates than they have vacancies, and candidates of a higher class than the comparatively few who apply for medical commissions in Her Majesty's Service; and even the Naval Medical Service seems not more unpopular than the latter, though it involves "imprisonment, with the addition of a chance of being drowned."

CULTIVATION OF THE ORGANISMS OF VACCINIA.

Mr. Rickman Godlee read a paper at the Pathological Society, on Tuesday, March 6, on the Cultivation of the Micro-Organism found in Vaccine-Lymph. He had been conducting a series of experiments for the past four years, trying different fluids, in order to find the most suitable soil in which to propagate the organisms which are found in small quantities in vaccine-lymph taken on the eighth day, and which are found in considerable quantities after the lymph has been kept for a few days in tubes. Mr. Godlee found that "in inoculating vaccine-lymph into either milk or turnip infusion, urine or hydrocele fluid, and keeping them at a temperature of 90° to 100°, an organism will generally be developed of perfectly characteristic appearance, and closely resembling that seen in the original stale lymph, and that it produces constant and characteristic changes in the fluids in which it grows." The amount and energy of growth depend on many circumstances, and vary with the soil in which they are being developed. The organisms seemed to grow most vigorously in turnip infusion. Next, with a view to discover whether this organism alone were capable of originating vaccinia, it was determined to vaccinate a child with a fluid in which it was undoubtedly actively growing; so hydrocele fluid was chosen, in which was a good supply of the organism, and three children were vaccinated with this fluid; but in no single case was there the slightest effect. "The punctures and scratches remained absolutely free from any appearance of inflammation." Mr. Godlee has arrived at the following conclusions:—1. That the granules constantly observed in active lymph are really organisms. 2. That they are capable of growth in fluids of very various characters. 3. That they probably require a heat nearly approaching that of the human body for their active development. 4. That they produce upon the fluids in which they grow very characteristic changes. 5. That as they have been at present grown, they are by themselves incapable of originating vaccinia. In spite, however, of this last conclusion, it must not be argued that the organisms are not the specific organisms of vaccinia, because it is well known that the direct descendants of an individual animal or plant may manifest qualities quite different from those of their parents. Thus, artificial species of plants, while they retain their specific characters when propagated by cuttings, revert to an original type when propagated as seedlings. Again, it is well known that if the lymph of small-pox be inoculated upon a cow, the symptoms of cow-pox are produced; and if the human subject be vaccinated from the pustules so produced, he will become the subject of vaccinia, and not variola: the poison has, in fact, acquired different qualities from having passed through the cow. Hence the inference that the organisms produced artificially may also have undergone changes which render them unable to reproduce their like. The subject is

one of great importance, and the profession will look forward with interest to the results of some further experiments which Mr. Godlee has promised shortly to communicate.

THE ARCTIC COMMITTEE.

It appears that the First Lord of the Admiralty has received the preliminary report of the Arctic Committee. The conclusions arrived at are:—That the outbreak of scurvy in the recent Arctic Expedition was due to the omission of lime-juice from the rations of the sledge-parties. That the ships were amply provided with suitable provisions of good quality; and that Sir George Nares had not sufficient reason for departing from the instructions contained in the memorandum of the Director-General of the Medical Department of the Navy (Sir Alexander Armstrong), for supplying the sledge-parties with lime-juice. We understand that this memorandum insists in the strongest terms on the importance of the uninterrupted use of a daily ration of an ounce of lime-juice, and expressly directs that this ration should be continued during the sledging expeditions; and that the entire responsibility of discontinuing it is shown to rest with, and is accepted by, Sir George Nares. All the other suggested causes of the outbreak—viz., damp, long-continued darkness, cold, etc.—are entirely rejected, we believe, by all the scientific witnesses; and it appears that Sir George Nares and Captain Stephenson say that in any future sledging expeditions they would certainly act on the lesson so terribly taught, and would so modify the arrangements as to admit of a proper supply of lime-juice; while Captain Markham still says that he does not believe in lime-juice as a preventive of scurvy. We are glad to learn that the inquiry has resulted in a full confirmation of the general belief in the paramount value of lime-juice; but we shall return to the subject when we have received copies of the report of all the evidence taken.

THE ENGLISH CONJOINT BOARD SCHEME.

The Conference of Representatives of the medical authorities concerned in the formation of a Conjoint Examining Board for England met again on Monday last at the Royal College of Surgeons, but we believe they again separated without having been able to come to any definite agreement on the points still in dispute. We understand that the chief alteration in the Scheme insisted on by the University of Cambridge has been somewhat modified. That body still demands, it is said, that the Scheme shall be in force for a fixed term of years only, at the expiration of which it shall cease to exist; but this term of life, or first term of natural life—for the authorities may immediately renew the Scheme—is now to last ten years instead of only five, and any one of the bodies may retire from the Scheme, after the first four years, on giving one year's notice. It does not appear to us that these modifications of the Cambridge amendment at all remove the grave objections to it. If it is accepted the Scheme will still be tainted with a character of uncertainty and non-viability; and assuredly all prospect of converting the Scottish and Irish bodies to the Conjoint Scheme creed by the grand example set by England, of which so much has been made, will disappear. Those bodies would infallibly, and very plausibly, say, "We will wait till the ten-years experiment in England has been tried." There are also, we believe, some minor points of detail still unsettled, but the Cambridge difficulty is the real obstacle at present to the general acceptance of the altered-amended-Scheme.

CORONERS' MEDICAL WITNESSES.

On Tuesday, the 6th inst., before Mr. George R. Finlay, Auditor of the Local Government Board for Ireland, Mr. Clifford Lloyd, solicitor, of the Irish Medical Association, appeared on behalf of Dr. Archibald H. Jacob, as Chairman of Council of the Association, and asked the Auditor to disallow and surcharge a sum of £150 paid to Dr. Richard W. Egan, as Coroner's Medical Witness during the year under audit. The 9th and 10th Vict., cap. 37, empowered coroners to summon as medical witness, in any particular case, a duly qualified practitioner in actual practice "at or near the place of death," the circumstances of which were being investigated; and the 28th section referred to a schedule of fees appended to the Act, that authorised coroners to pay "any sum or sums of money not exceeding" the amount therein mentioned. The Medical Association felt that the present arrangement of substituting a salary in lieu of fees was not only illegal, but in direct opposition to the public weal. After considerable discussion, the Auditor said no doubt the existing arrangement might be considered injurious to the medical profession, but he did not sit there as guardian of the interests of that or of any other profession, but as the guardian of the interests of the ratepayers; and in that capacity he must hold that the Corporation, having authority to pay the larger fee of £1 1s. for each inquest, had equal authority to pay the lesser sum of £150 per annum. He suggested also that the question would be better raised when the annual presentments were being fiated. Mr. Lloyd said the presentments were in advance, and Mr. Purcell, Q.C., had advised in favour of an appeal to the Court of Queen's Bench. The Auditor then formally ruled against the objection, and received notice of appeal.

BROMIDE OF CAMPHOR.

This drug, which is camphor in which one atom of hydrogen is replaced by one atom of bromine ($C_{10}H_{15}BrO$), and which has of late been largely used in the Paris hospitals by Charcot, Vulpian, Bourneville, and others in the treatment of nervous diseases, with seemingly good results, has also been investigated by Dr. O. Berger, of Breslau, in a considerable number of cases (*Berl. Klin. Wochenschrift*, No. 4, 1877), but his results are scarcely so satisfactory as those which have been reported in France. Briefly stated, he found that, even in doses of one to one and a half gramme, bromide of camphor has scarcely any hypnotic action. In twelve cases of neuralgia its use produced very little improvement. In six cases of delirium tremens the patients were not quieted by doses gradually increased up to from one-half to one gramme every hour, whereas the use of chloral hydrate produced rapid improvement. A short experience of its use in epilepsy, in doses of from one-tenth to three-fifths of a gramme three or four times a day, was unfavourable to it, though Bourneville has reported good results in epileptic vertigo. Dr. Berger found bromide of camphor most efficacious in the purely nervous form of palpitation of the heart, and in irritation of the urinary and generative organs. In its administration in large doses, he recommends that the patient's temperature should be frequently taken, and that the drug should be at once omitted if the thermometer indicates a fall below the normal height. This advice is founded on the experiments of Bourneville, Pathault, and especially of Lawson, all of whom agree that bromide of camphor reduces the temperature of the body; while the latter has shown that in the case of poisonous doses this reduction is very considerable.

EXERCISE IN DIABETES.

Dr. Külz, of Marburg, has observed eight cases of diabetes mellitus in which active exercise was of decided value: but such exercise must consist in vigorous movement in the open air; simple indoor gymnastics are scarcely of the slightest use. In his experience, the best results are obtained by mountain climbing, and, provided the patients are fond of such exercise, and can support the necessary exertion, he strongly recommends this treatment in lieu of drugs, provided that careful preliminary experiments have shown that exercise diminishes the excretion of sugar in the particular cases.

MEDICAL SOCIETY OF LONDON.

THE following gentlemen were elected to their several offices at the general meeting of this Society, held on Monday last, viz.:—*President:* George Buchanan, M.D., F.R.C.P. *Vice-Presidents:* J. C. Thorowgood, M.D., F.R.C.P.; F. W. Braine, F.R.C.S.; Leonard Sedgwick, M.D.; Richard Davy, F.R.C.S. *Treasurer:* Thomas Harvey Hill, Esq. *Librarian:* C. Theodore Williams, M.D., F.R.C.P. *Secretaries in Ordinary:* Clement Godson, M.D.; J. Astley Bloxam, F.R.C.S. *Secretary for Foreign Correspondence:* T. S. Dowse, M.D. *Council:* William Adams, F.R.C.S.; W. Allingham, F.R.C.S.; H. Royes Bell, F.R.C.S.; Thomas Bond, F.R.C.S.; John Brunton, M.D.; T. Lauder Brunton, M.D.; W. B. Dalby, F.R.C.S.; R. Farquharson, M.D.; Sir Joseph Fayrer, K.C.S.I., M.D.; J. Milner Fothergill, M.D.; John Gay, F.R.C.S.; J. D. Heaton, F.R.C.P. (Leeds); Constantine Holman, M.D.; H. Lawson, M.D.; C. F. Maunder, F.R.C.S.; W. D. Napier, Esq.; Robert Semple, M.D.; Erasmus Wilson, F.R.S.; Alfred Wiltshire, M.D.; J. C. Wordsworth, F.R.C.S.

ALTERATIONS IN THE MARROW OF THE BONES IN PERNICIOUS ANÆMIA.

COHNHEIM has lately described a case of pernicious anæmia, observed in the hospital at Breslau (*Archiv für Path. Anatomie*, Bd. lxviii., Heft 2), in which, in addition to the characteristic alterations in other organs, the marrow of all the bones exhibited peculiar changes, visible even with the naked eye. The marrow was of an intensely red colour, and it was found, when examined with the microscope, that it contained scarcely any fat cells, but instead (1) large numbers of colourless corpuscles, of which many resembled lymph corpuscles, and many others had an epithelial aspect, and contained one or more large nuclei; (2) a large number of coloured corpusles, the most remarkable of which were those which contained nuclei, which, like the cells, were coloured red. Nucleated red blood-corpuscles were also detected post-mortem in blood taken from other parts of the body, though none had been discovered in it during the last week of life.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ON Wednesday, February 28, the question of the expediency of rendering the offices of President and Vice-President of the College tenable for a second year, or for a longer period than one year, was brought under consideration at a numerously attended meeting of the Fellows. In the discussion which took place, it was stated that there was at present nothing in the charter or by-laws of the College to prevent the re-election of the President or Vice-President for the time being at the end of their year of office. Under these circumstances, a resolution which had been proposed and an amendment on it were withdrawn, and no further action was taken in the matter. It is believed that there will be a contest for the Vice-Presidency of the College in June, on the first Monday in which month the election of College officers takes place.

INHERITED PHTHISIS.

PROFESSOR QUINCKE, of Berne (*Deutsches Archiv für Klin. Med.*, Band 18, Heft 4, and *Berl. Klin. Wochenschrift*, January 8, s. 23), gives the following statistics with regard to the hereditary transmission of phthisis, as the result of his examination of 988 cases which came under his care when physician at the baths of Weissenburg, in Switzerland:—In 21 per cent. of the cases, one or other of the parents was phthisical, and if cases of phthisis occurring in the grandparents and in the brothers and the sisters of the patients' parents were also taken into account, the number of hereditary cases reached 28·6 per cent. Other observers have previously calculated that the percentage of hereditary cases ranges from 10 to 83, the mean of their observations being 36. The influence of heredity seems to express itself more strongly in the female than in the male sex. Four times as many cases in which several members of one family suffered from phthisis occurred among the hereditary as among the non-hereditary cases. The hereditary cases did not run a more malignant course than the idiopathic cases; nor did there appear to be any difference between the extent of the transmission to the offspring when the father was phthisical, and when the mother was phthisical. It was not found either that the father's phthisis was most transmitted to the sons, or the mother's to the daughters, or *vice versâ*. Taking an equal number of phthisical patients from town and country, heredity could be detected in 19 per cent. of the former, and 35 per cent. of the latter. The calculations of Professor Quincke, founded on statistics supplied by the Swiss Society for Scientific Investigation, assign 21·5 per cent. of all cases of phthisis to the industrial population of towns, and 26·7 per cent. to the country population engaged in outdoor occupations.

THE "PARKES" MUSEUM OF HYGIENE.

THE establishment of this Museum at University College may be looked upon as in a fair way towards completion. The Council have granted the necessary space, and the Executive Committee will at once proceed to fit it for the purposes of a museum. The secretaries of the Parkes Memorial Fund will be glad to receive offers of the gift or loan of objects of hygienic interest; or subscriptions in aid of the permanent endowment of the Museum.

MEDICAL PARLIAMENTARY AFFAIRS.

War Office.—In the House of Commons, on Friday, March 2, Mr. Gerard Noel said that plans and estimates were being prepared with a view to carrying out the recommendation of the Committee of Inquiry into the sanitary condition of the War Office. When the Treasury had sanctioned the expenditure, efforts would be made by the Board of Works to give effect to the recommendation. With regard to the promotion of three medical officers of the Arctic Expedition, Mr. Hunt declined to give reasons for the promotion, as also for the non-promotion of Staff-Surgeon Colam, but remarked that it was impossible to give promotion to officers before a vacancy occurred.

Army Estimates.—Monday afternoon was principally occupied by a debate upon the Army Estimates. Dr. Lush regretted that he could not join in the chorus of approval which had greeted the statements of the Secretary of State. He had hoped that some attempts would have been made to redeem the grievances of the medical officers of the army. He promised that if Mr. Hardy would only take example from the Admiralty in redressing admitted grievances, his office would be a bed of roses, as far as the medical officers were cerned. During the past year, though the number of recruits had largely increased, the number of medical officers had diminished by twenty-five. If such unwillingness to enter the Army continues, it will be impossible to keep the Army in an efficient condition. Colonel Alexander, quoting from the *Army and Navy Gazette*, stated that "no army can be relied on with confidence while the Commissariat, the Transport, and the Medical Department are in a state of suppressed revolt." Mr. Hardy defended the staff system, as distinguished from the regimental system, for medical officers. After careful consideration he had arrived at the conclusion that the regulations in time of war should also be carried out in time of peace. The best medical men are in the hospitals, and there is a training-school showing how the hospitals must be managed in time of war. Other medical men are required with the regiments. This Mr. Hardy called the principle of unification, and he thought that six months' trial of this system was not sufficient to arrive at any definite conclusions as to its merits or demerits. He considered that great boons had been conferred on medical men. They were promoted three years earlier than they asked for—viz., in twelve instead of fifteen years, because they were put upon the same footing as medical men in the Indian Service. A system of retirement was necessary in the interests of the younger men, and to secure a proper scale of promotion. Civil practitioners are sometimes employed, because it would be, Mr. Hardy considered, absurd

to place a military medical man at stations where there is only a very small detachment.

Cattle Plague.—Further inquiries were made respecting the prevalence of cattle plague in Yorkshire, with a view of checking its spread to the West Riding. Lord Sandon said that by an Order in Council of February 13, a local authority may make regulations prohibiting the holding of fairs and markets, and to regulate the movements of cattle. The West Riding authorities have prohibited the movement of animals, but they do not appear to consider it necessary to prohibit fairs and markets. Hull is the only place where cattle plague is known to have existed, so that the Privy Council have not thought it necessary to interfere with the West Riding authorities. No fresh cases have been reported since February 27.

The Convict Treadaway.—Mr. Cross declined to make public the reports of the medical officers upon the mental condition of the convict Treadaway. He advised the commutation of the sentence on the ground of epilepsy, which deprived him of the capacity he would otherwise have had of resisting the criminal impulse; and this upon the recommendation of a very experienced judge.

THE DENTAL DIPLOMA.

(*From a Correspondent.*)

The present seems to be an important epoch in the history of the dental profession, and all branches of it seem to be striving, though by different roads, to obtain a more satisfactory condition of affairs than exists at present.

There are, according to the *Monthly Review of Dental Surgery*, three distinct factions—one aiming to make every dentist practise his speciality only as a branch of surgery, like ophthalmology, etc.; a second party aim at making one qualification—*i.e.*, the licence of the College of Surgeons—essential, as well as the registration of every practitioner, and the inhibition of unqualified men; the Odontological Society forms a common ground for part of both the foregoing divisions, but unfortunately agrees with neither in a united manner.

The object of the present writer is to show clearly to the medical profession and to dentists themselves the value of the dental diploma; how much study is requisite to obtain it, and its relation to the membership of the College of Surgeons; and it will then be seen how well worthy it is of respect, and how well qualified in all necessary parts of his profession would be the man who carries out *conscientiously* the curriculum required.

The various courses of study are here placed side by side, and show at a glance how nearly they are allied, special training in the speciality being put against various branches of surgical and medical knowledge:—

Curriculum for the M.R.C.S.	*Curriculum for the L.D.S.R.C.S.*
1. An Examination in Arts.	1. Same, after Oct. 1, 1877.
2. Being 21 years of age.	2. Same.
3. Being engaged in acquiring professional knowledge during four years.	3. Same.
4. Anatomy Lectures: 2 winter sessions.	4. 1 winter session.
5. Dissections: 2 winter sessions.	5. 1 winter session and 1 summer (9 months).
6. Physiology: 1 winter session.	6. Same.
7. Practical Physiology.	7. (Say) Metallurgy.
8. Surgery Lectures: 1 session.	8. Same.
9. Practical Surgery: 6 mths.	9.
10. 1 course of Chemistry (optional).	10. Same (imperative).
11. 1 course of Materia Medica	11. Same.
12. 1 course of Medicine.	12. Same.
13. 1 course of Forensic Medicine.	13. 2 courses Dental Anatomy and Physiology.
14. 1 course of Midwifery.	14.
15. 1 course of Pathology.	15. 2 courses Dental Surgery and Pathology.
16. Practical Pharmacy and Vaccination: 6 cases.	16.
17. Practical Chemistry.	17. Same.
18. Practice of Surgery: 3 winters and 2 summers.	18. 2 winters and 2 years (at a dental hospital).
19. Examination of patients.	19. (At a dental hospital).
20. Clinical Surgery.	20. 2 winters.
21. Dressership: 6 months.	21.
22. Post-mortem Demonstrations.	22. 2 courses Dental Mechanics.
23. Practice of Medicine: 1 winter, 1 summer. Clinical Medicine.	23. 3 years' Practical Mechanical Dentistry.

Note.—The Dental Hospital Practice may be in the dental department of a general hospital.

It is obvious how easy it is for a man to take both diplomas, if he has energy and fair ability, and it is to his interest to do so; but it is still more obvious that the L.D.S. is the only qualification which shows *special knowledge* in its holder: and such a training strictly carried out, with a searching examination at the end, ought to give the qualified man the status of a member of a learned and scientific profession.

It was very sad to hear, amidst the flourish of trumpets heralding "The Association of Surgeons Practising Dental Surgery," that these gentlemen considered the dental diploma an "inferior one,"—a conclusion in their case not to be wondered at, when all but one or two of their members got that diploma with a nominal examination only. But let them read the foregoing tabulated statement, and they will then understand—what is most probably new to them—how efficient the curriculum really is, if properly carried out!

Another great point, justly urged by the Association, is to induce editors of all respectable newspapers and periodicals to refuse all puffing advertisements, for two simple and grand reasons—first, to protect the public against deleterious shams and charlatanism; and, secondly, to encourage and protect those earnest young men who, at a great sacrifice of time and money, qualify themselves by a stern curriculum for the legitimate practice of an honourable calling.

In conclusion, it cannot be too strongly urged on all students the vast importance of being qualified as surgeons as well as dentists.

FROM ABROAD.

Paris Statistics of Therapeutic Agents.

In the *Archives Générales* for February, Profs. Lasègue and Regnauld continue the interesting account of the consumption of the various articles of the materia medica in the Paris hospitals, the first part of which we analysed in our number for February 3. Commencing with the subject of *purgatives*, they observe that just as in a former period blood-letting preceded or accompanied all other important means of treatment, this position has been assigned more or less completely in more recent times to purgatives. In the hospitals, artificial compounds of soda, potass, or magnesia replace the natural purgative waters, the use of which is so much on the increase in private life. This is to be regretted, as it leads to the presenting the solutions of these salts in much too concentrated doses at intervals, while in smaller quantities they might be advantageously given more continuously. Of these *saline* purgatives, carbonate of magnesia and the sulphates of magnesia and soda have held the first places since 1855, a mean annual quantity of 3500 kilos. being consumed. The mild *vegetable* purgatives, with the exception of castor oil and senna in the children's hospitals, are not consumed in any important quantities. In fact, vegetable medicinal substances are fast losing their credit in France, and the tisanes, once thought of such importance, are left to the fancies of the patients themselves. Castor oil is, however, continually increasing in consumption. In 1875 the quantity used (3389 kilos.) nearly equalled the entire quantity (3675 kilos.) of all the saline purgatives put together. Taking the doses of both these classes at a mean of twenty grammes, there were administered during 1875 as many as 400,000 purgatives in the different hospital establishments, without counting other laxatives of lesser power. *Drastic purgatives* exhibit differences in the amounts consumed which are not easily accounted for. Aloes, however, has constantly increased in favour, rising from 10 kilos. in 1855 to

23 kilos. in 1875. Croton oil and gamboge have also quadrupled in quantity during the same period; while colocynth, never having attained more than 1 kilo. per annum, retired altogether in 1875. Jalap, from 30½ kilos. in 1860, fell to 7 kilos. in 1875; and scammony, from 6½ kilos. in 1855, rose to 11½ kilos. in 1870, to fall to 8¾ kilos. in 1875.

Iodine.—As a cutaneous derivative, this is tending to replace all other revulsives, issues and permanent blisters being now well-nigh abandoned in its favour. The great abuse of the employment of issues has, however, led to a too favourable appreciation of iodine as an external application in phthisis and in affections of the joints. The tincture of iodine has increased during the twenty years from 48 kilos. to 150 kilos. The iodide of potassium, from 248 kilos. in 1855, has mounted up to 558 kilos. in 1875; but as the doses have been largely increased within the last ten years, the increase of a medicine of such approved value has not been so great as might have been expected.

Mercury.—The annual mean of this has varied from 200 kilos. to 250 kilos., a maximum of 331 kilos. having been attained in 1870, and a minimum of 178 kilos. in 1874. The quantity of mercurial ointments applied is slowly decreasing, while that of corrosive sublimate has enormously augmented of late, chiefly owing to its greatly increased employment in baths. From 1855 to 1871 the quantity varied from 30 kilos. to 60 kilos., but in 1872 suddenly rose to 106½ kilos., and amounted to 135½ kilos. in 1873, 141½ kilos. in 1874, and 102½ kilos. in 1875. The consumption of calomel has varied but little, having been from 40 to 50 kilos. per annum. The iodides have been nearly stationary.

Chlorate of Potash.—This salt, long neglected, was first used as a remedy in mercurial stomatitis. Its sphere since then has been continually augmented, until (by an exaggeration that is to be regretted) it has been placed at the head of the means of combating stomatites and anginas of every description. From 39 kilos. in 1855, it rose in quantity to 419 kilos., and in 1876 even attained a maximum of 502 kilos. *Cod-liver oil* is another remedy that has increased uninterruptedly from the important amount of 9576 kilos. in 1855, to 18,571 kilos. in 1875. The *phosphate of lime*, which is used for analogous purposes, has oscillated between 100 and 300 kilos.

Iron.—Of the preparations of this metal used in the Paris hospitals, reduced iron and the subcarbonate, while standing at the same figure (76 kilos.) during 1870-75, have reached it by inverse ratios, the former increasing from 54 kilos. in 1855-60, and the latter decreasing from 108 kilos. The carbonate has risen from 15 to 30 kilos., and the lactate has descended from 3 kilos. to 1 kilo. The proto-iodide is the only preparation that has made a marked increase (from 22 to 93 kilos.), and that is rather due to the iodine than the iron which it contains. In old pharmacopœias the perchloride of iron holds an important place; but it gradually lost its reputation as a tonic. But its styptic and coagulating power has conferred upon it in recent times an importance which is on the increase. The amount used increased from 62½ grammes in 1855-60, to 155 grammes in 1865-70, and to 129 grammes in 1870-75.

Arsenic.—The quantity of this used in Fowler's solution has progressively increased from 1 kilo. in 1855 to 13 kilos. in 1875; while that of granules of arsenious acid has increased from ½ kilo. in 1867 (when it first appeared), to 10½ kilos. in 1875. Arseniate of soda has been little employed, except in the form of baths. *Alkaline* remedies have continued well-nigh stationary during the last twenty years. The confidence in the efficacy of *vegetable bitters* during this period has continued to increase. They were held in high esteem by physicians at the end of the eighteenth century, and, although their employment declined during the prevalence of Broussaism, it never ceased, and has naturally increased since tonic and corroborant medicines have again come to the foreground, and have attained the somewhat exaggerated proportions of a victorious reaction. Between 1855 and 1875 the quantity of hops has risen from 1290 to 3794 kilos., that of gentian from 524 to 1518 kilos., of quassia from 31 to 271 kilos., and of calumba from 12 to 44 kilos. The mean annual consumption of chicory has been 500 kilos., of camomile 200 kilos., and of absinthium 400 kilos. The progress of *pepsine* has been remarkable. First introduced into the hospitals in 1860, when ½ kilo. was consumed, it has oscillated during the years 1873-75 between 28 and 44 kilos. The quantity used has, in fact, decupled in ten years.

"Have we then found that *rara avis*, a remedy introduced into therapeutics without empiricism, taking its place by virtue of rational principles, and passing without transition from the laboratory of the physiologist to the bedside of the patient, there to gain its domicile? For our part, our personal trials of it, and the almost insurmountable difficulties of clinical observation, leave in our mind so much indecision that we cannot help regarding pepsine as a matter still in process of experiment, the harmlessness of which is not its least merit. Perhaps it is only in a whole crowd of dyspepsias one of those scientific forms under which lies concealed a prudent expectation. At all events it seems to us prudent to remit to our successors in statistical inquiries some twenty years hence the pronouncing of a definitive and justified sentence."

The *vegetable astringents* present great stability, 40 kilos. of tannin per annum being almost regularly consumed, as also 88 kilos. of oak bark, 300 kilos. of rhatany, and 20 kilos. of catechu. Of bismuth, which may be associated with these, the annual mean has been 350 kilos., the minimum not sinking below 250 kilos., and the maximum not rising above 450 kilos., even during epidemics of cholera, when it is resorted to even for slight diarrhœa. The years of the siege of Paris, 1870 and 1871, however, present a curious anomaly, the consumption of bismuth amounting to 520 kilos. during the first of these, and to 660 kilos. during the second. Of the *sulphurets*, the use of the monosulphuret of sodium, principally employed as a substitute for sulphurctted mineral waters, has increased from 1300 grammes in 1855, to 4800 grammes in 1875; and that of the polysulphuret, used for sulphur baths, has increased from an annual mean of 9352 kilos. to 19,300 kilos. Sublimated sulphur, chiefly used for the itch, has not varied in quantity during twenty years, the consumption being 1000 kilos. per annum. Glancing cursorily at other articles of the materia medica, it is found that the quantity of *glycerine* employed increased from 200 kilos. in 1855, to 6000 kilos. in 1875; and the progress of *collodion* has been still more rapid—viz., from 13 kilos. in 1855, to 150 kilos. in 1875. *Silicate of potash*, which first appears in 1865 as 10 kilos., reached in 1875 nearly 3000 kilos. *Carbolic acid* rose from 162 grammes in 1862, to 306 kilos. in 1873, 278½ kilos. in 1874, and 221 kilos. in 1875. The great increase of *tæniafuges* corroborates the fact clinically observed for some time past, that the prevalence of tænia has greatly increased in Paris. Comparing the five years which preceded and the five years which followed 1870, the consumption of *kousso* increased from 4 to 5 kilos.; of *pumpkin seeds* from 3 to 5½ kilos.; of *pomegranate bark* from 13 to 14 kilos.; and of *male fern* from 5 to 12 kilos. From the doses having continued much the same, it may be concluded that the number of patients treated for tænia in the Paris hospitals has doubled within the last five or six years. Other anthelmintics employed for the treatment of ascarides, lumbrici, etc., have continued stationary in the amounts consumed.

In conclusion, after adverting to the difficulties which attend inquiries having medical statistics as their basis, the authors observe:—

"It is in presence of this penury, inevitable because it is even in the nature of things, that it has appeared to us that any information, imperfect though it be, may possess some utility. It would, indeed, be better to know the modes of administration, and the supposed indications, of the remedies than the names of the medicinal substances; but such a statement implies numberless details, would be without limited boundaries, and would not lend itself to a synoptical view. It is not the prescribing physician, obeying his own personal views, and yielding even to an unconscious bias of his disposition, who can furnish the measure of credit which should be accorded to a remedy. Side by side with him may be a colleague who conforms to different rules, not less justified in his eyes. It is from the sum of the prescriptions at the bedside of the patient that are derived the gross truths, the sole to which we can pretend. The mean, or rather the result, of individual efforts is represented by the increasing or decreasing quantities of the remedies employed. The document, reduced thus to its humble significance, is only of value in the absence of better. But is that not something? . . . . . We may be permitted at present to draw from our investigation (which is only an earnest of something better) a few conclusions:—1. If Medicine has her therapeutical predilections, she does not readily abandon her old remedies, guaranteed by tradition, to take up with adventurous novelties. 2. New medicinal substances remain subjected during ten years to a period of probation; but when they have undergone this long

trial with success, they assume their true rank, and generally continue to be employed in practice. 3. Pathological discoveries exert only a doubtful influence on the progress of therapeutics. It is from general theories, comprehensive doctrines, and the current of opinion, which is but generalisation pushed to the extreme, that inspirations are derived. 4. Once engaged in a certain direction, therapeutics only quits this gradually, and, as it were, with regret; and years upon years are required before a new equilibrium is discovered."

THE FOREIGN DOCTOR QUESTION IN FRANCE.

Dr. Francis contributes to the *Lyon Médical* of March 4 an article upon this subject, characterised by great lucidity and fairness. That a great abuse has to be remedied, he says, no one can doubt who has perused the list of persons authorised by ministerial authority, without responsibility and without competence, for judging of the propriety of the claims made upon it. But he is no advocate for compelling all foreign practitioners who wish to reside in France to undergo the annoyance and humiliation of submitting to an examination. He maintains that quacks of all descriptions, whether native or foreign, whether with bogus-diplomas or without them, and Frenchmen providing themselves with foreign diplomas in order to override the laws of their own country, should be rigidly prohibited from practising; and he points out how unjust it would be to allow the holders of diplomas which do not confer the right to practise, even in the countries (as in Germany and Switzerland) that have conferred them, to claim that such a privilege should be allowed to them in France. But he admits that the possessors of diplomas giving the right to practise, conferred by authorised bodies, should be placed on a very different footing, being allowed, in fact, after proper verification, to pursue their profession in France. The question would then resolve itself into the creation of a competent board or committee, into whose hands would be committed the duty of scheduling the various foreign medical institutions whose diplomas would be acknowledged as conferring this privilege. The Committee to which the Bill of M. Roger-Marvaise is referred has chosen Dr. Laussédat as its president, and as he spent many years in exile, practising as a foreign physician, Dr. Francis feels sure that justice will be done to persons who may be in a similar position. The article explains also what is usually misunderstood in France—the present position of foreign practitioners in England. They are not prohibited practising medicine in England, and require no authorisation for doing so; and that many avail themselves of the tacit permission everyone knows. They are, however, excluded from the official registrar unless also possessed of an English qualification. The chief practical inconvenience attendant upon such exclusion is that they are unable to sue for payment; and this we suppose is to them a matter of no moment. Even this exclusion from the register is likely to be eventually withdrawn in favour of those possessing legitimate diplomas; and no doubt the satisfactory settlement of the question now before the French Legislature would much expedite its being so.

COLLEGIATE ELECTIONS.—The annual election of Fellows into the Council of the Royal College of Surgeons will take place early in July, when there will be three vacancies—one caused by the death of Sir William Fergusson, and two by the retirement in the prescribed order of Messrs. John Gay and J. E. Erichsen, who, it is stated, will offer themselves for re-election. Mr. E. Law Hussey, of Oxford, will be the chairman at the festival of the Fellows held the same day.

MIDDLESEX HOSPITAL.—The report presented last week to the Quarterly Court of the Middlesex Hospital showed that a slight increase in the amount of the annual subscriptions had taken place. The amount received was £2430, as compared with £2341 in the previous year—an amount still seriously below what is required. The in-patients were less by 311 than in the previous year—2368 as compared with 2681,—but the great severity of the cases, and consequent longer sojourn of the patients in the wards, made the nightly average of beds occupied during the year 239·3. The number of out-patients was 24,467, against 24,368 in the previous year. The expenditure had been £20,888 13s. 10d.—an increase of nearly £1600, incurred for several improvements which had been effected. The income, including special donations, had been £15,667 2s. 8d., against £13,553 6s. 4d. in 1875; the deficiency to be written off capital was therefore £5211 11s. 2d.

REVIEWS.

Surgical Observations on Gunshot Wounds of the Hip-Joint. By B. VON LANGENBECK. Translated by JAS. WEST, F.R.C.S. Birmingham: White and Pike. Pp. 63.

THOSE who have been unable to read Baron Langenbeck's "Surgical Observations on Gunshot Wounds" in German, will hail Mr. West's translation with pleasure. There is no higher authority in this or any country on this subject. Langenbeck has taken an active and prominent part in at least four campaigns, and has concentrated the results of this immense experience in his "Surgical Observations." The part before us is only a first instalment; a second, and even more important one, is promised by the translator. It has been published in German some time, forming, in fact, part of the sixteenth volume of "Langenbeck's Archives." This part treats of gunshot wounds of the hip-joint. In it are considered—first, the literature and the statistics of the subject the relative value of different methods of treatment, difficulties of diagnosis, and the value of diagnosis early on in the case. The symptoms are carefully gone into, and some illustrative cases are appended of great interest; the various complications are considered, and finally the different results obtained. This is of course the point of greatest interest, and it may surprise not a few to learn that, during the Franco-German war, of eighty-eight cases of injury to the hip-joint treated conservatively, not fewer than twenty-five were cured. Of those cases which required resection, however, only four out of thirty-one recovered. Even this is a great improvement on previous wars. Then the Professor goes on to consider the indications for conservative and radical treatment respectively, pointing out the appropriate measures in either case. We cannot do justice to this book in the small space at our disposal. The book ought to be in the hands of every surgeon who is much occupied with injuries, and certainly no army surgeon ought to be without it. The translation, though free, is very good and very interesting.

Torquay, Past and Present. By SPENCER THOMPSON, M.D. London: J. and A. Churchill. 1877. Pp. 48.

THIS "Sketch of Torquay" very fully answers the purpose which was intended by its author, to "give the stranger at a distance, or the newly arrived visitor, some idea of the place, and of its topographical and hygienic characteristics." Torquay is a well-known winter health-resort, and no meed of praise is needed at our hands to enhance its natural attractions. The position shelters it in the winter, no less than it protects it from the scorching summer sun. The little book is pleasantly written, and contains information which will be found of great value to those who may wish to know more about the place than can be gained by mere hearsay.

The Disposal of the Slop-Water of Villages. By Dr. CORNELIUS FOX. Second Edition. London: J. and A. Churchill. 1877. Pp. 43.

THIS little work now appears in its second edition. This testifies to its utility more than anything else we can say in its favour. The sewage question is, no doubt, one of the great unsolved problems of the day; and any work which helps, even in a small degree, to solve this question deserves our attention and thanks.

Questions and Answers. By W. DOUGLAS HEMMING, M.R.C.S., etc. Reprinted from the *Students' Journal.* London: Baillière, Tindall, and Cox, King William-street, Strand. 1877. Pp. 64.

AS aids to students who are preparing for medical examinations, more than one author has published examples of questions given by the various licensing bodies; but Mr. Hemming has gone a step further, and not only given examples of examination-questions, but has furnished answers to the same. We have no fault to find with the answers—indeed, they are models of succinctness and accuracy; but we have our doubts as to the advisability of putting cut-and-dried answers to examination-questions into the hands of a student. Students should practise writing their own answers to questions; and in doing so they might profitably follow the examples given by Mr. Hemming. But we hope that no student will think of

learning the answers by heart, under the impression that they will be of any service to him in the examination-room. To do this would be a waste of time, and would assuredly end in confusion and disappointment. We feel sure, however, that the author does not intend the work to be used in this manner.

Aids to Botany. By C. E. Armand Semple, B.A., M.B. Cantab., M.R.C.P. Lond., etc. London: Baillière, Tindall, and Cox, King William-street, Strand. 1877. Pp. 56.

In his preface the author expresses the hope that this little work will be of some real service to the student before embarking upon works of greater magnitude; but in our opinion it is anything but the kind of book we should put into the hands of one about to begin the study of botany. The entire absence of plates and drawings, and the extreme brevity of the definitions, render the work almost useless to one beginning to learn the science. There is, however, a class of students to whom, we should imagine, the work will be very acceptable,—and that is to those who, having already learnt the rudiments of botany, are preparing for a medical examination, such as that of the Apothecaries' Hall, where a slight knowledge of this science is necessary. That the author must have had the requirements of this class present to his mind when preparing the work is evident from the fact that in the section devoted to the consideration of natural orders he gives the characters of those only which supply the principal medicinal plants.

Atlas of Skin Diseases. By Louis A. Duhring, M.D., Physician to the Dispensary for Skin Diseases, Philadelphia, etc. Part I. Philadelphia: J. B. Lippincott and Co. 1876.

The aim of this Atlas, as stated in the preface, is "to give the profession a series of illustrations representing the dermatology of America," as it has been shown that "a number of affections manifest themselves with us in quite other forms than those seen abroad." Part I., which is before us, contains four well-executed coloured lithographs of eczema erythematosum, psoriasis, lupus erythematosus, and pustular syphiloderm; and there is a brief but perfectly adequate description of the cases represented, with some hints on diagnosis and treatment appended to each. These earliest plates scarcely bear out the author's dictum of an essential difference between American and European skin diseases, for they might equally well have been drawn from patients in London, Paris, or Vienna. We shall be rather interested to see what skin diseases peculiar to itself the great Transatlantic Republic has been able to evolve. Joking apart, however, we have nothing but praise for the present instalment of Dr. Duhring's Atlas, and we wish him all success in his undertaking.

Danger of Kissing Children.—Mr. Gibbons, in a lecture delivered before the Australian Health Society, points out the danger that is often incurred by the general practice of kissing children by all persons who come in contact with them. In this way, he says, diphtheria, scarlatina, and other diseases are often conveyed.—*Australian Med. Jour.*, Sept.

Composition and Quality of the Metropolitan Waters in February.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	21·30	0·073	0·165	0·000	0·006	13·2	2·4
West Middlesex .	20·70	0·077	0·180	0·000	0·007	12·65	3·8
Southwark and Vauxhall . .	20·60	0·077	0·180	0·001	0·007	13·2	3·8
Chelsea . .	21·30	0·066	0·180	0·000	0·006	13·2	3·3
Lambeth . .	21·60	0·056	0·210	0·000	0·008	13·2	4·2
Other Companies.							
Kent . . .	28·60	0·061	0·390	0·000	0·003	18·8	6·0
New River . .	21·70	0·049	0·135	0·000	0·005	14·3	4·2
East London .	19·80	0·063	0·180	0·000	0·007	15·4	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be slightly turbid in all cases.

GENERAL CORRESPONDENCE.

INFANT FEEDING.

Letter from Elisa, Countess von Ebersburg.

[To the Editor of the Medical Times and Gazette.]

Sir,—Permit me to ask for a small corner in your valuable journal on behalf of little children at home or in orphanages. The press and Parliament being once more active on this subject, it may not be unseasonable to throw out a few hints on this important question of infant mortality. Why do our babes die—and why in such numbers? Many reasons are given, but one seems to be the chief. Improper feeding is the great evil. We may be pretty sure that, had every child who dies before the end of the first year of life had a healthy mother to nurse it, and one, at the same time, willing to do so, the Registrar-General might soon find scope for transferring these mortality tables to a new page in his reports. For it is quite marvellous to observe with how great an amount of hardship these tender babes can even thrive if only they be "properly fed." We can reconstruct a nursery or an orphanage to put it under better sanitary conditions; but even then there will be little success, so far as the preservation of life is concerned, if the chief point—the feeding of the children—be not attended to. Who could reasonably expect a ventilated nursery in each of the thousands of poor homes in densely populated districts? Yet it is no theory, but my experience, extending over many years, and among a large number of infants, emaciated from their birth, and suffering from every inherited disease, that they thrive and get strong if rightly fed. But we must not trifle with their tender digestive organs, or illness is sure to follow. There cannot possibly be a variety of diet intended for a babe during its first year of life. Nature seems irreconcilable to anything short of the elements which the babe's natural food contains. It is therefore imperative that this should be at any sacrifice provided for the little one. Where the mother is unable to feed the babe, we must then provide a correct and complete substitute.

The genius of the lamented Baron von Liebig still lives among us. He has left to the young infants a legacy for which generations to come will thank him. Baron von Liebig's Malted Food Extract has indeed proved a panacea to little children from birth, and in every rank of society. The rich it now enables to dispense with the undesirable medium of a wet-nurse. The working-classes and the poor can, during their absence from home, take the comfort with them that the babe is duly provided for if Liebig's Malted Food Extract be given to the nurse; and the mother whose affection for her offspring would still prompt her to comfort it with the natural aliment at intervals, can do so without fear of harm to the babe, and without too great a tax on her own strength. Restless nights need not be feared with this diet (nurses soon find this out), as it naturally and not artificially soothes a child to sleep, and does away with the awful practice of dosing the brightest babes slowly out of existence. Moreover, possessing all the proportions and quality of the child's natural food, it is also convenient and economical. Being chemically digested, it only requires the addition of warm water, when it is ready for use; while the expense of the same is only that of good cow's milk at the rate of 4d. to 6d. per diem for a child.

There is not one infantile complaint or disease, even of the most complicated nature, where this Malted Food Extract may not be given, be it of a zymotic, constitutional, local, or developmental nature. It is, however, not only the tables of mortality we have to bring in view. If we would have healthy men and women—healthy minds and bodies,—we must first attend to the health of our children immediately they are born.

We must early fit them out with all the elements requisite for their journey through life. The first five years of childhood lay the first seeds. Yet we have, especially among our orphan children, a large collection of sickly, pale, haggard faces; a rosy one seems rather the exception than the rule. And who will deny that this general weakness of constitution is a lack of the elementary nutriment from the early years of infancy, and a constant arrear, instead of resupply and reserve force? Hence such numbers of hip and spine diseases, early phthisis and consumption, scrofula, and the many other maladies which call for constant enlargement and extension of our hospitals and dispensaries. Add to this the large number

of the poorer community who, though they have passed on to manhood, for what will they be fit? What chance of employment will they have? asks an eminent medical writer. They have neither strength nor energy for work, neither habit nor education fitting them for lighter labours. Pauperism is their inevitable lot. They form a drag and burden upon society, because they consume more than they produce, and make no return for that which their rearing costs.

In securing physical health to our little children we guarantee wealth to the nation. I would invite any home or orphanage to try the results of using Liebig's food for children only for one week, be it for a certain number of boys or for girls. The results will soon show the benefit of this salutary diet. I am, &c., Elisa, Countess von Ebersburg.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, February 16.

Dr. Buchanan, President, in the Chair.

Report of Council.

The minutes of the two previous meetings having been read and confirmed, the report of the Council on the prevalence of small-pox was received. The interview with the President of the Local Government Board, for the purpose of requesting that some immediate steps be taken to provide for the proper isolating of all infected persons, whether paupers or non-paupers was referred to. Mr. Sclater-Booth, in his reply to the deputation which waited upon him, said that the Act of 1875 went as far as they felt justified in the direction of compulsion; public opinion was ripening on these matters. He did not think the country would submit to such stringent proposals as those brought before him. He looked on the Act of 1875 as one of consolidation; it might be amended, but he was not prepared to propose this now. The suggestions of the Society would be taken into consideration at the proper time.

Dr. Dudfield rose to make some comments upon the inaction of the Local Government Board anent small-pox; but

The President ruled that this was out of order, not being a criticism upon the report of the Council.

Dr. Dudfield thought it a great pity that the deputation failed to bring forward the desirability of the Asylums Board doing by compulsion that which they are now doing to some extent daily—viz., admitting the non-pauper class. The great majority of those for whom the Vestries desire to provide hospital accommodation are really without proper lodging and means of treatment. He considered that the Asylums Board are not really averse to accommodating the class referred to, but they do not like to be considered as taking the place of the local boards for the whole metropolis. It amounts to this: that the central authority desires to compel the local authority to pay for non-paupers out of the right-hand pocket rather than out of the left. He hoped that some independent member would ventilate the subject in the House of Commons. We must remember that the brand of pauperism had not been stamped upon these District Asylums, as no one objected to go there. It is very undesirable to multiply small local hospitals. The Kensington Hospital, of seventeen beds, had not been used since the last epidemic of small-pox, and the Vestry did not want to use it again.

The President admitted that there was a kind of duty on the part of the householder to take all sanitary precautions to prevent the spread of contagion, and that under the advice of the medical attendant. He thought it strange that the President of the Local Government Board should talk to an assembled gathering of medical men about the danger of interfering with the susceptibilities of the medical profession. The Society considered that the duties of the officer of health were to see that the medical attendant as well as the householder took all necessary precautions. He concluded by moving the adoption of the report.

Dr. Dudfield alluded briefly to the generally improper ventilation of churches, reminding the members that this was one of the duties imposed upon the officer of health.

Dr. Hardwicke and Mr. F. A. Best were duly elected as extra-metropolitan members.

Diseased Meat.

Dr. Dudfield read a paper entitled, "Pleuro-pneumonia in Cattle; with especial reference to the question whether the Flesh of Cattle affected with this disease should be allowed to be sold and used for the Food of Man, or should be condemned as being either diseased, unwholesome, or unsound," of which we here subjoin an abstract:—

The Metropolitan Board of Works is the local authority for carrying out the provisions of the Contagious Diseases (Animals) Act for the entire metropolis, excepting the City of London, in which the Commissioners of Sewers have the jurisdiction. In the City of London no fixed rules have been framed by the local authority for the guidance of themselves and their officers in dealing with pleuro-pneumonia meat. The Metropolitan Board of Works, on the other hand, have framed rules for the guidance of their inspectors:—

"*Contagious Diseases* (*Animals*) *Act*, 1869. *Order in Council dated June* 5, 1875.

"Rule 2. All cattle affected with pleuro-pneumonia are to be slaughtered. Notice of an animal being affected is to be given at once to the cattle inspector of the local authority for the district, or to a police-constable.

"3. Slaughtering, when practicable, is to be done on the premises of the owner. If not practicable, owner is to provide proper cattle conveyance, in which the affected animal shall be removed to such slaughter-house as may be authorised by the inspector.

"6. The carcases of any cattle which have died or been slaughtered, in consequence of being affected with pleuro-pneumonia, are not to be removed from any field, shed, or other premises without a licence from the inspector."

As to Compensation for Animals Slaughtered.

"Rule 1. The local authority is authorised to compensate for every animal slaughtered to the extent of £30, and not exceeding three-fourths of the value of the animal before it was affected with pleuro-pneumonia.

"3. The carcase belongs to the owner, and he may dispose of it for his own benefit; 'and, provided it is fit for food, the inspector will authorise its removal to any place desired by the owner. But, should it not be fit for food, its removal is prohibited, unless to a knacker's, for the purpose of being destroyed.'

"4. The owner, on applying for compensation, must give information as to value and condition of animal before affected, and of the sum realised from the sale of the carcase, hide, etc."

"If it is fit for food" the inspector will authorise the removal of the carcase to any place desired by the owner. From the inspector's judgment there is no appeal, save to a magistrate, in the event of a medical officer of health or a sanitary inspector seizing the meat as "diseased, unwholesome, or unsound, or unfit for the food of man." This power of sanitary officers to examine and seize "any animal, carcase, or meat exposed for sale, or deposited in any place for sale, or for preparation for sale, and intended for the food of man," is conferred by the 26 and 27 Vict., cap. 117, sec. 2; and the Act directs such meat to be taken before a justice to be dealt with by him. An interesting question here arises—viz., what proportion of the animals slaughtered by order of the inspector found its way into the meat market? A very large proportion, I suspect; for in the last report of the Board's Contagious Diseases Committee it appears that they had awarded only £183 as compensation for fifty-six animals, or at the rate of £3 6s. for each animal slaughtered,—little more than a tenth of the maximum allowance. As they grant compensation to an extent sufficient to make up to the owner half his loss, and as the average value of a milch cow cannot be much, if anything, less than £20, it follows that the slaughtered animals must, as a rule, have been sold for a moderate food-price; otherwise the amount of compensation would have been much greater. Pleuro-pneumonia is an infectious and contagious disease which appears to be restricted to the ox tribe. It first made its appearance in the United Kingdom, in Ireland in the year 1842. Hitherto the real nature of the disease would appear not to be well understood, for Dr. Burdon-Sanderson is now investigating the subject on behalf of the Royal Agricultural Society of England. The disease, which runs a rapid course, is inoculable, and it is a common practice to inoculate cattle in the tail—a preventive measure of great severity, and perhaps of doubtful efficacy. The lung is very hard, and on section presents pale striated bands of exudation

in the interlobular spaces of a fibro-albuminoid matter, the fibrine being of the "corpuscular" sort described by Simon. The pleuræ are coated with soft fibrine. The adhesions, however, are easily broken down. Effusions in the chest of blood, serum, and lymph are not uncommon, and abscesses are formed in prolonged cases. We come now to the practical question whether meat from an animal infected with pleuro-pneumonia can be eaten with impunity. The subject was investigated in 1864 by a committee of the House of Commons. Dr. Letheby stated that he had seen a case of illness, sickness, etc., following on the use of the meat in the form of sausages. He also believed that it produced carbuncle, but thought the meat might be not unwholesome at the very commencement of the attack. Dr. Brinton regarded the meat as non-nutritious. Professor John Gamgee believed that the meat caused disease, and was not nutritious. Dr. Littlejohn, of Edinburgh, said the meat was not wholesome; while Mr. Simon admitted that the meat is consumed in large quantities without apparent injurious effects. There is no proof that meat from animals even in the last stage of pleuro-pneumonia is actually injurious to those who eat it—meat which a good butcher or meat-importer, knowing nothing of the history of the animal of which it formed a part, would pronounce to be really good. "On such meat," says Mr. Brown, of the Veterinary Department of the Privy Council, "I have no objection to be fed, quite without reference to the existence of febrile disease in the animal at the time of slaughter." Dr. Burdon-Sanderson's views correspond very nearly with those of Mr. Brown, for he says that "in general the carcases of animals in advanced disease ought to be condemned, but those of animals in the early stage must, in the absence of any evidence of their unwholesomeness, be used." Professor Simonds, of the Royal Veterinary College, in a communication dated December 15, 1876, says:—"As you are well aware, the flesh of animals affected with the disease known as pleuro-pneumonia has been used as food from the time the malady was first observed here—viz., 1842 down to this time: a period of thirty-five years,—and I may add that there is yet proof wanting of its having in any way injuriously affected the public health. Dr. W. Sedgwick Saunders, the Medical Officer of Health to the City of London, holds a very different opinion, for he informs me that animals which have suffered with pleuro-pneumonia would be considered, by him and his staff of inspectors, unsound and unfit for food. The presence of such adhesions and such marks, I may here state, indicate an advanced stage of the disease; and it may be, therefore, that the carcases Dr. Saunders condemns are such as the cattle inspectors outside the City would not allow to be used as food. We know that the cattle inspectors of the Board order the immediate slaughter of infected animals on premises "declared" to be infected, and that every animal attacked after the first case would be killed in the earliest stage of the disease, and before any very marked alterations in the structure of the lung can have been produced, much less in the muscular and other tissues; and this fact lends probability to the view that the flesh of animals killed at this stage of the disease may be used with impunity without impugning the justice of the practice in the City of seizing and condemning carcases in a later stage of the disease. I now leave the subject with one final remark—viz., that an article which may be "unsound" should not be sold as "sound" or at a sound price. And I would submit the question whether steps should not be taken to classify meat, and to label the meat of an animal slaughtered in a confessedly diseased condition, even though we may be prepared to allow that such meat, thoroughly cooked, may be consumed by man without any apparent injurious consequences?

Dr. Tidy made some observations upon a kindred subject—viz., "On Diseased Meat; including Trichina, Fluke Disease, Pleuro-pneumonia, Characteristics of Good Meat, Circumstances under which Meat should be Condemned." He said he had seen some very serious symptoms follow upon eating a piece of musty bacon; seven members of one family were made seriously ill by it. He remembered four distinct cases where bad symptoms followed upon eating slightly mouldy veal and potted meats. There were five different views as to the nature of the poison—1st, the poison was supposed to be of a fatty nature, and developed in the process of decay; 2nd, it was attributed to the formation of pyrogenous acids in the smoking and curing of bacon, etc.; 3rd, that it was some poisonous organic alkaloid; 4th, that it was a catalytic change in the component parts of the meat (this was the view taken by Liebig); 5th, that it was caused by a minute fungus (*Sarcina botulina* of M. Van den Corput). In support of this latter view it is remarkable that there is invariably mouldiness, and that it is generally most abundant in April, when cryptogamic organisms are specially developed. As respects the ova of *Trichina spiralis*, we find it chiefly in the pig, largely in beef, but only once did Dr. Tidy observe trichina in mutton. Suspected meat should be steeped in a solution of logwood, which would cause the ova to stand out prominently. The muscles of the eye are a favourite locality for the trichina. The reddish stain upon the white flesh of pork makes it appear more frequent in the pig. When staying in Vienna, Dr. Tidy visited a large sausage factory, and the owner assured him that a medical man came daily to inspect the meat, and to see that it was free from the ova of trichina. An interval of at least seven days, and often ten, occurs before the constituent symptoms of trichina-poisoning appear. There is seldom vomiting or purging, but always pneumonia. The human stomach is a suitable soil for the development of the trichina from the chrysalis-life, as it occurs in animals, to that of the fully developed trichina in man. There are four conditions which distinguish this form of poisoning from that of mineral or vegetable poisoning—1st, the long interval between the taking the food and the development of symptoms; 2nd, the vomiting and purging are never severe; 3rd, pneumonia is always present; 4th, the absence of poison on analysis. The question arises, Should such meat be sold? The ova are not destroyed by salting or smoking, or by putrefaction, but they are destroyed at a temperature which coagulates albumen. Why is it that infected meat should be so often eaten without producing any bad effects? First, because there is a peculiar protective power in the mucous membrane of the stomach to prevent the ova being carried into the system. The Scotch shepherds are accustomed to eat the flesh of sheep that have died of "staggers," without any injurious consequences. He could not, however, advocate the selling of such meat in the public markets. We must not forget the case of sixty-four persons attacked with the disease from eating trichinous pork. Dr. Gamgee had given the result of some important observations in a large convict establishment of 1500 persons where diseased meat was eaten, and fifty convicts per month were attacked with boils. Since 1842 the percentage of deaths from carbuncle has been increasing, and it was at the time that pleuro-pneumonic beef was brought over from Holland. The Registrar-General for Scotland had noticed that since lung-disease of cattle had increased so had carbuncle. No doubt such infected meat is in a state of perverted nutrition. He did not think that the flesh of an animal immediately before or after parturition should be consumed. The counsel for the defence have pleaded too often that the animal was killed solely because it could not be delivered. The characteristics of good beef are that it is not of a pale pink nor of a deep purple. It should be marbled with fat ramifying between the muscular fibres, firm and elastic to the touch, not watery; it should have the characteristic odours, which experience alone can detect. Sometimes we can detect the smell of physic, and then suspicion is aroused. The sickly smell of meat from an animal dying of pleuro-pneumonia It is very marked. If meat loses 80 per cent. of water at 212° Fahr. it is not sound. Meat should be condemned under the following heads:—1. All animals that have died or been killed on account of general disease. 2. "Bracksey" mutton. 3. All carcases tainted with physic. 4. All female animals killed during or close upon parturition. 5. All fœtal animals. 6. All that have died from other causes than the butcher's knife.

In the debate following the reading of these two papers,

Dr. Iliff inquired whether the flesh of animals affected with pleuro-pneumonia always have a sickly, cadaverous smell? Does not the animal often recover, although permanent adhesions of the pleura remain?

Dr. Tidy was of opinion that with careful cutting up of the meat, and washing it well with water, the peculiar smell might always be detected, but it was true that animals did recover from the disease, the adhesions remaining.

Dr. Bristowe remarked that the result of his own observations was that the flesh of these animals is not necessarily injurious to health. All that is watery and pale should be condemned. All animals dying of acute infectious disease ought not to be condemned. No doubt all flesh containing parasites should be condemned.

Dr. Kenyon, who had come up from Chester to hear the

debate in consequence of the prevalence of cattle plague in the North of England, said that the opinion round about him was that the flesh of animals dying from pleuro-pneumonia is good for food. It is not desirable to have some towns more stringent than others, as those where the regulations are less stringent are glutted with diseased meat. Sellers ought to be required to declare such meat to be, like other articles of food, depreciated by adulteration.

The President, in summing up the debate, said that no doubt there was an increase of carbuncular deaths twenty years ago, but the relative mortality had decreased eighteen years ago, and may be still decreasing. There must be, no doubt, a prodigious amount of pleuro-pneumonic meat eaten, without any evidence of harm being done.

Dr. Dudfield, in his reply, said that the law of the land against rinderpest was that animals affected should be slaughtered and buried whole. Whenever pleuro-pneumonia is detected in London, an inspector from the Metropolitan Board of Works visits the shed to give orders for slaughtering infected animals.

THE PATHOLOGICAL SOCIETY.

Tuesday, February 20.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Adjourned Discussion on Visceral Syphilis.

9. *Syphilitic Disease of various Viscera.*

The President showed a number of specimens of this nature for Professor Aitken, of Netley, and read a short description of each. They were from the museum of the Hospital there. The first was a portion of brain, exhibiting a tumour near the corpus striatum, from a soldier who had five times syphilis, and suffered from epileptiform convulsions. The second was one of cicatrised liver with gummata, from a soldier of twenty-seven, who also suffered from epileptiform convulsions, and was both a drunkard and syphilitic. The brain and the dura mater also presented gummata. The third specimen was from a soldier who died suddenly on duty, and had had syphilis: post-mortem, there were found in the wall of the left ventricle numerous opaque yellowish nodules, as well as similar disease in the testes and brain. The next two specimens presented disease of the aorta in syphilitic subjects—swelling, ulceration, puckering, and fibrinous deposit. Three specimens of disease of the lung formed the next series. The first was a pulpy-like mass as large as a hen's egg; the second came from the right lung, where the disease appeared as a deposit; and the third presented two isolated deposits in the left lung. The seventh and eighth specimens were from the liver, in the form of cicatricial spots and gummata; the ninth was syphilitic disease of the frontal bone; and the tenth and last was one of syphilitic testis.

10. *Drawings of Syphilitic Disease of various Organs.*

Dr. Turner showed these for Dr. Sutton. The first represented disease of the brain. A female, with a syphilitic history, became maniacal four months before her admission, after suffering from excessive headache; and three months later had fits, with sickness. In hospital she had various paralyses about the eyes, impaired vision, fits, and finally unconsciousness before death. Post-mortem, a node was found on the right parietal bone, and this and the membranes and the brain were all mutually adherent. The left middle lobe was similarly involved. Several cranial nerves were also affected by the disease. The liver presented characteristic disease. The second drawing represented disease of the aorta in a boy of ten with inherited syphilis, who had been admitted with symptoms of compression of the left bronchus. Spots of non-specific broncho-pneumonia were also found. The other specimens delineated were from the larynx, liver, kidney, etc.

The President drew special attention to the second drawing.

11. *Syphilitic Disease of the Lung.*

Dr. Green showed this specimen. It was taken from the body of a young man who had gummatous disease of his liver, but who was without clinical history. The lower lobe of one lung was occupied by an induration as large as an orange; uncircumscribed; neither occupying all the lobe, nor quite reaching the anterior or inferior boundaries, but involving the pleura posteriorly which was puckered and adherent. On section it was extremely fibroid, evidently from several foci of change; and it contained several yellow patches. Microscopically it consisted of a small-celled tissue, partly developing and partly retrograding, and was very vascular. The new growth seemed to begin chiefly around the interlobular vessels, and to proceed towards the alveolar walls—the latter not being primarily affected. Dr. Green did not doubt that this was a case of syphilitic disease of the lung. A precisely similar fibroid growth, but more disseminated, was also found in the lung in syphilis; and such specimens had often been shown at the Society; and they agreed with the present specimen in their microscopical characters also. The question was, Dr. Green thought, how far these fibroid changes were due to syphilis, and how they were to be distinguished. There was great difficulty; and the pathologist had to be guided rather by naked-eye appearances and general circumstances than by histological characters; for the latter were precisely similar to those of chronic phthisis, chronic pneumonia, and other forms of pulmonary fibrosis. If there was anything specially characteristic of syphilis in the histology it was probably only the change in the intima of the cerebral vessels. Now, this change was not seen in the small vessels of the lung, and therefore the appearance there was not characteristic. The mode of origin of the tissue in the lung seemed, however, to be peculiar; in all cases of syphilitic disease it appeared to originate in the interlobular septa. Probably it began there around the vessels specially, and thus it was distinguished from all other chronic fibroid changes. In phthisis the fibroid disease was secondary to change in the alveoli and alveolar walls; in chronic pneumonia also in most cases the process commenced in the alveolar walls; while in chronic bronchitis a fibroid thickening proceeded from the bronchi. As far, therefore, as the histology of fibrosis of the lung went, the place of origin was the chief characteristic of syphilis; and Dr. Green would call this the most valuable evidence for or against syphilis. There was also the great vascularity of syphilitic growths, so different from what was seen in phthisis. Still the distribution and other considerations were more valuable evidence than the histological characters. Was there, then, a syphilitic phthisis? It must be admitted that exceptionally a syphilitic gumma of the lung might caseate and excavate, and the process might be called phthisis. Also there might be more disseminated fibroid changes in the lung, and these go on to induration, and even gangrene. But that syphilis ever gave rise to progressive consolidation and disintegration, Dr. Green did not believe. Also by damaging the general health syphilis might cause phthisis, but the result was probably ordinary phthisis. A few years ago he had shown a remarkable specimen of phthisis from a syphilitic child. Histologically it had ordinary phthisical characters, but to the naked eye its appearance was syphilitic.

12. *Syphilis of the Lung, Bronchi, and Dura Mater.*

Dr. Pye-Smith showed these specimens from a man of forty-two, who had suffered for two years from cough and wasting, and who wore, at admission, a pale, cachectic, "phthisical" aspect. There was some dulness over both sides of the chest, and the case was at first considered one of ordinary phthisis. Seven years and a half before, the patient had had acute rheumatism, and there was now a loud systolic murmur at the apex of his heart. After he had been some time at Guy's Hospital an abscess appeared on the left forearm, with sloughing of the tendons. This improved, and he passed through a subacute attack of pericarditis and synovitis of the knees; but thereafter the wound reopened in the arm, with hectic and increased cough. The arm was amputated, but after a fortnight the man died in convulsions. Post-mortem, no ordinary phthisis was found, but a chronic interstitial pneumonia of one lung, probably syphilitic; contraction and puckering of the main bronchus of the corresponding side; and general bronchial dilatation. In the heart were two small fibroid nodules; in the dura mater, condylomata and adhesions; disease of the testis; and caries of the ulna. Dr. Pye-Smith said that one point of interest in the case was the sudden supervention of symptoms referable to the dura mater, without previous pain; the cerebral arteries were also quite healthy. Also the small amount of external syphilis was striking, compared with that of the visceral. Again, there was the curious condition of the bronchi, which were puckered and contracted—almost characteristic of syphilis. Fourthly, the lungs presented no gummata, but a chronic interstitial pneumonia, which was manifestly syphilitic. Dr. Pye-Smith agreed that there was no phthisis, in the proper sense, due to

syphilis; nor was this case one of syphilitic phthisis,—in it the bronchi were first diseased, leading to contraction and bronchiectasy, and the disease spread around. These characters, and the association of the disease with other visceral lesions, were evidence of the syphilitic nature of the change.

13. *Syphilitic Disease of the Lung.*

Dr. Shepherd sent for exhibition a specimen of this nature. The clinical history had been one of fibroid phthisis. The lung was indurated, the bronchi dilated; the alveoli were almost lost from fibroid disease; and there were chalky masses in some situations.

Dr. Drysdale said that he had long been familiar with the idea of syphilitic phthisis; for Ricord had spoken of it as early as 1845, and that not by syphilis weakening the constitution, and thus causing phthisis, but by the softening of gummata. Dr. Drysdale related two cases: The first was in a girl of thirteen, who had Hutchinson's teeth, ulceration of the pharynx, and stenosis of the trachea, as well as an ulcer of the left leg, which was cured by iodide of potassium. At the same time she suffered from phthisical symptoms, with signs of a cavity at one apex. These also disappeared under the same treatment. The second case was in a muscular man with a syphilitic history, and specific disease of the palate and testis. This man suffered from symptoms and presented signs of a cavity in the left upper lobe; but after a month's treatment with the iodide he left the hospital perfectly well. It was true such cases were rare, yet they did occur; and Dr. Drysdale would retain the term "syphilitic phthisis."

Dr. Wilson Fox said that his knowledge of syphilitic phthisis as such had been very limited; he had seen but two examples, and he would urge caution in recognising syphilis as a cause of destructive lung disease. He had had occasion to analyse all the recorded cases of fibroid change in the lung, and had found many varieties; and even in this discussion many varieties of syphilitic disease of the lung had been described. First, there was the gumma—rare at the best. Two had been sent from Netley, of which one was described as resembling fœtal brain, and the other as an ordinary gumma; but it was remarkable how frequent gumma seemed to be in the army, as was testified by published reports. Were they not confusing things and names? Secondly, in Dr. Greenfield's specimen he recognised the epithelial origin of the disease. And, thirdly, there were the fibroid specimens, in which a large preponderance of interstitial growth was seen over that met with in ordinary phthisis. But caution was necessary in recognising as characteristic certain peculiarities. Thus, as regarded origin, Wagner of Leipzig declared that the implication of the alveolar walls was characteristic of syphilis; while Virchow spoke of a peribronchial growth. With respect to Dr. Goodhart's cases, among the many that were mentioned, not one presented a lesion perfectly characteristic of syphilis, so that the total result was that syphilis had comparatively little effect in modifying phthisis towards a fibroid change. It was another question whether syphilis did not determine the first steps towards phthisis. It might cause ulceration on mucous surfaces; and bronchitis, and even pneumonia, might occur like the exanthem on the skin. It was possible that all these might proceed to characteristic changes. But of the specimen just exhibited by Dr. Pye-Smith, Dr. Fox could only say that such a lung was rare. He could remember but two in the literature of the subject; and as for the bronchiectasy, it was not characteristic. How much, then, could be gained in treatment, on meeting syphilis and chronic lung disease combined? Anti-syphilitic treatment had very little effect in the direction of modifying the latter; it was quite different in syphilitic disease of other parts, however far advanced. The only change certainly syphilitic—namely, gumma—was very rarely seen in the lung, either *intram vitam* or *post mortem;* and it did not seem as such, to Dr. Fox, to be a cause of destructive lung disease. Again he would say that pathologists were far removed from unity of opinion on this subject, and careful consideration was still required before these changes were called syphilitic.

Dr. Payne said that there might be more in syphilitic phthisis than Dr. Fox would admit. He reminded the Society how long it was before syphilitic disease of the liver was admitted as a characteristic condition. The change might occur as follows:—Masses of inflamed lung were met with occasionally, passing on to consolidation, and decidedly limited in extent, chiefly interstitial, but also alveolar in part. These had a decided tendency to degenerate, becoming yellowish at the centre and fibroid at the circumference. Did any other disease than syphilis produce such specimens? And their rarity might be accounted for. The liver disease in syphilis left a pucker on healing to mark the locality; but when the lung healed, the scar became obscured, remaining visible at the apex only. Some years ago he saw a patient who died of one-sided pneumonia, the lung being quite consolidated. Throughout the other were many granulations, which looked like tubercles: the patient having had syphilis, these appeared to be syphilitic nodules in their early stage.

A Member, speaking in behalf of the accuracy of the Army Medical Reports, stated, in answer to Dr. Wilson Fox, that gummata were even more common lesions than he had been surprised to learn them to be.

Dr. Fox explained that his remarks referred only to a confusion of terms.

Dr. Pye-Smith replied to Dr. Fox that he had called his case a rare one, not a common one. He did not call the specimen of lung one of phthisis, nor was any other organ affected with tubercle, not even the bronchial glands. But the patient was full of syphilis. In some cases of syphilis there was deformity and stenosis of the larynx or trachea. In this the bronchi were so affected; with fibroid disease of the lung. Was it going too far to call the latter change also a syphilitic one? As regarded treatment, he had twice had patients with phthisis and syphilis. One of them got worse until a node appeared, and he was treated with mercury; and the other improved under iodide of potassium and mercury. These were two powerful, inasmuch as they were converging, arguments.

14. *Syphiloma of the Brain and Cord.*

Dr. Gowers showed this specimen. The pons and one crus presented syphilitic growth, and the neighbouring nerves were involved. Other two syphilomata existed in the brain, and two on the cord. The patient had been under observation for two years, and had various affections of the senses and of muscular power. In this case, as in his previous cases, Dr. Gowers could trace the deeper disease continuously to the membranes. Iodide of potassium had no effect towards the end of the case.

15. *Syphilitic Disease of the Aorta.*

Dr. Mahomed showed this specimen, in which death occurred in a syphilitic subject by ulceration of the aorta. Dr. Mahomed believed that atheroma is more common in syphilitics, but that it is not specific.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Thursday, March 1.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

Annual Meeting.

The chair was taken by the President, Sir James Paget, at 8 p.m., Sir Joseph Fayrer and Dr. H. G. Evans being nominated by him as scrutineers, and the ballot for election of officers and Council for 1877-78 immediately opened.

The balance-sheet for 1876, which had been previously circulated among the Fellows, was taken as read, and the Honorary Secretary, Mr. John Whitaker Hulke, at once began reading the Annual Report of the President and Council. It stated that the number of deaths among the Fellows had been 17, including 2 honorary, 9 resident, and 6 non-resident Fellows; and that 19 new Fellows had been elected; consisting of 2 foreign honorary, 13 resident, and 4 non-resident Fellows. The total number of Fellows is now 651. The ordinary receipts and expenditure varied little from those of previous years. The volume of *Transactions*, owing to expensive illustrations, cost more than that of the previous year by about £100, and that, with some items of extraordinary expenditure, had more than consumed the cash balance in hand at the commencement of the year. The report referred to the near approach of the time when the Council would have to award the Marshall Hall Memorial Prize for the best original work done during the previous five years, and recorded in the English language, in anatomical, physiological, or pathological research, relative to the nervous system. In reference to the Committee appointed to examine into the relations existing between Membranous Croup and Diphtheria, it stated that the Committee had held several meetings during

the past year, and had been engaged in collecting evidence bearing on the more important facts at issue. To facilitate their investigations they had formed themselves into Clinical and Morbid Anatomy Sections; and though some time must elapse before the Committee will be able to make a report, they hoped that facts would be established which will be of great value in determining the identity or non-identity of the disease. The Council's report also referred to the hospitable reception the delegates of the Society (Dr. Hare, Dr. Barnes, and Mr. B. Carter) had received at Philadelphia, and the great success of the Medical Congress held there last autumn. Two Portraits (of himself and of the late Mr. Thomas Alcock), presented by Sir Rutherford Alcock to the Society in 1866, under an erroneous impression that the Society was forming a gallery of oil paintings of its Fellows, were recommended to be returned to him; and a feeling allusion was made to the death of the late Dr. Sibson, who had for some years been one of the Hon. Librarians of the Society. In relation to the library, the report stated the number of new books added to the library in the year to be 435, and that the new catalogue and index were progressing, and would be ready for the press in the course of the summer. It also mentioned that the usual triennial inspection of the library had been made, and its management found to be in good working order and efficiency, finishing with statistics of the number of works and volumes in the library, the number lent out, and the number of visitors to the library, similar to tables given at previous intervals of three years.

The adoption of the report was moved by Mr. W. S. Savory, seconded by Mr. John Croft; and a separate motion for returning the portraits to Sir R. Alcock, by Dr. Miller Ord, and Dr. Silver,—and both carried *nemine contradicente*.

The President then addressed the meeting. He commenced by taking a review of the past history of the Society, particularly contrasting its state nearly forty years ago, when he himself became a Fellow, with its present condition, and he found only changes which the lapse of time accounted for, and which were mostly for the better: the papers having grown more elaborate, the methods of inquiry more various and minute, and the investigations more deep and thorough. In alluding to the inevitable controversy which must ever exist between seniors and juniors in their estimation of each other's work, which, if passionless, must ever do more good than harm, he referred to the younger societies growing up around the parent society, with which he felt sure there was no ground for conflict. The communications to all societies might broadly be divided into the less and the more elaborate. Both were useful if containing truth, and he considered it the duty of this Society to seek the more elaborate. It would also be our right to have them, if we continued to exercise care in admitting them to be read, still greater care in selecting for publication in our *Transactions*, and liberality in publishing those selected. Mistakes might sometimes be made, but they were rare, and should be endured for the sake of maintaining the honour attached to having a paper in our *Transactions*, which, he might add, were by far the largest and best series of volumes published by any medical society of the present or any past times. In the institution of other societies he could see no sign of our Society having suffered damage, and he *could* see many signs that medical science had gained great advantage. The only point in which our Society could be said to have suffered was that our meetings were less fully attended, and our discussions less animated; but this might partly be explained by the greater completeness of the papers, the minuteness of their details, and the elaborateness of their argument, which were more likely to render the reading dull, and cause them to be less fit for discussion; but this is a result we must endure in the best promotion of knowledge. He instanced the case of the Royal Society, which originally embraced every branch of natural science in its labours, but now there was scarcely a division of natural science without a society devoted to its cultivation, and nevertheless the Royal Society was never more prosperous, its fellowship never more desired, its *Transactions* more rich, or its influence on science more distinct. That Society should be our example and its position our aim. The President then gave brief memoirs of the many important Fellows who had been lost to the Society during the past year; they included the following names:—Mr. George Nayler, of Savile-row, Surgeon to the Hospital for Diseases of the Skin, Blackfriars; Sir John William Fisher, of Park-lane, late Surgeon-in-Chief to the Metropolitan Police; Mr. George Southam, of Manchester, Surgeon to the Manchester Royal Infirmary, and Professor of Surgery at Owens College; Mr. William Sudlow Roots, of Kingston, Surrey, Surgeon to the Royal Establishment at Hampton Court; Dr. John Webster, Physician to the Scottish Hospital (to whom, he said, the Society owes some respect for an almost unfailing attendance at its meetings for above thirty years); Mr. Victor de Méric, Surgeon to the Royal Free Hospital, and to the German Hospital, Dalston; Dr. Thomas Laycock, Professor of the Practice of Physic in the University of Edinburgh; Dr. Henry Wyldbore Rumsey, of Cheltenham, the indefatigable worker on State medicine and sanitary reform; Mr. William Smith, of Clifton, Bristol, for some time Surgeon to the Chesterfield and North Derbyshire Hospital; Mr. William Harvey, the well-known aural surgeon, and the real author of the system known as "Bantingism," though it was not till long after that treatment had gone out of fashion that his work on "Corpulence" was published; and Dr. John Butter, of Plymouth, Physician to the Plymouth Royal Eye Infirmary. The President also gave obituary notices at greater length, with more fulness of detail, analysis of character, and feeling allusions to the usefulness of their life and works, and the lessons which they taught us, of two of the Foreign Honorary Fellows of the Society—Dr. Louis Stromeyer, Director-General of the Medical Department of the Army of Hanover; and Professor Christian Gottfried Ehrenberg, of Berlin,—and of three of its Resident Fellows—Dr. Francis Sibson, Consulting Physician to St. Mary's Hospital, who was one of the Honorary Librarians of the Society at the time of his death; Dr. Robert Lee, of Savile-row, late Obstetric Physician at St. George's Hospital, one of the Society's oldest members; and Sir William Fergusson, Bart., LL.D., F.R.S., Professor of Surgery at King's College Hospital. In speaking of Dr. Stromeyer, the facts were noticed of his father having also been an Honorary Fellow of the Society, and the introducer of vaccination into Germany. Notices were also given of Stromeyer's love for England, and his unaccomplished wish to study in London; his education under Blumenbach and Langenbeck; his visits to Goethe; and the interesting character of his "Recollections" of the German surgeons and surgery of fifty years since, and of his visit to this country, and notices of the social and professional life of London; also his first section of the Achilles tendon in 1831—an operation which marks the beginning of the whole system of subcutaneous surgery; the rapid increase of the practice of tenotomy in this country by the labours of Dr. Little after the cure of his club-foot by Stromeyer in 1836; Stromeyer's dislike of specialising, and devotion to the larger studies of surgery, fearing he might else be called a mere tendon-cutter; and his modesty in maintaining his claims of priority in the discovery of subcutaneous surgery. After detailing his progress at Erlangen, Munich, and Tübingen in years subsequent to 1838, the President referred to the insurrection of 1848, when Stromeyer commenced his distinguished career as a military surgeon with Esmarch, his son-in-law, as one of his assistants, and collected the materials of his valuable "Maximen der Kriegsheilkunst"; his devotion of himself after 1854 to an entirely military career on his appointment as Director-General of the Medical Department of the Army of Hanover; his last visit to England in 1872, and his lectures at St. Thomas's; and the honours he received on his Jubilee in April, 1876, from all ranks in Germany, and from among ourselves; two months after which, while still at work, he fell in apoplexy, and in a few minutes died. In speaking of Christian Gottfried Ehrenberg, the President referred to his early devotion to microscopic studies, and first great discovery and demonstration of the sporules of the lowest fungi; the vast results in number of species of plants and animals obtained in his scientific expedition to Africa for the Royal Museum of Berlin; and the appearance of his most important work on the "Infusoria" in 1838, which enlarged in every direction the field of microscopic inquiry. In pointing to the illustrations of his marvellous industry in the 268 titles of papers by him in the catalogue of papers by the Royal Society, the speaker said that in the history of microscopy his name must be placed next to that of Leeuwenhoeck. Of Dr. Sibson, the President said it was difficult to tell briefly anything worthy of his life and good deeds. In all his professional work, and in all the offices he filled, he was vigorous and abundant in discharge of duty, while the rare charm of his personal character moved many to work with him, and multiplied the power of his own work. From 1835 to 1848 he was Resident

Surgeon to the Nottingham Hospital, where he gained much of that knowledge of the mechanical physiology of respiration, and of the position of the internal organs in health and disease, which culminated in the publication of his *magnum opus*, the "Medical Anatomy"; his passing the examination for M.B. and M.D. at the London University in the same year (1848), with honours in both—a notable achievement, considering the active life of practical work in which he had been engaged; his nomination to the Senate in 1865; and his constant attention to the business of the University, and also of the College of Physicians, of which he became a Fellow in 1853; his successive delivery of the Goulstonian, Croonian, and Lumleian Lectures; and his enormous labours as Secretary of the Committee on the "Nomenclature of Diseases," of which undertaking he was the principal originator, and of which, as a work of more than national importance, the principal honour was due to him. After referring to his connexion with St. Mary's Hospital and the British Medical Association, and our own and the Royal societies, in all of which his labours were not less vigorous, and in every office of which he always set himself a high standard of duty, and fulfilled it, the President summed up the characteristic of all his work: his devotion and intense labour to determine many questions which will in consequence not need to be investigated again. "He never flinched from any duty, but when he saw it was to be done he looked rather to see how large it could be made; and no man followed better the advice of the King-Preacher—'Whatever thine hand findeth to do, do it with thy might.' And surely no one ever worked harder with so light and genial a heart. Who of us can forget the gentleness and enthusiasm of his social life—his fervent greetings, his words of affection, the sincerity of which was proved by the whole tenor of his pure, unselfish life? He was a many-sided man, and on 'all sides good.' Dr. Robert Lee was one of the oldest members of the Society, and had contributed twice as many papers to its *Transactions* as any living Fellow. He had also had the honour of attracting the three largest meetings (about 1850-51) which ever assembled in the rooms of the Society, to discuss his papers upon the use of the speculum and upon ovariotomy. "Many of us," said Sir James, "can remember how his dissection of the nerves and ganglia of the uterus, and afterwards of those of the heart, seemed to engage his whole mind, and inflame it not only with the love of truth, but with scorn for those who could not see the truth where he did. For Dr. Lee was a strong instance of that fault which sometimes goes with honesty—he was so sure that his convictions were the result of hard and well-intentioned study,—so sure that he sought the truth, and sought it in the right way,—that he was wholly unable to believe that anyone with equal honesty and almost equal industry could arrive at conclusions different from his own." His preparations are in the University of Cambridge, to which, a few years ago, he presented the whole of his anatomical collection. A passing reference was made to the Royal Society controversy between him and Dr. Snow Beck on the nerves of the uterus; and the notice finished with a criticism on the character, value, and utility of his work, in spite of his excessive opposition to all innovation. In referring to the last name on his list of deaths—that of Sir William Fergusson,—the President did not wish, he said, to go through a cold, bare narrative of the life of one so recently with us, and for whom all had so sincere a regard, but would confine himself to a study of his character and work. Looking upon him as the chief practical surgeon of his time, he noticed his remarkable endowments by nature, which he educated to the highest degree of sensitiveness and mobility, not only by the long hours spent in dissecting, but in his amusements in music and fine carpentry; his familiarity with the character and relations of every structure; his calmness and self-control; his love of mechanics, which made him so good a judge of apparatus; his orderliness, which caused his apparatus to be always complete and in its place; and altogether his sensibility, dexterity, and mechanical power, which rendered him more fitted to be a great surgical operator than anyone that he (Sir James Paget) had known. To these he owed his first reputation; but the publication of his "Practical Surgery" showed the wide range of his surgical knowledge, and he soon in important cases showed his great power of diagnosis, which, associated with his caution, made him a safe surgeon in cases where good operators are sometimes apt to be dangerous. He had such personal and social qualities as command the confidence of the public. He was gentle in voice and manner, cheerful, warm-hearted, and kindly in his judgment of others, firm in his friendship, and had a tender-hearted love of home. He had great personal influence as a teacher, and his pupils admired him and boasted of him, though his oral teaching was not effective, and he addressed the eyes much more than the ears of his class. "He will always deserve a high place in the history of surgery for those improvements and changes, which include his operations for harelip and cleft palate, excision of joints (especially of the hip and knee), and removal of the upper jaw with the labio-nasal incision, and generally for the simplicity he encouraged in all apparatus; but his chief influence will be through our distinct remembrance of him, for his good qualities were such as none can forget who had the happiness of knowing him intimately."

At the conclusion of the address a vote of thanks to the President, moved by Mr. Marshall and seconded by Mr. Erichsen in highly eulogistic terms, was carried with great applause.

Thanks were also voted to the retiring Vice-Presidents and other members of Council, Dr. E. Ballard, Mr. Charles Brooke, Mr. John Marshall, Dr. Wilson Fox, Dr. Graily Hewitt, Mr. John Couper, Mr. George Gaskoin, and Mr. Thomas Smith. In proposing the latter vote of thanks (which was seconded by Dr. Stewart), Mr. Charles Hawkins incidentally alluded to the singular fact that just sixty years ago the offices of President of the College of Surgeons and of the Medical and Chirurgical Society were held contemporaneously by the celebrated Henry Clive, who had also during his Presidency of our Society delivered the Hunterian Oration, in exact parallelism with our retiring President, Sir James Paget.

The result of the ballot for officers and Council for 1877-78 was announced as follows:—*President:* *Charles West, M.D. *Vice-Presidents:* Richard Payne Cotton, M.D.; *William Wood, M.D.; *John Cooper Forster; *John Wood, F.R.S. *Treasurers:* William Wegg, M.D.; John Birkett. *Secretaries:* John Harley, M.D., F.L.S.; John Whitaker Hulke, F.R.S. *Librarians:* *Charles Murchison, M.D., LL.D. Ed., F.R.S.; Timothy Holmes. *Other Members of Council;* *Robert Barnes, M.D.; Lionel Smith Beale, M.B., F.R.S.; *William Chapman Begley, M.D.; Edward Headlam Greenhow, M.D., F.R.S.; William Ogle, M.D.; Richard Barwell; Arthur Edward Durham; *Richard Phillips; *John Soelberg Wells; *Erasmus Wilson, F.R.S. (Those gentlemen to whose name an asterisk is prefixed were not on the Council, or did not fill the same office, last year.)

OBITUARY.

JOHN BUTTER, M.D., F.R.S.

Dr. John Butter, who lately died at Plymouth at the great age of eighty-six, was compelled to retire from practice many years ago from blindness, and his name even is probably unknown to the great majority of the present generation of medical men. But long ago he earned a niche in the Medical Pantheon; and we are glad to be able, through the kindness of a valued contributor, to say a few words on what Dr. Butter did. He became a Member of the Royal College of Surgeons of England, and Fellow of the Royal College of Physicians of Edinburgh in 1811, and took the M.D. of Edinburgh in 1820. He was elected a Fellow of the Royal Society in 1822; and was also a Fellow of the Linnæan Society. He was Founder, Trustee, and Consulting Physician to the Plymouth Royal Eye Infirmary since 1821, and was for forty-four years Surgeon to the South Devon Militia. In 1821 he published a work on "Ophthalmic Disease," and he wrote sundry "Memoirs"; but his chief work was a treatise on "Irritative Fever and Erysipelas," published in 1825, and speaking of this our correspondent says:—

"In the year 1824 there was quite an alarming epidemic of pyæmia with diffuse inflammation of the cellular tissue, following the slightest injuries to the workmen employed in the Plymouth Dockyard. It created great alarm at the time, and was spoken of as the 'Plymouth Dockyard disease.' Dr. Butter published a description of it in 1825, in which he called it 'irritative fever'—a work which will always hold its place as an authority in the history of the development of modern ideas in medicine. At that day humoral pathology, or, in other words, our knowledge of the changes of the blood in health and disease, was at its lowest ebb, for the theories of Galen had been put out of currency by Cullen like base coin, and modern chemistry

and the microscope were not yet in existence. The disease which Dr. Butter described was a kind of puzzle; it was a violent inflammation of a whole limb, yet bleeding did no good,—nay, the disease spread the faster in spite of it. It was clear there was something here more than the vigorous 'action' which Hunter believed to be the essence of inflammation, and so a solution was sought by the aid of the word 'irritation,' which was employed to signify an unnatural or perverted action without power: thus Dr. Butter called the whole disease an 'irritative fever,' and Mr. Travers described the whole class of similar cases under the term 'constitutional irritation.' Anyone who will take the trouble to read Mr. Travers' book on 'Constitutional Irritation,' in which a large part of Dr. Butter's book is quoted, will see what a prodigious gain in positive knowledge we have made in the last fifty years, and chiefly through the aid of the microscope. Whatever may be the differences between the doctrines of Pasteur, Beale, Bastian, Lister, and Richardson, they all agree in recognising a foreign intrusive physical agent, where our forefathers only dimly saw an 'irritation,' and they show how the use of chloride of zinc and carbolic acid may prevent the spread of pyæmia and diffuse suppuration if they should ever again affect the workmen in Plymouth Dockyard. Dr. Butter's short monograph is highly creditable to himself, and a most valuable picture of medical theory and practice at the time it was written."

ABRAHAM DUKE, M.D., F.R.C.P., F.R.C.S.E.

Dr. Duke was born near Arundel, in Sussex, in 1809. He studied at first at Guildford, under the late Mr. Wooldger; he then entered at Guy's, taking his M.R.C.S. in 1834. He was in practice with his twin-brother at Chichester from 1833 to 1848, when failing health compelled him to give up practice for a time. Was surgeon to Chichester Infirmary 1837-48, and contributed some papers on various subjects to the *Lancet*, and was elected F.R.C.S.E. in 1844. After leaving Chichester he went to Edinburgh for a time, and took his M.D. there in 1850, when he was highly complimented for a treatise which he wrote on Phthisis. After some time spent in travel, during which he visited various continental hospitals, he settled at Rugby, May, 1852. Elected M.R.C.P. Lond. in 1859. He was much respected at Rugby.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 1:—

Lethbridge, Charles Frederick, Hemingford-road, N.
Macgeagh, Thos. Edwin Foster, Pemberton-terrace, N.
Prosser, Thos. Gilbert, Grenville-street, W.
Turner, Frank Edward, Loraine-road, Holloway.

The following gentlemen also on the same day passed their primary professional examination:—

Walker, Horatio Edward, London Hospital.
Wood, Charles, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Broadbent, W. H., M.D.—Honorary Consulting Physician to the Hospital for Women and Children, Vincent-square, Westminster.

Mackay, George, M.B., L.R.C.S.E.—House-Surgeon to the Dumfries and Galloway Royal Infirmary, *vice* J. H. Hay, M.B., M.R.C.S., resigned.

Worthington, Thomas Blair, B.A., M.B.&M.C. Trin. Coll. Dub.—Senior Assistant Medical Officer to Sussex Lunatic Asylum, Hayward's-heath.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office.—Medical Department.—To be Surgeons under the Royal Warrant of April 28, 1876:—William Briggs Allin, M.B.; Michael Richard Ryan, M.D.; Edward Osmund Reynolds, gent.; Henry John Robbins, M.D.; John James Morris, M.D.; Aylmer Ellis Hayes, gent.; John Francis Williamson, M.B.; John Thomas Carey, M.B.; William John Read Rainsford, gent.; Isaac Boulger, gent.; Phineas Barrett Tuthill, M.D.; Thomas Boyd, gent.; Percy Herbert Johnston, M.D.; Finlay Murchison, M.B.; Isaac Bomford Emerson, gent.; Augustus Hewett, gent.; Eugenius Alfred Roche, gent.; George Laffan, M.D.; Ulick Joseph Bourke, gent.; Robert Robinson, gent.; Joseph John Lamprey, gent.; William Henry Allen, gent.; Robert Cardwell Gunning, gent.; George Mark Russell, M.B.; Herbert Cotton, gent.; John Percival Hunt, M.D.; Jones Lloyd Peyton, M.B.; Arthur Wellesley Carleton, M.B.; George Arthur Hughes, M.B.; Alexander Crombie Keith, M.B.; John Brodie, M.B.; Frederick George Leslie Eagar, gent.; Brisbane Warren Large, gent.

BIRTHS.

Benham.—On February 28, at 40, Westgate-street, Ipswich, the wife of H. J. Benham, M.B. Lond., M.R.C.S.E., of a son, who only survived his birth four hours.

Bushell.—On February 12, at Pekin, China, the wife of S. Wootton Bushell, M.D., Physician, British Legation, of a son.

Creighton.—On February 27, at Derryree House, Lisnaskea, County Fermanagh, the wife of Fleet-Surgeon Robert Creighton, M.R.C.S.E., of a son.

Fenton.—On March 2, at Grey Friar's-green, Coventry, the wife of Mark A. Fenton, M.D., of a son.

Graham.—On March 3, at Park-gate, Yorkshire, the wife of Arthur Graham, L.R.C.P.E., of a daughter, stillborn.

Jamison.—At St. Helen's, Lancashire, the wife of Arthur Jamison, M.D., of a daughter.

Kavanagh.—On March 5, at Jerne House, Wickham-road, the wife of P. Kavanagh, M.D., of a son.

O'Connor.—On March 3, at Welshpool, Montgomeryshire, the wife of Bernard O'Connor, A.B., M.D., of a daughter.

White.—On March 5, at Moat House, Kingston-on-Thames, the wife of G. Farr White, F.R.C.S., of a daughter.

MARRIAGES.

Carruthers—Wheatley.—On March 1, at St. Wilfrid's Church, Calverton, James Gurney Carruthers, M.R.C.P., of South Norwood, and late of Northampton, to Helena Elizabeth, eldest daughter of the late Thomas Wheatley, Esq., of South Norwood.

DEATHS.

Adcock, Mary, wife of Surgeon-Major J. Adcock, M.D., Army Medical Department, at The Vicarage, Alton, Hants, on March 1, aged 36.

Alderson, Marianne, wife of Sir James Alderson, F.R.C.P. Lond., M.D. Oxon., etc., at 17, Berkeley-square, on March 5.

Blood, Margaret, wife of Michael Blood, M.D., at St. Helier's, Jersey, on March 3, in the 63rd year of her age.

Burn, Alexander, M.D., late of the Bombay Medical Service, at 12, Pelham-place, South Kensington, on March 3, on his 71st birthday.

Davis, William Farquhar, Surgeon-Major, M.D., F.R.C.S., at Torquay, on February 25, aged 44.

James, Annie Annandale, wife of David James, M.D., and daughter of the late Thomas Annandale, M.R.C.S., of Newcastle-upon-Tyne, at St. Mary's, Dunbar, on March 1.

Stone, Thomas, F.R.C.S., for many years Resident Surgeon of Christ's Hospital, London, at 2, Oldfield-terrace, Acton-vale, W., on March 2, in the 71st year of his age.

Webb, Charles, M.R.C.S.E., L.S.A., J.P., at his residence, Basingstoke, on February 27, aged 62.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Royston Union.—Medical Officer. Applications, stating age and medical qualifications, with testimonials and references, to Thomas Shell, Clerk to the Guardians, Royston, on or before March 13.

Bradford Infirmary and Dispensary.—Resident Medical Officer. Candidates must be registered as legally qualified medical and surgical practitioners, and furnish testimonials as to moral character and professional ability. Applications, stating age, to be forwarded to Mr. Chas. Woodcock, Secretary, 65, Market-street, Bradford, on or before March 24.

Maldon Union.—Medical Officer. Applications, stating age and qualifications, accompanied by testimonials of recent date as to character and ability, to be sent to the Clerk, on or before March 12.

University College Hospital.—Resident Medical Officer. Applications, with testimonials and statements of age and qualifications, to Talfourd Fly, M.A., Secretary to the Council of University College, on or before March 10.

Wimborne and Cranborne Union, Dorset.—Medical Officer. Candidates must be registered under the Medical Act of 1855. Applications, stating age and medical qualifications, with testimonials and references, to Frank H. Tanner, Clerk to the Guardians, Wimborne Minster, on or before March 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Isle of Wight Union.—Mr. E. R. Woodford has resigned the Godshill District; salary £80 per annum.

Kendal Union.—Mr. J. C. Smith has resigned the Burton District; area 13,448; population 2604; salary £42 per annum.

APPOINTMENTS.

Droxford Union.—Wm. H. Hatfield, M.R.C.S. Eng., L.R.C.P. Edin., to the Hambledon District.

Montgomery.—Thomas P. Blunt, F.C.S., as Analyst for the County for one year.

Preston.—James C. Brown, D.Sc., as Analyst for the Borough.

Wantage Union.—Robert G. McCalman, M.D. and C.M. Aber., to the Ilsley District.

Hunterian Museum.—Captain Allen Young has just presented to the Museum of the Royal College of Surgeons a collection of the skulls of Esquimaux obtained by himself and the surgeon of his vessel, Mr. Horner, during the last

cruise of the *Pandora*. Most of them are from Upernavik, but one belongs to a tribe located in the neighbourhood of Whale Sound, at the north of Baffin's Bay, and is therefore further north than any point from which remains of human beings have been hitherto brought to Europe.

THE SPIRIT AND TOBACCO DUTIES.—From a Parliamentary return recently published it appears the net receipt of revenue in the United Kingdom for the year ended March 31, 1876, from duties on spirits, malt, wine, beer, sugar used in brewing, and excise licences was £33,012,192. Of this England contributed £23,824,166, Scotland £4,706,561, and Ireland £4,481,465. The revenue from the duty on tobacco in the United Kingdom was £7,744,978, of which England contributed £6,059,046, Scotland £683,640, and Ireland £1,002,292.

THE Metropolitan Asylums District Board have adopted and forwarded a report to the Local Government Board, in which they state that adequate provision for the isolation and treatment of epidemic infectious diseases in the metropolis does not exist, and that such provision could be best made in a comprehensive and systematic manner by one central authority acting for the whole metropolis, not only for pauper patients, but for other classes desirous of obtaining hospital accommodation, such central authority to have, in addition to the control of the Poor-law administration, the whole of the powers of the Sanitary Acts conferred upon it.

LOCALISATION OF COPPER IN THE LIVER.—In a note communicated to the Académie des Sciences Dr. Rabuteau stated the results of his analysis of the liver of a woman aged twenty, who, under Prof. Charcot at the Salpétrière, had taken, in the course of 122 days, forty-three grammes of the ammoniated sulphate of copper, and who died from rapid phthisis three months after taking the last dose of this substance. He found, by following the process of Fresenius and Babo, that 1000 grammes of the liver contained 16·25 centigrammes of copper, the 1474 grammes (being the total weight of the liver) containing 23·95 centigrammes.—*Gaz. Hebd.*, March 2.

THE HEREFORD LUNATIC ASYLUM.—We have received a copy of the fifth annual Report on the Hereford City and County Lunatic Asylum for the year 1876. The statistics call for no particular comment, but the Medical Superintendent, Dr. T. A. Chapman, very pertinently remarks:—"It is a matter having so many practical bearings that it is probably well again to state that all close analysis of the increase constantly going on in the registered number of the insane shows the increase to be due, not to an increase of fresh cases—*i.e.*, to a greater tendency to insanity in the population,—but to an increasing tendency to send to the Asylum cases that used not to be so accommodated, and of whom the majority remained with their friends, and were never statistically heard of. This tendency is due, as a constant element, to the increasing knowledge of what asylums really are, and an increasing objection amongst the people generally to associate with, and retain amongst them, insane persons. The occasional elements are, especially, relief to the monetary pressure of asylum accommodation, due, now to a Union Chargeability Act, now to a Government subsidy. This is, of course, an evil in so far as that it implies increased expenditure, but the same argument might obviously be brought against the existence of asylums at all; and the real question—as to whether sending into the Asylum patients who might, and, apart from such special circumstance as the Government subsidy, certainly would, have been otherwise accommodated, be desirable or not—is a much wider and more difficult one." The present charge for county and city patients in the Asylum is 9s. 6d. per head weekly, and it is calculated that the same rate will be maintained during the current year.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Alpha.—The American diplomas give, let us say by courtesy, the title of doctor; but no right to practise medicine or recover fees. The L.S.A. is the qualification for the general practitioner; it gives the right to dispense medicines, to recover for them, and to recover fees.

A Yankee.—The importation of American fresh beef to Great Britain during the month of January last was 1,796,000 lbs.

Medical Etiquette, Plymouth.—Read Perceval's "Medical Ethics." Haydon, the grand historical painter, a countryman of yours, was very severe; he said—"The greatest curse to society is the delicate irritability of medical men. Many a wife, many a mother, many a child, and many a sweet girl, have been sacrificed from the apprehension of the relatives to offend the medical attendant by hinting at a wish for further advice. Never hesitate; it is better to offend your medical man than risk a loss of life."

Mr. Lawrence.—Professor Flower will commence his course of lectures on the Comparative Anatomy of Man, in the theatre of the College of Surgeons, this day (Friday).

A Metropolitan Teacher.—We understand there was a meeting of the Conference Committee in Lincoln's-inn-fields on Monday last, at which both gentlemen mentioned by you were present.

E. P. L., Yorkshire.—The epigram is—

"Sir, the plan you 've adopted is good, for 'tis mine;
But the execution 's so bad—let it pass for thine."

The Lungs of London.—The Metropolitan Board of Works have now about 1300 acres of "open spaces" under their care. By the Bill now before Parliament they are empowered to acquire, by purchase or gift, such other gardens and open spaces as may be offered.

Audi Alteram Partem.—

"When quacks, as quacks, may by good luck, to be sure,
Blunder out at haphazard a desperate cure,
In the prints of the day, with due pomp and parade,
Case, patient, and doctor are amply displayed.
All this is quite fact—and no mortal can blame it—
If they save a man's life, they 've a right to proclaim it;
But there's reason to think they might save more lives still,
Did they publish a list of the numbers they kill."

Scrutator.—The last certified accounts of the eight Metropolitan Water Companies showed that the water-rate amounted during the year to £1,247,818.

Good Templar.—The journal established in America is called the *Quarterly Journal of Inebriety*. Its first number appeared in December last. It is to be the official organ of the "American Association for the Cure of Inebriates," publishing its papers and transactions.

Argus.—The first number of the *Archiv für Ophthalmologie* appeared in 1854, and commenced with a paper of great merit in ophthalmic literature by von Graefe. This was followed for the next sixteen years by a series of his communications.

A GOOD EXAMPLE.

The Corporation of London has set a worthy example in respect to the preservation of open spaces for public use and recreation. At their meeting last week, on the petition of the Banstead Commons Preservation Committee, they agreed to take such steps as may be necessary for securing the preservation for the public use of the downs, commons, and open spaces in the parish of Banstead. The expenses incurred are to be paid out of the City of London Grain Duty, which is applicable, under the Act of Parliament, to these purposes. The Corporation at the same time agreed to take similar steps in reference to the proposed enclosure of some public recreation-grounds at Dartford.

CHANGES IN THE CLIMATE OF LONDON.

Mr. Eaton, President of the Meteorological Society, states that in recent years the climate of London has been considerably modified by the consumption of fuel and the vast population living within the metropolitan area. He calculates that the heat developed from the present annual consumption of 5,000,000 tons of coal on the metropolitan registration area of 118 square miles, and from all other artificial sources, would suffice to raise the temperature of a stratum of air 100 feet in depth, resting on that area, 2·5 degrees every hour. The effect of the growth of the population of London from 900,000 at the commencement of the century to 3,500,000 at the present time, and of the still greater increase in the comparative consumption of coal, is manifested by the rise in the average temperature of the air at the Greenwich Observatory.

SWISS PHYSICIANS AND VACCINATION.

Some time ago a general consultation of all legitimate Swiss physicians was held upon the utility of compulsory vaccination. A committee was formed to draw up a set of questions, to send them to the members of the medical profession, and to receive their replies. The questions put were the following five:—1. Does your experience incline you to the view that a thoroughly successful vaccination protects the subject against small-pox, or at least against the severer forms of it, for a long series of years? To this question 1122 doctors replied "yes," 22 "no," and 24 were "undecided." 2. Would you recommend the vaccination of healthy children? The replies were—1123 "yes," 25 "no," 15 "undecided." 3. Would you recommend revaccination? Replies—1083 "yes," 60 "no," 25 "undecided." 4. Do you consider that inoculation with retro-vaccinated cow-lymph offers such advantages that its use should be universally striven for? Replies—only 771 "yes," 213 "no," and 184 "undecided." 5. Are you an advocate for the maintenance of the present compulsory vaccination? Replies—1010 "yes," 133 "no," and 25 "undecided." Voting-cards to the number of 1376 were issued, each headed respectively "yes," "no," and "undecided": 1168 of these had been returned at the commencement of the past month, giving the support of a qualified practitioner upon each of the questions; upon some of them considerable comment was made upon the whole question.

BOOKS AND PAMPHLETS RECEIVED—

Dr. E. Bonnefoy, Guide Pratique d'Electrothérapie—Bentley and Trimen, Medicinal Plants, part 18—T. Lauder Brunton, M.D., Tables of Materia Medica—Christopher Heath, F.R.C.S., A Course of Operative Surgery, part 4—Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases, part 18—Mrs. Caddy, Household Organisation—Charles H. Blackley, M.D., New Observations on Hay-Fever, with New Experiments on the Quantity of Ozone in the Atmosphere—Em. Chauffard, Andral, La Médecine Française de 1820 à 1830—Christopher Fleming, A.M., M.D., M.R.I.A., Clinical Records of Injuries and Diseases of the Genito-Urinary Organs.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Students' Journal and Hospital Gazette—Sunday at Home—Leisure Hour—Révue Mensuelle de Médecine et de Chirurgie—National Anti-Compulsory Vaccination Reporter—Monthly Microscopical Journal—Hardwicke's Science Gossip—Edinburgh Medical Journal—Veterinarian—Archivio Clinico Italiano dei Medici Condotti—Obstetrical Journal of Great Britain and Ireland—Bulletin Général de Thérapeutique, Médicale, et Chirurgicale—Home Chronicler—Leeds Mercury—Indian Medical Gazette—Commentario Clinico di Pisa—Transactions of the Odontological Society of Great Britain—Practitioner—Chicago Medical Journal and Examiner—Jackson's Woolwich Journal—Enciclopedia Médico-Farmaceutica—Gazeta Medica da Bahia.

COMMUNICATIONS have been received from—

r. Balmanno Squire, London; Dr. Byrom Bramwell, Newcastle; Dr. J. C. Gill, London; Dr. W. A. Sturge, Paris; Messrs. Barraud and Jerrard, London; The Secretary of the Harveian Society, London; Mr. Chas. Glasin, Lynn; Dr. Chas. Drysdale, London; Mr. W. F. Tebb, London; Mr. W. Young, London; Dr. J. Fehrsen, South Africa; Mr. J. Knowsley Thornton, London; Mr. Walter Leslie, London; Mr. Lory Marsh, London; The Secretary of the Medical Society, London; Dr. A. M. Buchanan, Glasgow; Mr. George Meadows, Hastings; Dr. G. Vivian Poore, London; Dr. James Barr, Liverpool; Dr. J. W. Moore, Dublin; Mr. G. Brown, London; Mr. M. Becher, London; Dr. C. Meymott Tidy, London; Dr. W. R. Gowers, London; Dr. Wm. Squire, London; Mr. Richard Davy, London: Mr. B. R. Wheatley, London; Dr. Bruce, London; Dr. Barlow, London; Mr. John Chatto, London; Dr. C. Bell Taylor, Nottingham.

APPOINTMENTS FOR THE WEEK.

March 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Prof. Henry Morley, "On the Effects of the French Revolution upon English Literature."

12. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Buchanan (President) will address the Society on taking the Chair. The Adjourned Discussion on Dr. Edmunds' paper on Vegetarianism will be opened by Dr. Lawson.

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Gowers and Mr. Sankey, "On the Pathological Anatomy of Canine 'Chorea.'" (Microscopical Specimens will be ready for inspection at 8 o'clock.) Mr. Barwell, "On Congenital Dislocation of the Knee (Tibia forwards)." Mr. W. D. Wilkes, "Vesical Calculus (the nucleus of which was a piece of necrosed bone) removed by Lithotomy."

14. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8½ p.m. Surgeon-Major Colville, "On the Recent History of the Plague in the Province of Baghdad."

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Harveian Society, 8 p.m. Dr. Hughlings-Jackson, "On Affections of the Ear, with Nervous Symptoms."

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

16. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society (The Century Club, 6, Pall-mall-place), 8 p.m. Meeting.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Dr. James Bryce, "On Armenia and Ararat."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 3, 1877.

BIRTHS.

Births of Boys, 1274; Girls, 1224; Total, 2498.
Average of 10 corresponding years 1867-76, 2347·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	778	751	1529
Average of the ten years 1867-76	790·6	762·1	1552·7
Average corrected to increased population ...	...	...	1661
Deaths of people aged 80 and upwards ...	...	...	48

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	1	7	2	6	...	1	...	3
North	751729	44	4	5	1	8	1	5	1	4
Central ...	334369	1	4	2	...	3	...	...	...	1
East	639111	16	8	6	1	11	...	3	1	4
South	967692	22	6	3	...	12	...	4	...	10
Total	3254260	84	23	23	4	40	1	13	2	22

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·779 in.
Mean temperature	39·1°
Highest point of thermometer	55·2°
Lowest point of thermometer	23·5°
Mean dew-point temperature	31·7°
General direction of wind	W.S.W. & N.W.
Whole amount of rain in the week...	0·31 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 3, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Mar. 3.	Deaths Registered during the week ending Mar. 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2498	1529	55·2	23·5	39·1	3·95	0·31	0·79
Brighton	102264	43·4	59	37	52·0	25·0	38·7	3·72	0·52	1·32
Portsmouth ...	127144	28·3	66	36	52·0	27·0	41·0	5·00	0·21	0·53
Norwich	84023	11·2	48	38	51·5	20·0	37·2	2·89	0·44	1·12
Plymouth	72911	52·3	47	25	52·0	27·0	42·4	5·78	0·25	0·63
Bristol	202950	45·6	143	132	52·5	21·8	40·4	4·66	0·34	0·86
Wolverhampton ...	73389	21·6	52	32	...	...	...	...	...	...
Birmingham ...	377436	44·9	372	176	...	...	...	...	...	...
Leicester	117461	36·7	107	46	54·5	22·0	37·8	3·23	1·04	2·64
Nottingham ...	95025	47·6	62	49	53·2	18·1	36·9	2·72	0·56	1·42
Liverpool	527083	101·2	445	272	52·0	26·4	38·7	3·72	1·63	4·14
Manchester ...	359213	83·7	250	198	...	...	...	...	...	...
Salford	141184	27·3	126	91	53·6	17·4	37·1	2·84	1·85	4·70
Oldham	89796	19·2	61	46	...	...	...	...	...	...
Bradford	179315	24·8	139	72	50·6	20·0	35·6	2·01	1·01	2·57
Leeds	298189	13·8	213	123	52·0	22·0	37·2	2·89	1·10	2·79
Sheffield	282130	14·4	203	128	51·2	17·5	36·7	2·61	1·65	4·19
Hull	140002	38·5	132	57	53·2	22·0	37·1	2·84	0·79	2·01
Sunderland ...	110382	33·4	90	52	55·0	25·0	39·8	4·34	0·14	0·36
Newcastle-on-Tyne	142231	26·5	100	61	...	...	...	...	...	...
Edinburgh	218729	52·2	145	82	53·1	23·0	35·9	2·17	0·03	0·08
Glasgow	555933	92·1	369	309	...	...	...	...	...	...
Dublin	314666	31·3	229	191	56·0	24·8	41·6	5·34	0·76	1·93
Total of 23 Towns in United Kingdm	8144940	38·3	5956	3782	56·0	17·4	38·4	3·55	0·74	1·88

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·78 in. The highest reading was 30·21 in. on Thursday, March 1, and the lowest 28·96 in. on Monday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON A CASE OF SQUINT.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Honorary Surgeon to the Nottingham and Midland Eye Infirmary.

Allow me to call your attention to a patient suffering from the most common form of squint—"strabismus convergens concomitans." This little girl, Janet S., from Pye Bridge, is six years of age, and was first observed to squint about two years ago. Her mother assures us that the child caught the affection from a playmate, and I have no doubt she has convinced herself that such is the case. We are all so apt to attribute to accident, or some outside cause, those innate diseases or malformations which are part and parcel of ourselves, that we need not wonder that the parents of squinting children should ascribe the defect to imitation, to a habit of staring at a prominent lock of hair or at a feather in the head-dress, to worms, teething, convulsions, or some other extraneous cause, which has, in reality, nothing whatever to do with the case.

This child first began to squint two years ago, because she then began to learn to read and sew. Such patients squint so soon as the eyes are used for near objects; and the more they are thus used, the worse does the defect become. Squinting is more common in towns and great centres of industry than in agricultural districts, simply because the children are earlier and more highly educated. You will notice in this case that the child shows a slight tendency to turn the left eye inwards at times; but the right is much the worst, and we have ascertained that the sight of this eye is the weaker of the two, although she can still decipher large print with it.

It is well that we should have some means of expressing the extent of the deviation in cases of squint, and this is usually done by measuring from the median plane of the orbit. If I make a dot on the lower lid exactly in the centre, which is the normal position of the pupil when the eye is at rest, and another in continuation with a vertical line drawn through the centre of the right cornea in its abnormal position, we find the distance between the two dots is exactly three lines and a half; and this is the extent of the squint. If I now close the left eye, and direct the patient to look straight with the squinting one, it assumes its normal position; but on raising my hand we find that the left eye has become the squinting one, and, moreover, that the extent of the deviation is exactly the same as that of the right eye. You will see this perfectly if, instead of closing the left eye, I hold a piece of ground glass before it. This shuts out the left eye from any participation in the act of vision, although you are able to see through the glass the exact position assumed by it when the right or squinting eye is looking straight. It is as though the two eyes were connected by a cord that was too short to permit them both to look straight together, and that whatever was taken on one side had to be given from the other. This is what is meant by "concomitant"—that is, the straightening of the squinting eye is accompanied by the squinting of the other; and the fact that the patient squints first with one eye, and then with the other, also brings the case under the definition of "alternating." The deviation of the right or squinting eye is called the "primary deviation"; the deviation of the left or sound eye, when covered or seen through the ground glass, the "secondary deviation." The primary and secondary deviations always correspond exactly in cases of concomitant squint; and it is essential to note this, because when the squint is due to paralysis the secondary deviation greatly exceeds the primary.

Convergent strabismus from paralysis is not by any means a common affection, but through the kindness of a private patient I am enabled to show you a case. This gentleman, Mr. P., from Derby, is thirty-six years of age, and, as you perceive, squints very decidedly inwards with the left eye. Now, if I direct him to follow my finger with the squinting eye, you see that he cannot force it outwards beyond the centre of the orbit, while the great effort he makes in this direction causes him to squint much more with the right eye than he did before with the left. To appreciate the value of this symptom you must remember that you cannot turn the left eye outwards without at the same time turning the right eye inwards—they are associated actions. The central nerve-ganglia of the left external rectus and the right internal rectus are intimately connected; and when this patient makes an effort to turn his paralysed eye outwards, although he cannot effect his object, he is at the same time doing his utmost to turn the right eye inwards: hence the effect, although *nil*, or nearly so, on the paralysed external rectus of the left eye, is greatly in excess on the healthy internal rectus of the right. This distinguishes cases of paralysis from cases of concomitant squint; and you will notice a similar association of symptoms in patients suffering from uncomplicated paralysis of the superior rectus, where, owing to the connexion of the central nerve-ganglia of the superior rectus and levator palpebræ, the effort to look upwards raises the lid of the paralysed eye out of all proportion to its fellow.

Why should so many children begin to squint when they first begin to read, or write, or sew? Simply because they cannot see unless they do so. Their eyes are too short in the long axis—that is, from before, backwards. The refraction is too low, and objects, instead of being focussed upon the retina, are depicted upon a spot a little beyond it: hence the patient makes extraordinary efforts to lengthen his eye, or increase its refraction, so as to bring the picture into its proper place. You will understand this at once if you compare the accompanying outline of the short eyeball (Fig. 1) with its fellow of the normal eye (Fig. 2).

Fig. 1.

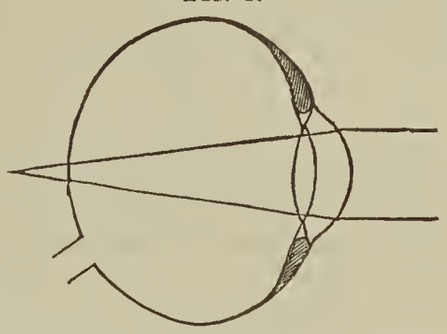
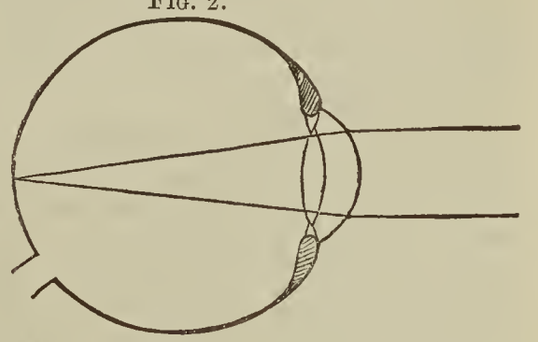
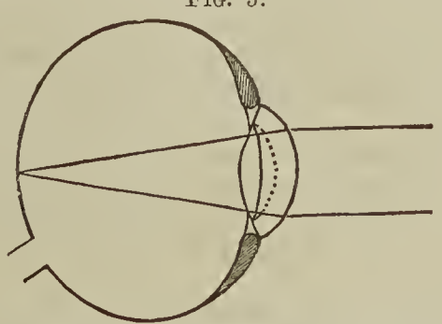


Fig. 2.



You may say, "What has this to do with squint? Squinting will not alter the shape of the eyeball." No; but it has a similar effect, as I will now explain. Patients whose eyeballs are too short are said to suffer from hypermetropia; they are obliged to exert a certain amount of accommodation—that is, render the lens optically stronger by increasing the curvature of its anterior surface by the active exercise of the ciliary muscle, even when looking at distant objects: an effort that is not at all required of the normal eye. Rays of light proceeding from objects twenty feet distant are parallel, or nearly so, and, in an eyeball of ordinary dimensions, are brought to a focus on the retina by the power of refraction of the cornea and lens alone, when the eye is at perfect rest, and without any exertion of the ciliary muscle (see Fig. 2). In hypermetropic persons it is necessary that the convexity of the lens should be increased before these parallel rays can be brought to a point, as indicated by the dotted line in Fig. 3,

Fig. 3.



where the hypermetropic eyeball is seen successfully bringing parallel rays of light to a focus on the retina by increasing

the curvature of the anterior surface of the lens—an effort which, in an eye of ordinary shape, is only required for the divergent rays which emanate from near objects. Now, if the hypermetrope is obliged to accommodate for distant objects, the rays from which are parallel, you can readily understand that considerable exertion is required in order to enable him to focus near objects, the rays from which are divergent; and this excessive effort of accommodation involves a squint, because the power of accommodation is greatly increased by convergence of the optic axes. The central nerve-ganglia of accommodation and convergence are intimately connected; they are associated actions—go hand in hand; and the one is necessarily accompanied by the other. If I put on a pair of concave spectacles, rays from distant objects are rendered to me divergent; I am compelled to accommodate for them, and I convert my normal eye into a hypermetropic one. If I now try to read, a still greater effort of accommodation is required, and I am at first unable to do so; but, with an extra effort, I manage to decipher newspaper type. Now, if you watch, you will find that this effort of increased accommodation has caused me to squint: that is, in order to exert sufficient accommodation to overcome this concave glass when looking at near objects, I am obliged to squint; and this is the case with hypermetropic children. If I use a strong pair of concave glasses, no effort at accommodation will enable me to overcome them; the squint in that case would be of no use, and is therefore not called into requisition. Hence, persons whose eyeballs are very short, who suffer from high degrees of hypermetropia, are not nearly so likely to squint as those suffering from moderate degrees of the same affection. You will often find whole families of children who (paradoxical as it may appear) inherit squint from parents whose eyes are perfectly straight—the father suffering from a high degree of hypermetropia, while the mother's eyes are normal; or *vice versâ:* the result being moderate degrees of hypermetropia in the children, who squint in order to overcome it, and are often supposed to catch the affection from one another. If I neutralise the concave glass with an equally strong convex one, no effort is required, and I can read as well as ever.

Why, therefore, do we not cure squint by neutralising the hypermetropia with a suitable convex glass? A most rational suggestion; and no doubt great good may be effected in this way, as well as by paralysing the accommodation with atropine; but, in point of fact, these patients do not come to us, as a rule, until they have squinted for some time. Often they only do so because their lives have been rendered miserable by the animadversions of their schoolfellows and playmates. Prolonged treatment with spectacles constantly worn, and which only mitigate the defect, still subjects them to remark—indeed, tends to aggravate rather than diminish this serious evil,—and, consequently, offers no attraction either to our patients or their friends. Moreover, it is dangerous for little children to wear spectacles out of doors, or when at play, they are so apt to be injured by fracture of the glass; and, strange as it may appear, after they have squinted for some time they won't leave off, even though you give them glasses so strong that the squint, far from assisting, actually disturbs vision. The old axiom, "*Sublatâ causâ, tollitur effectus,*" does not apply here, for we are compelled first of all to remove the effect by operation, and afterwards to deal with the cause as best we may. We have therefore no option but to operate in this case; and in doing so we have choice of four methods—von Graefe's, the Moorfields, Liebreich's, and a modification of these which you have seen me adopt for some years past in the cases treated at this institution.

I pinch up with forceps an ample fold of conjunctiva and sub-conjunctival tissue immediately over the insertion of the internal rectus tendon, as in von Graefe's operation; divide this, and separate the conjunctiva pretty freely from the subjacent parts, so as to avoid shrinking of the caruncle (as suggested by M. Liebreich); pass a small hook along the under border of the tendon, and cause its extremity to project beyond the upper border. I then cut upon the point of the hook through the stretched conjunctiva with scissors, thus making a counter-puncture, as is Mr. Bowman's practice, and divide the remains of the tendon under the strip of conjunctiva which is allowed to remain.

Shall we operate upon one or both eyes? We have seen that the eye which was closed, whether right or left, became for the nonce the squinting one. Now, if both eyes are closed, as in sleep or during anæsthesia, both squint; and the primary deviation, limited during waking moments to one eye, becomes equally divided between the two. Here is clear evidence of the binocular nature of the affection; and you can readily understand that it would be futile to operate upon one eye only for a squint which so evidently affects both. The tendon of the squinting eye should be divided rather more freely than the other; and in apportioning the dose between the two eyes it is well to test the sight immediately before operation, reserving the major procedure for the weaker eye of the two. Most authors recommend us to do one eye only at a time,—and this would be, no doubt, a safe procedure if we could do as we pleased with our patients; but, in point of fact, we cannot do as we please, and in deciding upon the course to adopt we must take into account various outside factors which are likely otherwise to disturb the result of our calculations. Two or three operations involve the repeated administration of anæsthetics, which patients dread more and more each time they are used. If I operate upon one eye only, the other eye is certain to squint, just as it does if closed or covered with ground glass; and, indeed, the operated eye itself will often in such cases look as if it wanted something more doing at it. When this is the case the parents are disappointed, while friends and acquaintances who deprecated the operation are triumphant, and often succeed in persuading them to decline any further interference.

In my own practice I generally divide both tendons, and am not satisfied until parallelism is pretty nearly restored.

Here is a patient operated upon a fortnight ago, who has been good enough to sit for her photograph in order that you might compare her then and present condition. The original squint in this case was in the right eye, as shown in Fig. 4,

Fig. 4.

Fig. 4.—Original Squint.

transferred, when the squinting eye was covered with ground glass, to the left eye, as shown in Fig. 5. In this case I operated upon both eyes at once, securing at one *séance* the result shown in Fig. 6.

If I had operated on the squinting eye only in the first instance, the patient would have squinted with the other, and presented an appearance similar to that shown in Fig. 5, and she would have returned home—a considerable distance—very little better for what had been done. Of course such a condition would admit of remedy; but, as I remarked before, you cannot do as you please with your patients, and if you send them away only half done, as it were, it often happens that they do not return. If I have reason to suspect that too much has been done, I limit the effect by catching up the tendon and adjacent tissues with a suture, and stitching it to the conjunctiva and subconjunctival tissues at the inner edge of the cornea, taking up a greater or less portion of tissue

according to the effect it is desirable to produce. When the patient has completely recovered from the effects of the anæsthetic, this may be tested, and the suture loosened, tightened, or removed, at pleasure. The effect of the operation is simply

Fig. 5.

Fig. 5.—Transferred to sound eye when the squinting eye was made to look straight.

to permit the tendon of the internal rectus muscle to fall back and become attached to the globe lower down. The first effect is somewhat diminished when the tendon becomes re-

Fig. 6.

Fig. 6.—Result after operation.

attached to the globe, and is afterwards, in the course of a few weeks or months, slightly increased, owing to the action of the opponent muscle, which is now enabled to exert a greater influence upon the position of the eye, so that a slight residual convergence will often disappear.

This desirable end is much more certainly attained by the use of spectacles which correct the hypermetropia. If, on the other hand, we find that the ultimate result is a tendency to eversion, the malposition may be corrected by withholding glasses, so that the necessity for convergence accompanying increased accommodation may help to restore parallelism of the globes. If, in spite of this, we find that one or both eyes are turned slightly outwards, they may readily be put straight by dividing both external recti muscles. Practice and attention to the rules I have laid down will enable you to command the most brilliant results in cases of squint. We have operated upon thousands of patients at this institution. It is a rule that each shall return within a few months, so that we may note the ultimate result. One easily forgets faces in a large practice; and it frequently happens, as you know, that we fail to recognise them, so completely has the ocular defect been removed.

ORIGINAL COMMUNICATIONS.

CASE OF ANEURISM OF CŒLIAC AXIS.

RUPTURE—HÆMORRHAGE INTO PERITONEUM—DEATH.

By THOMAS STRETCH DOWSE, M.D., F.R.C.P.E.,
Physician Superintendent to the Central London Sick Asylum, Highgate.

Thomas C., aged forty, admitted into the Central London Sick Asylum, February 14, 1876, and died in the following April. He was a baker by trade, and has not been out of this country; his father died at the age of sixty from rheumatism; his mother died at the age of seventy; he has four brothers and one sister living and healthy. There is no history of acute rheumatism; in fact, he has never suffered from any especial illness but measles and small-pox.

In the month of May, 1875, he first felt pain at the lower part of the chest (says it was a sickly pain); it usually came on after exertion. In the following August this pain extended higher up the chest, and was then associated with difficulty in swallowing (it was not felt between the shoulders); sometimes what he tried to swallow would not pass at all, but returned with wind, and then he swallowed better. When the food had once entered the stomach it ceased to give him pain. He never suffered from hæmorrhage either from the stomach or bowel. He repeatedly remarked that he neither suffered from difficulty of breathing, palpitation of the heart, vomiting, or giddiness, but his great trouble was the difficulty of swallowing.

On admission, it was noted that he was of fair complexion; the hair light, fine, and scant; skin and conjunctiva very pale. There was no facial expression of active intra-thoracic disease. He says that he has never contracted syphilis, neither has he been intemperate, but he has smoked heavily. There is complete absence of pain. The chest is well formed, and the respiratory murmur is everywhere normal. The heart gives no thrill upon palpation; the apex-beat is nearly to the seventh rib, and an inch to the left of the nipple-line. There is a diastolic murmur to be heard at the base, but its seat of greatest intensity is over the pulmonary valves. The heart's action is regular, heaving, and impulsive. The abdomen reveals no deformity upon superficial observation, yet, when its surface is scanned obliquely, an impulsive movement is detected, which becomes evident by palpation. It is situated almost immediately below, and a little to the left of, the xiphoid cartilage. Upon manipulation this pulsating tumour is found to be only slightly painful; its general contour cannot be well defined, but it seems spherical in outline. It was important to observe that it moved with the diaphragm in the act of respiration (depressed during inspiration, and raised during expiration); its impulse was not immediately synchronous with the heart's systole, but in rapid succession to, and terminating with, the ventricular diastole. Auscultation gave a marked grind at the time the column of blood was passing, which was heard over the iliac and femoral vessels; and although there was great tenderness over the tenth and adjoining dorsal spines, yet no bruit was heard in this position.

From this information I came to the conclusion that the patient was suffering from an aneurism of the cœliac axis of the abdominal aorta. It then became a serious question whether or not some benefit might arise from distal pressure over the aorta, similar to that adopted by Mr. Bryant in the

case which he brought before the Royal Medical and Chirurgical Society in the year 1873. This, according to Mr. Holmes, was the only case recorded where an aneurism, seated at so high a level as the cœliac axis, had been made the subject of deliberate surgical treatment, which, unfortunately, was unsuccessful, for I find that twelve hours after the first application the aortic tourniquet was reapplied, but was removed after four hours in consequence of alarming symptoms—unsteady and feeble breathing, great weakness of pulse, coldness of feet, and congestion of the venous system,—death following in eleven hours after the removal of the instrument.

Notwithstanding this unfavourable precedent, I had determined to give distal pressure a trial, but as my patient was returning to bed after going to the water-closet, he complained of severe pain in the chest, and expired immediately, the pupils being widely dilated.

At the post-mortem examination, which was made twenty-four hours after death, the brain was found to be of normal consistence, and the cerebral vessels had undergone no gross change. The membranes, as well as the brain-substance, were extremely pale. When the thorax was opened, the lungs were seen collapsed and shrunken, but they bore inflation, and their tissue was healthy. The heart when removed weighed seventeen ounces, and its substance was tough and fibrosed; the left ventricle was greatly dilated, and the valves were healthy, except the aortic, which were incompetent. This is usually the case in all large aneurisms of the trunk. It will be seen that the thoracic aorta was considerably dilated, and the walls had undergone atheromatous change; and it is extremely interesting to note that such was not the condition of the abdominal aorta below the aneurism. Hence, it is to be inferred that had the man lived to have permitted distal pressure applied over this vessel, some good might have resulted. Upon opening the abdomen, the cavity of the peritoneum was found to contain large masses of clotted blood. After throwing back the stomach and removing the intestines, the aneurismal tumour was seen to take its origin from that part of the abdominal aorta known as the cœliac axis. The tumour itself was about the size of a cricket-ball, and its pressure posteriorly had absorbed a considerable portion of the bodies of the ninth, tenth, and eleventh dorsal vertebræ, leaving the cartilages entire. The cavity of the ancurism contained fibrous coagula, which have been removed. The external and older layers consisted of a whitish fibrinous substance, somewhat tough, compact and dry; the inner layers were coloured and more moist. Although this attempt at repair had been set up, there was a large cavity in the centre of the aneurism without any deposit, and which consisted merely of clotted blood. The effect produced on neighbouring parts by pressure could not have existed to any great extent beyond that which it exerted upon the bodies of the vertebræ just described; and this accounts, in all probability, for the little pain and uneasiness which the aneurism gave him. Of the three branches of this axis, the gastric seemed to be more involved than the other two; and the cardiac end of the stomach was the seat of extensive extravasation between the peritoneal and cellular coats. The seat of rupture appeared to be (but it was not determined with great exactitude) at its lower and posterior part. The kidneys and liver were normal. (Specimen shown at the Medical Society.)

SOME CASES OF THORACIC ANEURISM.

By T. M. DOLAN, L.R.C.P. and L.R.C.S. Edin.,
Medical Officer to the Halifax Union Infirmary.

Aneurism must be always interesting to the physician, both from the gravity of the disease and from the difficulty in many cases in arriving at an accurate diagnosis. Insidious in its nature at one time, its existence may not be suspected or detected until the mode of death or a post-mortem reveal the secret; while at another time it presents itself in such an open manner that a correct opinion may be easily formed. The treatment, especially in modern times, has undergone so many modifications, and the pages of our journals record such favourable results from special modes, as iodide of potassium and galvanism, that the therapeutist is encouraged to look more hopefully on such affections, and to hold out more encouraging prospects to such unfortunate sufferers.

My own experience has not been favourable as regards curative measures. My contributions must be looked upon rather as an addition to our statistics, and may assist some future writer on the subject, as regards age, sex, profession, and other influences on the causation of this malady.

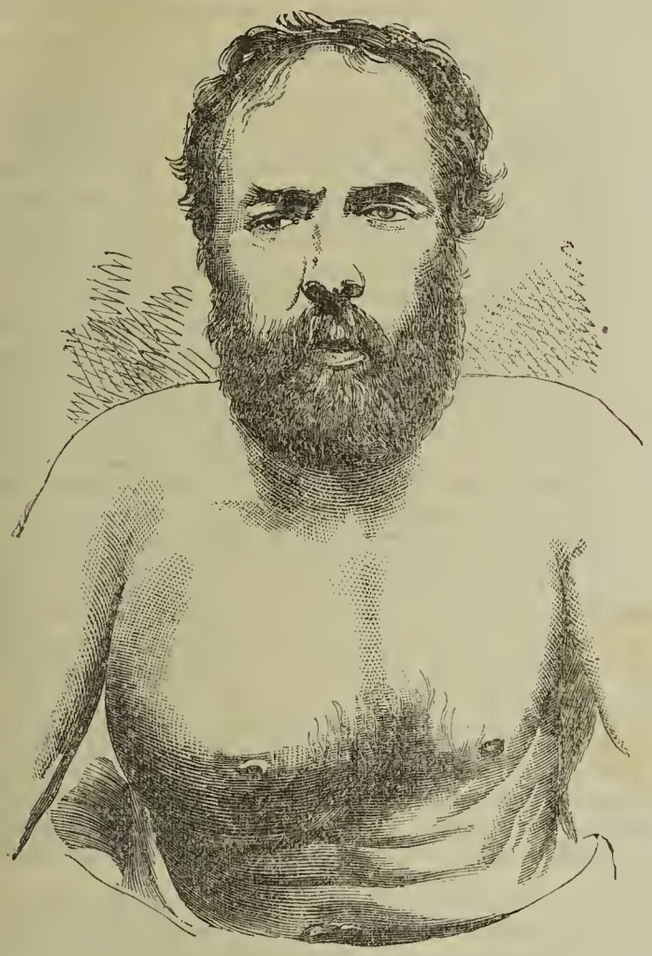
In the histories of six patients who came under my notice there have been in each case distinguishing features: in three the diagnosis was involved in obscurity; in the other three a distinct pulsating tumour revealed the nature of the malady. The first case will, I believe, prove interesting from the latency and then the sudden development of morbid action, from the very large size of the tumour, from the duration of life, and from the mode of death. It verifies in many of its details the observations of well-known observers, and, in its course forwards, fulfilled this axiom as laid down by Nélaton:—"On a remarqué que les perforation des parois thoraciques produites par les anévrismes s'observent surtout dans ses parties antérieure et droite." The mode of deaths was also in conformity with experience, not being sudden and unexpected; but the hæmorrhage took place slowly, and Nature tried for some time her own beneficent styptic of clotting to avert the fatal result.

Case 1.—J. R., aged forty-three, was admitted by me into the Halifax Union Infirmary on May 24, 1870. I knew something of his history before he came under my care. On making an examination of him I found a thoracic tumour extending upwards, downwards, forwards, and backwards on the right side. About six ribs were absorbed, with a portion of the sternum. Pulsation was distinctly marked all over the tumour. He seemed in very fair health; ate and slept well; complained of no pain or difficulty of breathing. There was very little difference in the pulse on both sides; no dizziness; no swelling of the legs; the pupils were uniform in size, and the urine free from albumen. Being an intelligent tailor of the "Alton Locke" type, he gave me an account of the first appearance and progress of his ailment. His first recollection of anything connected with it went back to June 24, 1867, when, as he was walking to attend the Halifax Fair, he suddenly felt himself short of breath. Having always enjoyed good health, he at once consulted an old and respected practitioner (the late Dr. John Garlick), who made a careful examination of his lungs and heart. There was then no external swelling, but Dr. Garlick discovered a dull spot about one inch above the left nipple, a little to the right, where the tumour subsequently began. Without telling him what was the matter, he cautioned him as to his living, and gave him to understand that it was something serious. He ordered him rest and quiet; but, being of a social disposition, the physician's advice was disregarded, and he continued his usual avocation and style of living. He was then a master-tailor, with a good business; but domestic troubles coming on, he broke up his home, and on November 19 sailed for America, visited New York, Boston, and San Francisco. There was then a slight bulging. He felt better there, but the tumour increasing he consulted Dr. Mackintosh, of Second-street, who told him to get back to England as quickly as he could, and first gave him the idea of his having aneurism. He adopted his advice, and returned to England.

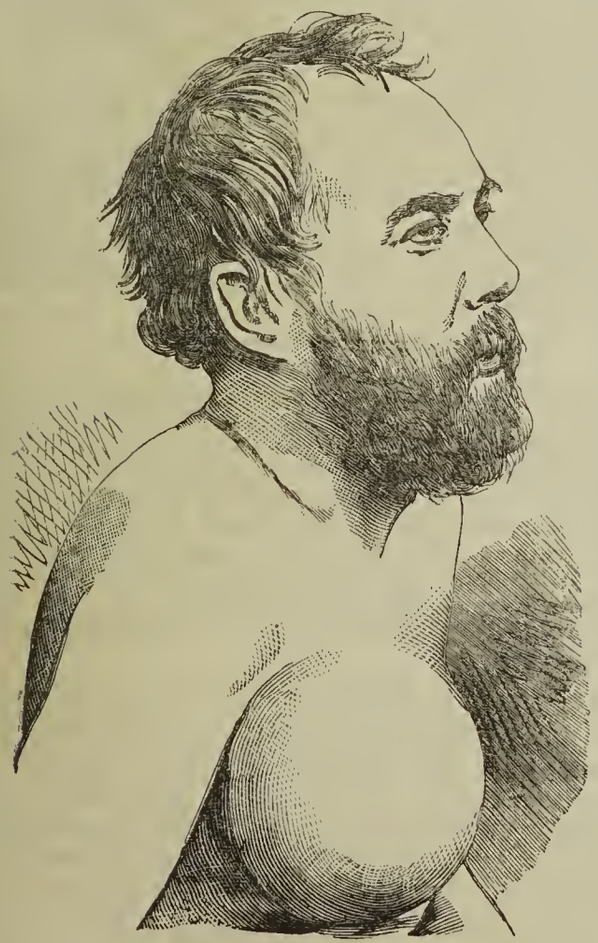
In April, 1868, he became an in-patient of the Manchester Royal Infirmary under the care of Dr. Brown. The tumour at that time was of moderate size. He remained there six weeks, but, being under the impression he could not live long, returned to Halifax Infirmary. Being erratic and fond of change, he some time afterwards went to London, and was admitted to St. Bartholomew's Hospital under the care of Drs. Gee and Harris. He could not be induced to remain, and returned again to his native town, where he saw several practitioners, became again an out-patient of the Halifax Infirmary, and then entered the workhouse. Being, as above stated, a man of some degree of intelligence, he had listened to *cliniques* given on his case, and had picked up a smattering of medical terms, and he now told me "that he expected to live many years, as it was probable that fibrinous solidification would set in, and that he hoped he would deceive the faculty." He had never done any hard work, had had many troubles, and indulged in heavy nights of drinking. He had never suffered from syphilis; had occasionally taken a blue pill; once received a violent blow on the sternum. For the last two years the tumour had grown very much, fortunately taking a direction forwards, and latterly in the course of the axilla. During the six months he was in the Union Infirmary his general health was very fair; he ate and slept well; the principal thing that annoyed him was flatulency, which was easily removed by soda, ether, and

peppermint-water. All this time the tumour steadily progressed in size; the walls got thinner, and I had to make a bag of calico and shot-lead to support the parietes.

In October he complained of lancinating pains in tumour. The accompanying engravings will convey some idea of its



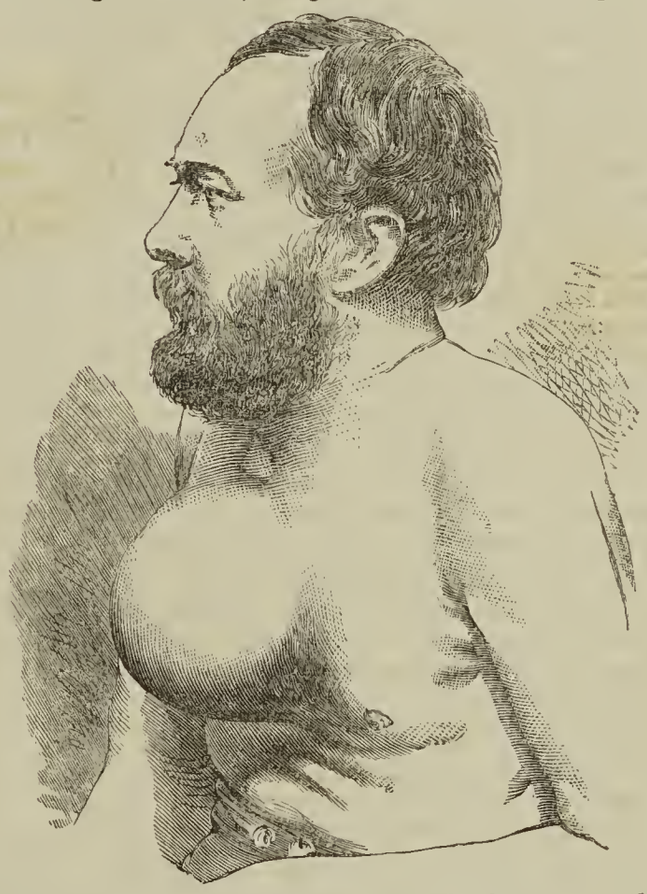
size and situation. On one of the engravings there may be seen a small dark spot, where the skin was thin and bluish,



and where subsequently the oozing commenced. Considering the nature of the tumour, its size, etc., I had little to do but prolong his life by careful attention to diet, and avoidance of fatigue or exertion of any kind.

On Monday, November 1, there was slight ulceration of skin, followed on the 13th by slight hæmorrhage. The first serious discharge took place on the 17th. On the 20th there was a more copious flow. He was quite conscious, though pale and bloodless, and then gave me instructions to make a post-mortem examination, and to ask the medical gentlemen who had previously attended him to be present, as he thought that some future sufferer from the disease might be benefited by it. From the 20th to the 25th there were intermittent gushes. On the latter day, after a violent flow of blood, he quietly and calmly expired.

Autopsy, made November 28, 1870, when there were present Mr. Hodgson Wright, Mr. Jukes, Dr. Connolly, Dr. Harmon, Mr. Aston, and Mr. Ingham. *General appearance* of the body: Nothing especially interesting; calvaria not opened. Before making an examination we thought it best to completely remove the contents of the thorax, and so examine the parts from a posterior aspect. An incision was made through the ribs on the left side, in a line from the axilla to the hip, and then through cartilages on same side; and this portion was taken off. The pericardium and left lung were thus brought into view. The pleura was non-adherent; pericardium was covered with layers of fat. Another incision was made on the extreme edge of tumour, on right side and above running along



the clavicle, and below along last rib. The lungs were then lifted up, beginning on left side, the descending portion of aorta dissected off, a cord tied tightly round the other important part, and the whole contents of the thorax turned out. The right pleura was adherent; the lung tissue comparatively healthy. The right lung was very much compressed, and was partially adherent to the tumour. The descending portion of the aorta was healthy; the arch greatly dilated. The lesions commenced in the ascending portion, about the sinuses of Valsalva, moving steadily forward towards the walls of the chest on the right side. There was a large clot, of the usual black-currant jelly type, evidently of recent formation. There was no trace left of the original sac, the parietes of the aneurism being composed of layers of fibrine of different ages, of the partially-absorbed muscles, integument, etc. The fibres of the heart were pale, the valves normal. The other organs of the body presented nothing of interest. As far as regards causation, we have—first, the man's occupation, which is favourable both to heart lesions and aneurism; secondly, we have this supplemented by an irregular life; and thirdly, we have the violent blow on the chest as the probable excitant.

Case 2.—The second case differs very much from the one recorded. The symptoms were for some years involved in obscurity. There was no external swelling. The diagnosis was based on an aneurismal bruit, which was not always present. The mode of death verified its accuracy.

R. P., bank cashier, aged forty-three, consulted me on December 28, 1873, and gave me the following history:—For the past two years he had complained of intermittent pains in the chest, sometimes sharp and lancinating, sometimes dull and continuous. When leaning over his desk the pain became worse, and he felt relief by throwing up his arms and yawning. Had previously enjoyed excellent health. He was a man of sanguineous nature, and had an abundance of animal spirits. He had always been accustomed to take long walks, and his holidays were spent in pedestrian tours. During the past three months the pain had become worse, and he felt a feeling of numbness and tingling in the right arm; he had also a difficulty of breathing, especially when walking up-hill.

When I saw him his countenance indicated intense suffering, and he had that peculiar harassed expression so often found associated with kidney disease. His symptoms closely resembled a paroxysm of angina pectoris. I made a careful examination of thorax. The breathing was laboured, and the heart's action increased; but I could not discover any lesion to account for the gravity of his symptoms. I examined his urine, and found it normal. I prescribed a liniment, chloroform, belladonna, and aconite, and a sedative, which gave him some ease. I also advised rest from business cares and fatigue.

On the night of the 24th he had a violent attack. I saw him in bed at his own house, and had a better opportunity of examining him. There was no perceptible alteration of the walls of the chest; the pulse was intermittent, and the heart's action fluttering and irregular. I then, for the first time, heard what I believed was the bruit of aneurism, about two inches above the left nipple towards the right. He obtained some relief from my prescriptions, but had occasional attacks. I then told him that his symptoms were of a decidedly serious nature, and expressed my desire to have the opinion of Dr. Clifford Allbutt, of Leeds. On January 26, 1874, we went to Leeds and saw Dr. Allbutt. The patient was then suffering intense pain, evidently of a neuralgic nature. Dr. Allbutt examined him most carefully; there was complete absence of any bruit, no intermittent pulse, and no indications to confirm my suspicions. Dr. Allbutt expressed his opinion that there was some serious occult mischief going on, and, believing that it was probably aneurism, asked me to look after the patient, and proposed to see him with me at Halifax when at his own home in a state of repose. He also impressed upon the patient the necessity of retiring from his profession, of rest, and of freedom from anxiety, and prescribed some sedatives to relieve the pain, which was then the most prominent and important symptom.

From January 26 to February 13 his condition varied very much, he having sometimes freedom from pain and at other times exacerbations. On the 13th the bruit returned. Dr. Allbutt came over on the 15th, saw him with me, and again examined him. The measurement round the chest was equable in all parts. There was no dulness on percussion; his condition was very much the same; but Dr. Allbutt at once discovered the bruit, which was most perceptible when the stethoscope was placed on the patient's back.

There being now no doubt of the nature of the complaint, and as he was a highly intellectual man and pressed hard for an explanation of his symptoms, Dr. Allbutt broke to him in the kindest manner our unfavourable verdict. We laid down rules for his guidance and observation, which he accepted with a rare amount of equanimity, and followed out strictly. The medical treatment was directed to the relieving of the pain, and we resorted to the use of iodide of potassium in the hope of producing arrest of the malady. He retired from his profession, lived carefully, took all possible precautions as regarded avoidance of fatigue and over-exertion, and dragged on his existence alternating between ease and pain.

Towards the end of April he felt much better, and had considerable freedom from pain. He then went to Southport, where he remained for about ten days, and returned seemingly none the worse.

May 9.—I saw him after his return, when he was in fairly good spirits. He had still an anxious, harassed look; pulse intermittent; pain less; the bruit persistent; no swelling of any part; appetite fairly good; urine average quantity. On the same night, whilst two friends were having supper with him, and he seemed very well, he suddenly fell back in his chair, his face flushed for a few minutes, and this was followed by faintness and pallor. I was instantly sent for, and on my arrival found him pale, weak, and faint, with incipient symptoms of difficulty of breathing. I remained with him all night. The breathing became worse, and after lingering about ten hours, and without losing consciousness, he quietly passed away. Evidently there was only slight rupture and gradual oozing of blood, and hence the slow mode of death.

A post-mortem examination was not allowed, so that it was not possible to determine what portion of the vessel was involved, or to what size the aneurism had grown. As regards causation, we can only hazard the opinion that his sedentary occupation and confinement to desk work, alternated by a sudden change to long walks and pedestrian exercise, may have had some influence in developing morbid action.

Case 3.—J. W., aged sixty-three, labourer. This patient was an old inmate of the Halifax Union Poorhouse, having been admitted in the time of my predecessor for chronic rheumatism. During eight years he had enjoyed fair health, and was able to act as an assistant in the wards. He was a strong, powerfully built man; had suffered from syphilis, and was liable to severe neuralgic attacks in the head, which were always relieved by iodide of potassium.

In April, 1874, he complained of difficulty of breathing, and of a feeling of tightness round the chest, with pain in the right arm. I examined him, and found the heart's impulse much increased, and a distinct bellows-sound. I ordered him to bed, and prescribed digitalis; it relieved him for some time, and he was able, after a little rest, to resume his ordinary duties, occasionally complaining of *malaise*.

In November, 1874, there was a slight swelling about three inches to the right of the left nipple, which he showed to me, and I then found aneurism. I prescribed iodide of potassium in moderate doses, discharged him from his office, and kept him as quiet as possible. The tumour progressed very slowly in a direction forwards, but evidently was taking a course inwards.

In November, 1875, the swelling was about the size of a hen's egg. During the same month he complained of difficulty in swallowing, and his food consisted solely of fluids. His breathing also became worse.

On the night of November 13, 1875, he expired suddenly after throwing up a quantity of blood. The tumour had evidently pressed on the œsophagus, causing ulceration, and had burst into it.

There was no post-mortem. I must here remark that it is a matter of regret that the poorhouse medical officer has not the discretionary power of making such examinations when he deems it necessary. The Local Government Board discourage the practice. The workhouses of England receive a large percentage of cases that have been at some time in our voluntary hospitals; and a verification of the actual cause of death and pathological condition is very necessary in the interests of humanity and medical science.

Inter-Hospital Football Club.—The final match for the possession of the Challenge Cup, offered by the Inter-Hospital Football Club, was played between Guy's and St. Thomas's Hospital teams at Kennington Oval on the 7th inst., when, after an exciting and stubbornly contested match, the Guy's team were declared the winners by six touches-down to one. No goal was obtained by either side. Towards the close of the match, Gray, the Guy's captain, had the misfortune to fall and dislocate his shoulder, but it was immediately reduced by Dr. Clement Lucas, who happened to be on the ground.

Sydney.—From Sydney we learn that the *Ad Eundem* and Honorary Degrees Bill was read a second time in the Legislative Assembly on January 12 last. The object of this Bill is chiefly to give the Sydney University power to confer without examination a degree upon any person who shall have obtained an equivalent degree in any other recognised university elsewhere. Sydney advices also state that the small-pox epidemic has now shown itself on board her Majesty's ships *Wolverene* and *Sappho*, five seamen having been attacked by it. Both these ships have been put in quarantine, and her Majesty's schooner *Conflict* has been converted into a hospital-ship. The steamships *Brisbane* and *Australia* have not yet received pratique, but no further cases have been reported from either vessel.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

INTESTINAL OBSTRUCTION—COLOTOMY IN RIGHT LUMBAR REGION—DEATH FROM EXHAUSTION.

(Under the care of Dr. S. MACKENZIE and Mr. RIVINGTON.)

ANN S., sixty-two, was admitted into the London Hospital on December 21, 1874, under the care of Dr. Stephen Mackenzie. She was suffering from intestinal obstruction. For two years she had experienced a pain across her abdomen, coming on some hours after food. Two months previously she felt something give way inside her whilst she was lifting a heavy pail. A month later her bowels became constipated, and she had not had a motion since that date. For three weeks she had vomited incessantly, and for a fortnight had scarcely taken anything but toast and water.

On admission, the patient's abdomen was found to be much distended, and the coils of intestine could be seen contracting after irritation. She complained of great pain, especially on the right side of the abdomen. Some soft fæces could be felt in the rectum, and were removed, but an O'Beirne's tube was passed without success. Nothing could be ascertained through the vagina.

The pneumatic aspirator was used, and the intestine punctured near the umbilicus. About five pints of air were removed, and an ounce and a half of fluid fæces came away at the end. This operation afforded the patient considerable relief.

On December 29 an elastic swelling was observed below the umbilicus, near the site of one of the punctures, and two days later an abscess in the abdominal wall was opened, fæcal pus escaping. No action of the bowels could be obtained.

On Sunday, January 3, the following was the condition of the patient, as described by Dr. Sutton, who had been asked to see her:—"The abdomen is now very much distended, rising about three or four inches above the level of the sternum; it is unequally so. The most marked projection is below and in the region of the umbilicus. This reminds one of the abdomen of a pregnant woman. The distension of the transverse colon is very distinct. There is no fluctuation; the percussion-note is clear,—unduly so in parts; no tumour can be felt. The edge of the liver cannot be felt. There is a faint systolic murmur at the apex of the heart. Three weeks ago the resident medical officer noticed a distinct presystolic murmur as well. The symptoms show obstruction of bowel, which has been coming on gradually for several months, and has become total within the last six weeks. Since then nothing has passed. The vomiting coming on a week later, and not being very urgent, would seem to indicate that the obstruction is low down; and the distension of the colon, and the impediment to the passing of the bougie, seemingly situated somewhere in the sigmoid flexure, favour this view. Vaginal and rectal examination throw no light upon the cause. The facts of the patient having suffered for about two years with pain in the abdomen, which has kept her awake at night, and of having wasted very much during the last eighteen months, whilst the constipation has become more and more troublesome during the last twelve months, would seem to indicate that a growth has been forming, probably of a malignant character. At the present time the symptoms do not indicate immediate dissolution; she passes a normal quantity of water; her pulse is small, but not very thready; and her voice has a fair volume. There is, perhaps, one very unfavourable symptom—she feels so very much better."

The same evening Mr. Rivington was sent for to the hospital to see her for the first time, and, after hearing the history and examining her, decided to perform right lumbar colotomy immediately; when the nurse reported that at 7 p.m. the patient had passed a very copious motion of an exceedingly offensive character, part of the motion being fluid, and part of it solid, and that it had been thrown away. Under these circumstances it was deemed better to wait until the following day. As it turned out, the report was a mistaken one, the patient having passed only an enema recently administered to her.

Having regard to the uncertainty which existed as to the exact seat of obstruction, and to the circumstance (pointed out by Dr. Fagge) that the ascending colon and cæcum are usually found distended, in cases of obstruction of the large intestine, at whatever point the stricture may be situated, Mr. Rivington thought it would be better to open the colon on the right side rather than to attempt the operation on the left, and in this view was supported by the subsequent opinion formed independently by his colleague Mr. Hutchinson. The operation was performed at 4 p.m. on January 5, by a transverse incision in the usual place. The bowel was reached without difficulty, but did not bulge into the wound. The peritoneum was neither seen nor disturbed. A large quantity of semi-fluid fæces was evacuated, and the stream continued with little interruption through the evening, night, and following day. The condition of the patient, which was very unfavourable before the operation, amended a little after it, but she never thoroughly rallied, and she finally sank at the end of the third day.

The post-mortem examination, made on the 8th, forty-four hours after death, was conducted by Mr. McCarthy. The abdomen was distended. A small abscess was found in the abdominal wall, connected with the wound in the skin made by the aspirator. There was enormous distension of the bowels. Commencing peritonitis was indicated by congestion along the coils of intestine, and the presence of some creamy fluid in the cavity of the peritoneum. The peritoneum at the seat of the operation was intact. The obstruction was situated at the junction of the sigmoid flexure and rectum. Two constrictions existed, the upper admitting an ordinary penholder, and the lower admitting a finger, the two constrictions being separated by an interval of about three inches, along which the mucous membrane had completely ulcerated. There were two small superficial ulcers in the mucous membrane below the stricture. The heart weighed eleven ounces, and was flaccid. The kidneys were contracted and granular. The liver was fatty. The aorta and large vessels were very diseased and calcareous.

A subsequent microscopic examination of the ulcer in the intestine was made by Mr. Needham, but nothing like cancer-structure could be found in or near the ulceration. The constrictions were due to thickening of the fibrous tissue.

HOSPITAL FOR WOMEN, SOHO-SQUARE.

HYDATID TUMOUR OF THIGH.

(Under the care of Mr. REEVES.)

[Reported by S. W. IORWERTH JOSEPH, House-Surgeon.]

M. B., aged forty-eight years, single, by occupation machinist (thirteen years), admitted into Shaftesbury ward, January 8, 1877, with a tumour occupying the inner aspect of the upper part of the right thigh. The skin covering the tumour is discoloured, and its surface slightly broken. Through a minute aperture in this discoloured skin is escaping a drop of healthy pus, and through this opening patient states a wine-glassful of clear fluid escaped a few days since. The bruised condition of the skin is due to a knock the patient gave the tumour while at work a fortnight since. The growth is more or less circular in outline, having a diameter of about three inches and a half. It is elastic, fluctuates, is freely movable with the soft structures of the part, and from it may be very readily elicited the "hydatid thrill."

The history given by the patient is as follows:—When thirteen years of age she first noticed a small lump the size of a pea under the skin, occupying the central position of the present tumour. As it occasioned little pain, she postponed seeking advice till, by its increase in size, it became very inconvenient. On this account she consulted Mr. Lake, of the London Hospital, in 1860, and the tumour was shortly after removed by Mr. Critchett. On removal patient states it weighed two pounds and three-quarters. Until 1862 patient thought it had entirely gone, when she again noticed it began to grow very slowly, and it continued doing so till nine months ago, since when it has rapidly increased in size. Patient is of full habit of body, and appears healthy. She states she has always enjoyed good health, and was only incapacitated from work when previously operated upon. The thoracic and abdominal viscera seem, on examination, to be quite healthy, and no evidence calculated to demonstrate the existence of a hydatid tumour in any other part of the body can be obtained.

January 11.—Chloroform having been administered, an incision some two inches long was made in the long diameter of the limb over the centre of the tumour, and a thick yellowish-white fibrous capsule exposed. On incising this, several ounces of clear fluid escaped, and with it several secondary cysts, varying in size from a pea to a large plum. The parent cyst-wall collapsed, and was then readily removed, and the cavity syringed out with a solution of chloride of zinc (one in twenty.) No hæmorrhage occurring, the edges of the wound were brought together by silver-wire sutures, and a drainage-tube inserted through the fistulous opening previously spoken of. The anatomical position of the tumour was superficial to the fascia lata covering the adductor longus muscle of the right thigh immediately above where it is crossed by the sartorius muscle. Some of the secondary cysts which escaped unhurt at the time of the operation were quite transparent, others cloudy, and the larger ones opaque. When placed in water some of these manifested thin irregular-shaped membranous appendices, while the surface of others appeared quite smooth and free. The microscope revealed the most perfect specimens of echinococci.

The amount of constitutional disturbance which followed the operation was very trifling, and the patient made a good recovery. She was allowed to get up for the first time on January 26, and discharged cured on February 5, 1877.

The association of hydatid tumours with fasciæ and muscles, although authenticated, is sufficiently rare to admit of the present case being put on record. Some special interest may be attached to this case, inasmuch as the patient was previously operated upon some seventeen years ago.

Note.—At University College Hospital, about four years ago, two hydatid tumours in connexion with muscles were removed. They both occurred in young subjects—one in Scarpa's triangle, the other in the back of the neck. They both contained secondary cysts. It is very desirable that cases of *recurrent* hydatid in the same spot should be placed on record, especially as it is so constantly asserted that simple evacuation of the fluid is sufficient in cases of hydatid of the lung and the liver to insure a cure. This rule is not universal with respect to the latter organ.

A Proposed Seaside Hospital at Brighton.—The proposal of the committee of a London hospital to establish a seaside hospital at the eastern end of Brighton has caused considerable excitement in that town. It is proposed to purchase the former residence of Lord Leconfield, known as East Lodge, which is for sale, and convert it into a hospital. A numerously signed memorial has been presented to the Sanitary Committee, protesting against the proposition on hygienic grounds, and setting forth the depreciating effect it would have on the value of the surrounding property. The Committee, with the approval of the Town Council, have directed the Town Clerk to communicate with the authorities of the hospital, requesting them to relinquish the project.

Strangulated Hernia at the Hospital Cochin.—M. Desprès reports that during 1875-76 he has had seventeen cases of strangulated hernia. Of these, eight were operated upon, six recovering, and two dying. Two of these were inguinal, one case proving fatal; and six were femoral, one also proving fatal. The practice at this Hospital of abstaining from the repeated and fruitless use of the taxis has been favourable to the success of the operation. All the patients, with one exception, have been operated upon on the third day at latest. The patients and practitioners in the vicinity of the Hospital have gradually learned that it is best to resort to it at once, where baths, assistants, and every convenience are always ready; and the present year is the first one on which the majority of the patients have come to the Hospital on the first day of the strangulation. The operation without opening of the sac was resorted to only once, for a large and recent inguinal hernia. In the cases of femoral hernia the sac was always opened. The nine cases which were not operated upon all recovered: four of these were omental hernia treated by expectation, and all recovered in from forty to sixty hours; the other five (three inguinal and two femoral) were reduced by non-forcible taxis after a prolonged bath. In all these cases the strangulation had existed only for from twelve to fifteen hours, and the patients had not been submitted to the employment of the taxis or purgatives prior to admission.—*Gaz. des Hôp.*, March 6.

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Medical Times and Gazette.

SATURDAY, MARCH 17, 1877.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

At the meeting of the Council of the Royal College of Surgeons on the 8th inst., the consideration of the report on the proposed alterations of the regulations relating to the education and examination of candidates for the Fellowship of the College, and of the memorial from Fellows objecting strongly to some of the proposed changes, was deferred; and it was resolved that a special meeting of the Council for the reconsideration of the subjects involved should be held on the 22nd inst. There is time, therefore, for careful examination and consideration of at least the main points of the new scheme. And certainly no one would be justified in hastily expressing an opinion either against it or in favour of it. For, on the one hand, the matter has been for a very long time under consideration: the report on which the new rules and regulations are based was adopted, and that not lightly, so long ago as April last year; the second report, formulating all the proposed changes, was adopted on December 14 last, and was not before the Council for confirmation till last week; and, finally, the proposed alterations are the work of a committee, of which such men as Sir James Paget, Dr. Humphry (of Cambridge), Mr. Hilton, and Mr. Erichsen were members. Such facts as these "must give us pause" before condemning the alterations, wholly or in part, even were we inclined on first thought to do so. But whatever weight those facts and names may, and rightly, carry, we have, on the other hand, the memorial, which we published last week, and which has been signed by 309 Fellows of the College, and is strong and important on account of the names as well as of the numbers of those who signed it. And, further, we understand, members of the College of some standing, who might be expected to approve of, and be grateful for, any lowering of the terms upon which they might obtain the Fellowship, have also strongly protested against the proposed changes.

The great objection, and by far the most important one, to the proposed new rules and regulations, is that they "reduce the present standard of the examination for the Fellowship in favour of the Members of the College of ten years' standing," or, as the new regulations put it, "of not less than ten years' standing." A Member of the College of *less* than ten years' standing is to be admissible to the first part of the Professional Examination at any time after receiving his diploma as a Member; and the subjects of that first part are to be "Human Anatomy and Physiology, and the elements of Comparative Anatomy and Physiology"; and the subjects of the second part, to which he will be admissible on conditions which we will notice presently, are to be "Surgery, including Surgical Anatomy and Pathology, and Medicine,"—the last subject being required only if the candidate has not already a medical diploma, or has not passed in Medicine for the Membership. But for the Member of *not less* than ten years' standing the subjects of the first part of the examination are to be "Surgical and Regional Anatomy" only; and the subjects of the second part, to which the candidate is to be admissible immediately, or at any time after having passed the first part, are to be (or, more correctly, the subject is to be) "Surgery, chiefly in Practical Surgery." No general Anatomy —no Physiology—no Pathology!

Now, the Fellowship of the College is the highest title that body can bestow; it is an honour-degree,—the blue ribbon of the College; and, as the memorialists say, it is now, and ought to be, equal to any surgical qualification in the country. The man who gains it ought surely to be well versed in the science as well as in the art of the profession. It has been over and over again declared that anatomy and physiology are the very foundations of medicine and surgery, and no one can dispute the high value of a good knowledge of pathology also; and yet, in the case of a Member of the College only thirty-one years of age, it is proposed to eliminate from his examination for the Fellowship, physiology, pathology, and all anatomy but what we may call local anatomy. In respect of these subjects his examination for the high distinction of the Fellowship will be much easier than that for the Membership of the College! If such an alteration is carried out, will not the Fellowship inevitably "sink in intrinsic value and professional esteem"? We cannot but think so; and, to quote again from the memorial presented to the Council, that it "will tend still further to hinder the progress of surgical education, by encouraging too many to avoid the more searching examination, and to wait for an examination which will be to them easier than that for the Membership."

Several changes are also proposed in what is to be required of Members of the College of less than ten years' standing: they are to be admissible to the second part of the Professional Examination at any time after passing the first part, or producing proof of having attained the age of twenty-five years, and of having been engaged, no matter where or how, "in the study (or study and practice) of the profession." If we rightly read the new regulations, no extra preliminary examination—no French, or German, or Greek—is to be required; no proof of "two years in the acquirement of professional knowledge in recognised hospitals and schools, in addition to the certificates "required for the diploma of Member"; no course of "practical surgery";—all these and other additional requirements are to be done away with. The wisdom of all this we venture to doubt, but we have not now time or space to consider it. We must observe, however, that, by the new regulations, Members of the College of eight years' standing will have to be examined, in the first part of the Professional Examination, in the "Elements of Comparative Anatomy and Physiology," which is not required of them according to the present regulations. Is this to be retrospective?—*i.e.*, are Members of the College who have been waiting to complete their eight years of Membership to come under the new regulations for Members of "less than ten years' standing"? We can hardly suppose that any such injustice—for an injustice it surely would be—can be intended.

We are obliged, then, to hold that the new regulations for the education and examination of candidates for the Fellowship of the College, or at any rate the most important part of them, are highly objectionable; and we have altogether failed to find any justification, or even plausible reason, for them. We have heard that it is said that the number of Fellows is diminishing, and ought to be increased. We do not see that there is any need to increase their number. There are now many hundreds of Fellows by examination,—quite a sufficient number to make a good constituency; and, at any rate, we cannot agree in the expediency even of enlarging it by lowering the value of the diploma. Are they decreasing? It is true that in the year 1873-74 only eleven Fellows by examination were admitted; but the examination had just then, we think, been made much more severe than before; and, in spite of that, seventeen were admitted in 1874-75, and in 1875-76 twenty-five—a number that had been only twice exceeded, and one other time equalled, in the last twenty years. The average number admitted yearly in the last twenty years is a fraction over eighteen, and the yearly number admitted in the last five years was eighteen; so there certainly has been no decrease of the slightest importance in the number of the Fellows by examination.

It is further argued that there exists, scattered throughout the country, a number of surgeons who for some reason or other did not attempt in their younger days to take the honour-diploma of the College, but who have since attained such an amount of position and eminence that they deserve, and it is desirable that they should now have, the Fellowship, but that they cannot and ought not to be expected to pass the present examination. We do not doubt that there are many such men,—men whom we should be glad to see in possession of the F.R.C.S. Eng., but not by lowering the examination in such a degree as is proposed. There are, no doubt, many graduates of Oxford and Cambridge who for various reasons only took a pass degree, but who have since in their respective circles distinguished themselves, and who now wish they had gone in for honours; now honour-schools, also, have been opened since their undergraduate days in subjects that might have suited them especially; but we have never heard that it has been even thought that their case is so "hard" that they ought to be admitted, when graduates of only a few years' standing, to an emasculated examination for an honour-degree. But, to meet the case of the distinguished Members alluded to, the Council of the College of Surgeons might well apply for power to elect not more than a certain number of Honorary Fellows every year. They now have power to elect two each year; but when the number to be selected is so small, the distinction becomes invidiously great, and the Council have never, we believe, exercised the power. But enlarge the number to six, eight, or ten, and confine the election to distinguished members of not less than, say, twenty years' standing, and these men will gain an honour they have earned, without the general value of the diploma having been lowered for that purpose.

We desire not to be supposed to hold that no improvements can be made in the Fellowship Examinations. On the contrary, we are strongly disposed to hold that medical instruction has been forced by the character of the examinations of late years to tend too much in the direction of a mere piling-up of, or cramming in, facts in microscopical and comparative anatomy and physiology, that cannot be of any value, directly or indirectly, in the practical work of the medical man's life and we think that more time and attention might with great advantage be given to *education*, and less to what Dr. Moxon

terms the accumulation of fact-heaps, and that the examinations for both the Membership and the Fellowship of the College might be greatly improved by testing candidates more in this direction, without really lowering their scientific character and value. We publish elsewhere in our columns this week a letter on this subject, though we do not agree with much that our correspondent "Spes" says, and we hold that he goes too far in the changes he urges.

We hold also, very decidedly, that the new rules and regulations of the College, especially as respects the examination of Members of not less than ten years' standing, are fatally depreciatory. Frequent changes in the regulations for examinations for degrees or diplomas are greatly to be deprecated, and in the present instance the proposed changes seem to us, look at them how we will, a very grave mistake. We therefore trust, and we venture to predict, that the Council of the College will on reconsideration recognise their mistake and refuse to confirm them.

THE PATHOLOGY OF WHOOPING-COUGH.

M. Guéneau de Mussy has taken the bronchial glands under his special care. Having maintained to his own satisfaction the statement that enlargement of the bronchial glands causes a cough resembling whooping-cough in character, it seemed the most obvious thing in the world to pass to the converse proposition that the characteristic element in whooping-cough is caused by enlarged bronchial glands.

We demur to the first proposition. Enlargement of the bronchial glands may be associated with a paroxysmal cough, but there is no *whoop;* and it is not more frequently followed by vomiting than any other bad cough. In some cases the cough is *not* paroxysmal; and we can recall one case at least where enlargement was considerable, and where there was no cough at all. But let us consider the converse proposition, which has been debated by our French *confrères* as though it were a perfectly novel doctrine.

In Dr. Ley's well-known book "On Laryngismus Stridulus," which was published in 1836, the following note (page 440) may be read:—"Recently four children have been brought to my house labouring under whooping-cough. In all, the glandulæ concatenatæ near the trachea were very considerably enlarged. Is this merely an accidental combination, or is there any essential connexion between the two? May it not be that an enlargement of these glands from a specific animal poison similar to that of the parotid glands—*i.e.*, mumps—is, after all, the essence of whooping-cough?" In other parts of his book Dr. Ley draws attention (and so does Sir Thomas Watson in commenting thereupon) to the *possible* sequence being first the catarrh of the bronchial mucous membrane, then the glandular swelling, then the paroxysmal cough. In his remarks Sir Thomas Watson refers to the bronchial glands rather than to the glandulæ concatenatæ. Now, this "conjectural explanation," as Sir Thomas Watson modestly calls it, has been before the profession many years. Is it likely that English and German pathologists, longing for something which should throw light upon this obscure disease, should have ignored so marked a feature as enlargement of the bronchial glands if it had existed with any degree of constancy in the post-mortems which have been made?

M. de Mussy says that enlargement is not found because it is not looked for. But he himself, although he says he has proved such enlargement always to exist clinically, has only brought forward two cases proving it by post-mortem evidence—the only evidence which we should be willing to accept. We will not deny that in a strumous child the tracheo-bronchial catarrh of whooping-cough might be followed by enlargement of the bronchial glands, just as any catarrh of the respiratory tract might. We venture to believe, however, that measles is a much more frequent antecedent of bronchial-gland enlargement than whooping-cough. But the question at issue is one of fact. Barthez and Rilliet do not record enlargement of the bronchial glands as a lesion found in post-mortem examinations in whooping-cough; neither does West: and this being so, we do not care to discuss the elaborate agreements with his hypothesis which M. de Mussy finds in the occurrence of the whoop after the preliminary catarrh, and so forth.

We will content ourselves with putting two cases for M. de Mussy's explanation. A child had well-marked whooping-cough. He contracted ague. His whooping-cough stopped absolutely. The ague was rapidly cured by quinine. Immediately the whooping-cough returned. What became of the bronchial-gland enlargement during the interval?

Second.—A common enough case. A child has whooping-cough and gets pneumonia—then whoop *ceases*. If there were enlargement of the bronchial glands, surely with the extension of inflammation that enlargement should increase, and, according to theory, the whoop increase.

To sum up:—Enlargement of the bronchial glands has not been proved to exist in a sufficiently large number of cases to give it any value as throwing light on the etiology of whooping-cough; and even if it did exist in a large number of cases, it would still be valueless in explaining the whoop, because in other diseases where enlargement occurs the typical whoop is not produced.

ARTERIO-CAPILLARY FIBROSIS.

It will be well within the recollection of our readers that Sir William Gull and Dr. Sutton brought forward, at the Royal Medical and Chirurgical Society, in May, 1872, a paper on this subject. It gave rise to most animated debates, and to debates too which resulted in a much more enlarged view as to the nature of Bright's disease being taken than had been previously held. Dr. Johnson, in December of the same year, again brought up the subject in an able paper, which was also read to the same Society. The views of these authors differed very widely. It may be as well to briefly summarise what was then taught by them respectively, before giving the substance of a communication on this same subject by Sir William Gull and Dr. Sutton, made to the Pathological Society on Tuesday last, March 6. These authors had arrived at the following conclusions:—

1. That there is a diseased state, characterised by hyalin-fibroid formation in the arterioles and capillaries, which is often accompanied by atrophy of the subjacent tissues. 2. It is probable that this morbid change begins in the kidney, although there is evidence of its beginning primarily in other organs. 3. The contraction and atrophy of the kidney are but part and parcel of the general morbid change. 4. The kidneys may be but little, if at all, affected, whilst the morbid change is far advanced in other organs. 5. This morbid change in the arterioles and capillaries is the primary and essential condition of the morbid state called chronic Bright's disease with contracted kidney. 6. The clinical history varies according to the organs primarily and chiefly affected. 7. In the present state of our knowledge we cannot refer the vascular changes to an antecedent change in the blood, due to defective renal excretion. 8. The kidneys may undergo extreme degenerative changes without being attended by the cardio-vascular and other lesions characteristic of chronic Bright's disease.

Dr. Johnson, who had previously called attention to the changes in the small arterioles, considered them due to muscular hypertrophy of the middle coat. In a paper brought before the Royal Medical and Chirurgical Society, December 10, 1872, he argued that this "hyalin-fibroid" was not an *ante mortem* pathological change, but rather a *post mortem*

mechanical result of the method of preparing the specimens for the microscope,—the action of glycerine and camphor-water, in fact. He argued, indeed, that this change was never found in vessels examined immediately after their removal from the body, or preserved in dilute spirit, instead of in dilute glycerine; in other words, he tried to show that the "hyalin-fibroid," was an artificial product, and not a morbid one; certain conditions, such as cause of death, and length of time after death at which the specimens were prepared, favouring the production of this hyalin change.

In further developing what was really the whole gist of their former paper—viz., that "the state commonly called chronic Bright's disease with contracted kidney was not essentially renal,"—Sir William Gull and Dr. Sutton in their latest communication wished to show that a wider investigation of concomitant or even antecedent changes in other organs was called for. They believe that after the middle period of life there is very commonly a pathological condition of the body which leads to fibroid changes not only in the kidneys, but more or less generally in other organs, the renal affection being but a more pronounced local expression of this general disease or degeneration. Clinical medicine from this point of view would recognise the significance and bearing of many now supposed unimportant ailments, and might find that these ailments are signs of commencing tissue-changes of the kind in question springing up in one or more of the several organs, it might be in advance of renal changes, and foreboding their advent. They believe that these tissue-changes may in some cases result from renal disease, while in other cases they may be independent of them. Dr. Johnson questioned the ante-mortem nature of the "hyalin-fibroid" deposit, which they looked upon as a characteristic change; further observation had, however, confirmed them in their views. "As to the hypertrophy of arterioles, we may say, as we did in our earlier communication, that though the muscle in some of the larger arterioles especially seemed to be increased, yet we are sensible of the difficulty of giving a true interpretation to such an appearance." Neither could they state that the muscular layer has a *constant thickness in arterioles of equal calibre*. Hence the possibility of over- or under-estimating what is normal. The changes in the spinal cord—the organ which was especially under observation—varied from simple exudation to a most extensive fibroid degeneration.

The earliest changes, which required contrasting with the normal cord in order to appreciate them, consisted of homogeneous masses, diffused amongst the nerve-elements and connective tissue, which were otherwise normal. These masses have also been called "colloid" bodies. The next stage was characterised by slight thickening of the vessels in addition to this homogeneous exudation; then gradully the fibroid change becomes more and more marked: and examples of this were shown. The ultimate result being that the new hyalin-homogeneous substance was found to such an amount as to compress and invade the nerve-tubules, so that the axis-cylinders became either destroyed or invisible. The fibroid changes resemble those of granular contracted kidney, in that they spread from the surface membrane inwards, and from around the arterioles and capillaries, compressing the nerve-tubes, causing them to atrophy, just as the tubules of the kidney are invaded and finally destroyed. These changes, nevertheless, for a long time leave many tubules unaffected, and hence both cord and kidney may retain much of their functional activity, even when they are the seat of very extensive fibroid change.

As Dr. Johnson will bring forward a paper on the same subject at the next meeting of the Society, all discussion was postponed, in deference to the wishes of the members, until after they had heard his further views expounded.

THE WEEK.

TOPICS OF THE DAY.

Some comment has been made on the fact that the ratio of registered births to population in Ireland is so far short of that of England; and it has been therefore argued that the registration of births in the former country must be excessively defective. But Dr. W. M. Burke, who signs as Registrar-General the detailed report on the year 1875, recently issued, calls attention to other returns in explanation of the difference. He states that in the ten years 1865-74 the rate of legitimate births, which in England averaged 33·4 per 1000 of the population, was only 26·1 per 1000 in Ireland. But he has also something further to state. The census of 1871 showed that in England 14·7 per cent. of the total population were married women between the ages of fifteen and fifty-five; but in Ireland the married women between these ages were only 11·8 per cent. of the total population: so that there were five married possible mothers in the former country to four in an equal number of the population in the latter; and, taking the ages of fifteen to forty-five years, the difference is even greater. Thus the birth-rates of the two countries bear the same ratio to each other as the relative proportion of married women in the population. Looking at the returns from another point, it is found that the births in England are annually equal to 224 to every 1000 mothers, and the registered births equal to 223 per 1000 in Ireland. The marriage-rate in Ireland is low in proportion to the total population; this is partly owing to the large annual emigration of unmarried persons of the marrying ages. There is a popular opinion that Irish mothers are more fruitful than those of England; but this, if true, must under present conditions be, to a certain extent, neutralised by the comparatively late period of life at which many marriages in Ireland are now solemnised. The annual excess of births over deaths in Ireland is about 1 per cent. of population.

Some extraordinary evidence was elicited at an inquest held last week on the body of a child who died suddenly in Lambeth. The mother deposed that on the Wednesday night deceased was very ill, and apparently suffering from measles. Witness went to a woman-chemist in the Kennington-road, and stated the symptoms, receiving two bottles—one containing castor oil, and the other a medicine of a purple colour. Witness administered these medicines as she was told; but although the castor oil sent the child to sleep, the mixture had such an effect upon her that the witness could hardly hold her. About eight o'clock the next morning the child died. James Kipping, the father, said he went to the woman-chemist, and told her of the death. She at once said, "Run back, then, and fetch the stuff." He did so, and handed her the bottle. She put it to her mouth, and remarked, "Lord, bless my soul! it is a bad job; I can't do anything for you." She walked up and down the shop, and got out of sight; and he suddenly heard the tinkling of glass. She then came forward, and handed him the bottle, saying, "It is no fault of yours or mine; if I could have seen the baby my partner would have given a certificate." Witness ran home, and upon looking at the bottle, saw that the purple liquid had been thrown away, and a light-coloured liquid substituted. Mr. Carter, the coroner, remarked that the case had assumed a very serious aspect; and he therefore adjourned the inquest for a fortnight, in order that an analysis of the contents of the child's stomach might be made. We must of course defer any comment on the case for the present, except just to point to this as a fresh proof of the folly and danger, as well as the prevalence, of chemist-practice.

The fresh outbreak of small-pox at Chatham, which we reported last week, has fortunately not spread. Mr. J. B. Jardine, the Medical Officer of Health, states that the epidemic is gradually disappearing from the town. He again, however, expresses a hope that a hospital for infectious

diseases will be at once erected and made ready before another epidemic occurs, by which means the earlier cases may be isolated, and many lives saved.

The Southampton townspeople are making vigorous efforts to secure for their neighbourhood the advantages presumably to be derived from the establishment of a Naval College for Cadets in the vicinity. They have forwarded to the members of the House of Commons a statement setting forth the superior claims of the Netley site for the proposed College, as compared with the site at Mount Boon, near Dartmouth.

A very important judgment was last week delivered by Lord Chief Justice Cockburn on the subject of the administration of noxious drugs. At Bodmin Assizes a man was charged with administering cantharides with a criminal intent. The Lord Chief Justice, after consultation with Mr. Justice Hawkins, ruled that there must not only be an administration of a noxious drug with a guilty intent, but that the drug must also have been administered in such quantities as to be noxious, whereas the dose here given was too small to be seriously deleterious. Distinction was drawn between a drug like cantharides, which is only noxious when given in excess; and strychnine, a well-established poison. The man was consequently acquitted. This case is so important that we propose to refer to it again.

A case of gross recklessness in the dissemination of disease is reported from Bristol. At the meeting of the Bristol sanitary authorities held last week, Dr. Davies, the Medical Officer of Health, stated that the driver of the ambulance used by the Bristol Workhouse authorities for the conveyance of fever patients to the hospital, a few miles distant from the city, had on his way from the hospital picked up five persons as passengers. He had conveyed two fever patients to the hospital, and then, calling at a public-house, he allowed four women and a child to journey in the ambulance to Bristol. It was decided that the man should be proceeded against under the Public Health Act.

We understand that the committee appointed by the Admiralty to inquire into the causes of the outbreak of scurvy in the late Arctic Expedition have been requested by the Board of Trade to confer with a departmental committee which has been engaged in collecting evidence concerning scurvy in the mercantile marine, the Board being anxious to profit by the information which has been gained in this inquiry, with a view of checking, if possible, the numerous cases of the disease which have lately occurred in the merchant service.

A special exhibition of "arrangements and apparatus for heating and ventilation" is about to take place at Cassel, in Germany. The exhibition will open on April 1 next, and will close at the end of August; the reception of apparatus, etc., has already begun. Awards will be made at the close of the exhibition, which bids fair to be very popular, as the committee have already received applications for space from almost every country of the Continent. Arrangements with English firms have been undertaken by Mr. B. W. Fothergill, civil engineer, Felsberg, Cassel, from whom all particulars may be obtained on application.

The Health Committee of the Sheffield Corporation have instructed the town clerk to inform the Local Government Board that their medical officer is making an inspection of those parts of the town of which complaints as to unhealthiness have been made, with the view of giving effect to the provisions of the Artisans and Labourers' Dwellings Improvement Act, 1875. In consequence of the magnitude of the scheme, which comprises an area extending over 127 acres, it will take some time to complete the inspection.

On Saturday evening last, Dr. Corfield, Professor of Hygiene in University College, delivered a lecture at the Society of Arts on "Foods and Drinks." Dr. Carpenter, C.B., F.R.S., occupied the chair; and there was a very large audience. The lecturer explained the reasons why beef is more nutritious, though somewhat less digestible, than mutton; the disadvantages attending the use of pork, from its closeness of fibre and superabundance of fat; and the comparatively low value of the flesh of young animals. Good meat, he pointed out, should neither be too pale, indicative of disease, nor too dark; it should be elastic to the touch, and not become moist if kept. Salmon was pronounced to be as nutritious as beef or mutton; but eels, mackerel, and herrings were less easily digested than most other fish, because of the fat contained in their muscles. Dr. Corfield quoted Dr. Parkes's opinion that spirits do not sustain the body in resisting extremes of heat or cold, that they induce liver disease, and decrease the power of working; that strong wines and beer were liable to cause gout; and that even light wines and beer should be used, if at all, in moderation, and only at meal-times. In conclusion, the lecturer referred to the nerve-stimulating and non-intoxicating qualities of tea, coffee, and cocoa, and the dangers of indigestion resulting from their abuse, especially in drinking them too hot.

THE METROPOLITAN ASYLUMS DISTRICT BOARD AND THE FULHAM AND DEPTFORD HOSPITALS.

The Metropolitan Asylums District Board have put forward a circular under date 24th ult., explaining a charge of unnecessary delay which was made against them in a recent Parliamentary discussion, in the building of new hospitals at Fulham and Deptford. The circular sets forth that in July, 1875, the Select Committee of the House of Commons appointed to inquire into the action of the managers in regard to the establishment of an infectious hospital at Hampstead, approved the proceedings of the Board in regard to the provision of their hospitals, and recommended that administrative offices, similar to those then proposed to be permanently erected at Hampstead, should likewise be made ready on the two vacant sites at Fulham and Deptford. Accordingly, on October 9, 1875 (the first meeting after the recess), a special committee of the Board was appointed to report upon the best method of giving effect to this recommendation; and on December 4 following they submitted their plans, which were approved by the managers, and forwarded to the Local Government Board for the necessary sanction. By adopting these plans alone, the managers would have carried out to the letter the suggestion of the Select Committee of the House of Commons; but the Administrative Offices Committee felt it desirable to mature a plan for the erection of hospital buildings in connexion with the administrative blocks, so that, in the event of its becoming necessary to provide accommodation at either place, no delay would occur in doing so. After much correspondence the plans for the administrative offices were finally approved by the Local Government Board on March 10, 1876, the plans for the pavilions being deferred for further information. At this date there were only eight small-pox patients in the hospital at Stockwell, and none in that at Homerton. On July 15, 1876, tenders for the erection of administrative buildings at both hospitals were accepted, the time fixed for completion being March 25, 1877. The high price of bricks would have made it unjustifiable for the managers to offer for tenders earlier. On October 11, 1876, the Local Government Board recommended the pushing on of the buildings at Deptford only; but the managers at once proceeded to settle pavilions for both sites, and they ultimately obtained authority in December last to proceed with the erection of thirteen pavilions at Deptford to accommodate 390 patients, and ten pavilions at Fulham for 300 patients. Finding that it would be impossible to get the necessary machinery for the laundry and kitchen in working order before the 15th ult., the managers arranged that date for the completion of six

pavilions at Deptford and four at Fulham, the remainder to be completed by the 25th inst. The first-named pavilions are now completed, and are ready for the reception of patients, the staff at each having entered on their duties on the 26th ult.

OBSERVATIONS ON THE PURPLE OF THE RETINA.

Professor Boll, of Rome, has lately discovered that the retina of all animals assumes a purple colour if kept for some time in the dark, and that it again becomes colourless when the animals are exposed sufficiently long to strong daylight. Professor Kühne (*Centralblatt*, Nos. 3 and 4, 1877) has succeeded in utilising this discovery to obtain what we may call photographs, or pictures of external objects, upon the retina. His process is as follows:—The head and the eyeball of a living Albino rabbit were fixed so as to look towards a window through which alone the daylight entered the room. The nearest point of the window was one metre and three-quarters from the cornea, the most distant three metres. After having been protected from the light for some time, the covering was removed, and the eye exposed for three minutes to the cloudy sky. The animal was then decapitated, the eye immediately extirpated by the light of a sodium flame, and at once immersed in a 5 per cent. solution of alum. Immediately after the animal's death, the second eye was exposed to the light just as the first had been. After twenty-four hours had elapsed, the eyes were removed from the alum solution, and examined. The eye which had been exposed *during life* showed scarcely any alteration; whereas at the back of the retina of the eye which was exposed after the animal's death, "a complete picture of the window, with its six corners and a round pane, was visible as a white outline upon red ground." The same effect was also obtained by simply exposing the head and eye of a recently decapitated rabbit, which had been previously kept in a dark place, for ten minutes to a large skylight in a laboratory lighted by several other windows. After the eye had lain twenty-four hours in a 5 per cent. solution of alum, a most excellent picture was visible on the back of the retina, the margin of the window and the rods between the panes appearing as beautiful red bands, while the panes themselves were white. Since the publication of Dr. Kühne's researches, Dr. Helfreich, *privat-docent* at Würzburg, has shown by experiments on rabbits that the purple colour of the retina can be observed with the ophthalmoscope. He found that the eye of an Albino rabbit, which had been kept in the dark for some time before decapitation, retained this colour more than fifty minutes after death. The retinal purple contrasts strongly with the colour of the choroid bloodvessels.

TRAINING COLLEGE FOR TEACHERS OF THE DEAF.

Our readers are no doubt aware that efforts have been made of late to introduce into England the improved system, known as the "German" system, of education for the "deaf and dumb," which communicates language by *lip-reading* and *articulation*. This has a great superiority over other methods, in that it enables those taught by it to communicate with their fellow-creatures so much better than when they are unable to use spoken language. His Royal Highness the Prince of Wales presided, the other day, at a dinner in aid of the "Association for the Oral Instruction of the Deaf and Dumb," which has its schools in Fitzroy-square, and is doing excellent work, deserving of all possible support. But it is said that there is a great want of a master and mistress thoroughly competent to teach the new, or rather the revived system of lip-teaching, and a great demand for governesses in private families. It is proposed, therefore, to establish a Training College in the immediate neighbourhood of London; and an English gentleman, Mr. A. A. Kinsey, has been trained for this special work by practical education in the best "German" system schools in Germany, and is in every way qualified to act as Principal of the College. "A practising school will be attached to the Training College, in which all the branches of a sound English education, together with moral and religious instruction, will be given in the same manner as in schools for hearing children—*signs and the manual alphabet being rigidly excluded.*" The scheme has the approval of the Rev. Canon Barry, D.D., Principal of King's College, London; the Rev. Canon Cromwell, Principal of St. Mark's College, Chelsea; Drs. T. R. Armitage and E. Symes Thompson, and other persons. And the Honorary Secretary is B. St. John Ackers, Esq., of 85, Wigmore-street, London, W., who will be happy to afford every information on the matter. As this scheme will help forward the work done by the schools of the Association above mentioned, it seems well worthy of the support and interest of the public.

DEATH UNDER THE ADMINISTRATION OF NITROUS OXIDE AND ETHER.

A death has recently taken place at University College Hospital during anæsthesia from nitrous oxide gas and ether, being, we believe, the first fatal case which has occurred in this country that can be attributed to this combination of anæsthetics. The patient was a woman fifty-five years of age, who was admitted to the Hospital in consequence of strangulated femoral hernia. When admitted she was in a very weak and exhausted condition from constant vomiting, the hernia having been strangulated for over forty-eight hours. She was taken into the operating-theatre, and gas and ether administered by means of Clover's apparatus. In about four minutes she was well under the influence of the anæsthetic, without having exhibited any previous excitement. Taxis was then applied, when almost immediately the patient became pale and recommenced vomiting stercoraceous matter. At the same time the respirations became weak, and the pulse at the wrist imperceptible. The doors and windows of the theatre were at once thrown open, and artificial respiration was carried on for a few minutes. As no obvious benefit resulted, an enema, containing three ounces of brandy, was administered. Fumes of strong ammonia were applied to the nostrils, and ammonia injected into the right median basilic vein, but all without any good result, and the patient died within about ten minutes from the onset of the alarming symptoms. At the autopsy, stercoraceous matter was found in the trachea and right bronchus. The right side of the heart and the large veins were full of dark fluid blood. The ventricular walls were thin and flabby, and the cavities slightly dilated. The left ventricle was empty. The arch of the aorta presented numerous patches of atheroma.

THE MEDICAL SOCIETY OF LONDON.

The 104th anniversary dinner of this Society was held on Thursday, March 8, at the St. James's Hall Restaurant, at 7 p.m.; Mr. Wm. Adams, President, in the chair. Eighty-five Fellows were present; and amongst the visitors we noticed Dr. Risdon Bennett, Mr. Callender, Fleet Surgeon Belgrave Ninnis, Dr. West, and Major Duncan. The Fothergillian Gold Medal was presented by the chairman to Dr. Peter Braidwood for the best essay received on Pyæmia; and one of the silver medals of the Society to Mr. Richard Davy. At the ordinary meeting of the Society, on the 12th inst., the new President, Dr. G. Buchanan, took the chair; and after thanking the Society for his election, adverted to the comprehensive nature of the Society's work, showing how it had ever held itself to be concerned with the whole range of medical knowledge, and not with this or that branch of it. The Society had escaped the tendencies of that school which had regarded medical science as ending with the observation of facts, and which had cared little for the interpretation of its observations, and little for the applications of science to practice. Among the earliest promoters of the Society were

to be found men of equal eminence as anatomists and physiologists, as pathologists and as practitioners. Moreover, it reckoned among its earliest Fellows the greatest of all sanitary physicians, who, indeed, was peculiarly identified with the Society. And to this high idea of a "medical society" this Society had remained true. It had aimed at including in its ranks all medical workers, knowing the mutual interdependence of each branch of medical knowledge upon another, and the unity of the object to which all were directed. The President concluded by pointing out the manifold aspects—physiological, therapeutical, and sanitary—under which the subject then discussed deserved to be regarded.

THE RENEWAL OF PRESCRIPTIONS.

In Germany it has long been the law that druggists shall refuse to dispense a *second* time any prescriptions which contain "drastic, emetic, diuretic, emmenagogue, narcotic, or other similar powerful medicines," unless the physician who wrote the prescription accords his permission, by previously signing them and appending the word "*reiteratur*." This law, like so many others, appears to have fallen into neglect, and a Ministerial circular has recently been issued, recalling the attention of druggists to it, and requiring its strict observance. We mention this circumstance because some similar regulation might well be introduced into our own country. As it is, a patient once furnished with a prescription for morphia, chloral, and other similar drugs, can supply him or herself almost *ad libitum* with such medicines; and we have known instances in which ladies have habitually consumed large quantities of chloral hydrate, which, except through wilful laxity on the part of the druggist, could only have been procured in this way. Some regulation to prevent the use of prescriptions by anyone, except the person for whom it was originally ordered, is also a great desideratum. Among ladies especially, the practice of lending prescriptions which happen to have "done them good" to friends supposed to be suffering (wrongly more often than rightly) from a similar affection, is extremely common, and a double injury is inflicted by such a practice—first, by the treatment of a disease with inappropriate remedies; and secondly, by cheating the medical profession of its just privileges. It is true that such a custom often does most harm to those who lend themselves to such underhand practices, by the disappointment they suffer, owing to the failure of the supposed remedy; but, on the other hand, it is clearly unjust that a medical man should be paid for prescribing for half a dozen people only at the rate for which he gives his time and experience to a single indivividual.

SMALL-POX IN ST. MARYLEBONE.

The report of Dr. Whitmore on the health of the parish of St. Marylebone for the month of February last, whilst showing that the death-rate was 6·45 per 1000 less than in the corresponding month of last year, records the number of deaths from small-pox registered in the parish during that period to have been four, the same as in the two previous months. Three were children aged respectively four, seven, and eight years, and one was a young lady aged twenty-two years. All of these were reported as unvaccinated. With regard to the young lady—who had the disease in its confluent form,—she was the daughter of a medical man occupying a very respectable position in the parish; and Dr. Whitmore remarks that it would appear somewhat unaccountable that one so circumstanced should have been permitted by her father to live to that age unprotected: unaccountable, because it is hardly possible to imagine that any intelligent member of the medical profession at the present day can be opposed to vaccination. The number of small-pox cases occurring in the parish, and reported to the medical officer since the last report (January 28), was forty-nine. A widow, with her four children, occupied a room in a house in Manning-place: one of the children took small-pox, and, having it in its mildest form, was nursed at home; in the interval of a week a second child sickened with the disease, and died; a third also took it, and died; at length the other child and the mother both took it, and were removed to hospital. These children were all unvaccinated, but it is certainly within the bounds of probability that, had the child first attacked been removed to hospital immediately on the appearance of the disease, the mother and the other children would have escaped; and, had they been vaccinated, no further attacks might have followed the first outbreak.

SANITARY REFORM IN GERMANY.

Considerable annoyance is expressed in medical circles in Germany, that a law for the better regulation of coroners' inquests, which has long been promised, is not likely to be laid before the German Parliament this session. Commenting on the apathy of the German Government in refusing to take notice of numerous urgent petitions from medical men and various life insurance companies in favour of the Bill, the *Berliner Klin. Wochenschrift* gives vent to the opinion which has often been applied of late years to another Government nearer home, that "in everything connected with medical science the authorities are anything but eager to institute reforms."

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 104 and 84 in the two preceding weeks, rose again last week to 96; of these 43 were certified as unvaccinated, 25 as vaccinated, and as to 28 no information was given on this point. The Registrar-General states that during the past three weeks the deaths of 51 children under five years of age, certified to have been unvaccinated, have been referred to small-pox; of these 20 were registered last week, including 12 in the North and 5 in the East groups of districts. Of the 96 deaths from small-pox, 46 were recorded in the Metropolitan Asylum Hospitals, 1 in the North-street (Poplar) Infirmary, and in St. Thomas's Hospital; the remaining 48, or half the total fatal cases, occurred in private dwellings. After distributing the hospital cases, it appears that 16 of the deceased small-pox patients had resided in Bow, 17 in Southwark, 11 in Islington, 5 in Marylebone, 5 in Hackney, and 5 in Lambeth; in all, 5 belonged to the West, 25 to the North, 3 to the Central, 31 to the East, and 32 to the South groups of districts. Owing to a fresh outbreak in Islington, the fatal cases showed an increase in North London; the disease, however, continues to cause the highest death-rate in East London, especially in Bow. The Metropolitan Asylum Small-pox Hospitals contained 928 patients on Saturday last, including 140 convalescent cases at Limehouse, against 901, 916, and 907 at the end of the three preceding weeks. The new cases admitted during the week were 225, against 205 and 230 in the two previous weeks.

MEDICAL PARLIAMENTARY AFFAIRS.

Cattle Plague.—Complaint was made by Lord Fortescue, on Thursday, March 8, in the House of Lords, with reference to the limited distribution of Orders in Council respecting the removal of cattle during the prevalence of cattle plague. It is very desirable to give every facility for these orders not only being promptly obeyed, but known, by the drovers, etc., so that they should have no excuse for infringing such important restrictions. The Duke of Richmond explained that these orders had been very widely circulated among the local authorities, shipping agents, etc. He had also given instructions for the unlimited sale of the Proclamation in question to all applying for it. One more case of cattle plague is reported from Hull.

Small-pox.—Mr. James drew attention to the thirty-fifth annual report of the Registrar-General, in which it is stated that 13,424 persons died of small-pox, but there is no attempt to classify these deaths with reference to the controlling in-

fluence of vaccination. Mr. Sclater-Booth explained that the Legislature had not given the Registrar-General the means of insisting on such information being supplied in all cases.

War Office.—The sanitary condition of the War Office was again alluded to by Mr. Coope. The estimate, prepared at the suggestion of the Committee of Investigation, for the necessary alterations and repairs, had been submitted to the Government, who were seriously considering what steps ought to be taken in the matter.

Small-pox.—In consequence of further delay in closing the Small-pox Hospital at Limehouse, Mr. Ritchie inquired how soon the Fulham Hospital would be open. Mr. Sclater-Booth replied that the delay was caused by the contractors, who attributed it to the changes of weather. Saturday, March 10, was fixed for the opening, and the Deptford Hospital would be opened a few days later.

Scurvy.—Mr. Hunt promised to lay on the table of the House the report of the Committee of Investigation into the outbreak of scurvy in the Arctic ships.

Government of the Metropolis.—The question of the government of the metropolis by a powerful and representative central board, controlling the district vestries, was again brought before the House of Lords, when Lord Delawarr rose to move for a return of the sums expended by vestries and district boards upon paving, lighting, drainage, water-supply, and sanitary arrangements and other works, not under the jurisdiction of the Metropolitan Board, during the years 1874-76. Earl Beauchamp, on the part of the Government, consented to the production of the papers, but defended the system of local administration. The motion was agreed to.

Cattle Plague.—Lord Sandon acknowledged the receipt of a report by the Privy Council of the existence of cattle plague in Lincolnshire. Several animals on one farm, nine miles from Grimsby, have been affected. The chief inspector of the Government is on the spot, investigating the origin of the outbreak. A dairyman at Stepney had also reported the existence of cattle plague in his dairy, which consisted of 130 cows, and five animals were slaughtered immediately. The remaining 125 will be slaughtered at once. Every precaution seems to have been taken by the use of disinfectants, etc., to keep the sheds free from disease.

Small-pox.—An inquiry was made in the House of Commons respecting the reported conveyance of small-pox patients to the District Asylums in cabs, instead of invalid carriages belonging to the different parishes. Mr. Cross replied that at Homerton Hospital one case had been brought there in a cab, and the police were instituting proceedings against the offending parties. At Stockwell two cases were similarly conveyed, but the cabs had been duly disinfected. A fine of £5 was imposed. The porters of the hospitals had strict orders to take down the number of any cab-driver so offending, that proceedings might be taken against him and the hirer.

Samaritan Hospital.—The Committee of this institution have appointed Mr. Spencer Wells, F.R.C.S., and member of the Council of the Royal College of Surgeons, Consulting Surgeon in the vacancy occasioned by the decease of Sir William Fergusson, Bart. Two Surgeons for In-patients have been appointed to succeed Mr. Wells as Surgeons to the Hospital—viz., Dr. G. Bantock and Mr. Knowsley Thornton, who have for some years past assisted Mr. Wells in the wards, and have regularly attended in the out-patient department. It is probable that two Surgeons for Out-patients will be appointed in the vacancies created by the promotion of Messrs. Bantock and Thornton.

The Committee of the Sailors' Home in Liverpool having had prominently brought before their notice the immense harm done to the inmates of the Home and other seamen by the numerous quacks (who, true to their instincts, are to be found in large numbers) near the Home, have opened a dispensary for seamen in suitable premises close to the Home. The cases will be strictly limited to those of venereal disease, and the patients to seamen. By this means it is hoped that no unfair encroaching on the work of other charities will be caused, and no abuse of the new dispensary. It will be on the self-supporting system, a shilling being charged for each attendance. The services of two surgeons have been obtained, and the dispensary has now been in working for some time. It would be premature at present to say more than this—that the undertaking promises very well.

ARMY MEDICAL DEPARTMENT.

(*From a Correspondent.*)

The last Royal Warrant, which regulates the conditions of service in the Medical Department, is a remarkable document for many reasons. It has an historical importance in the annals of the Service, for it terminates the old, and commences the new, order of things medical. It is the death-blow to the old army doctor, and it forces into life a new variety, in the shape of a general practitioner in a red coat. The romance of the Service is finally extinguished, and in future it is all to be hard work, no play, and as little pay as possible. The army doctor of the old school has for some years held his position on an uncertain tenure. His privileges have been doubtful, his rank questionable, and his home crumbling away. In the old days, when the army was a "caste," when the combatant officers represented, in theory at least, the landed aristocracy and gentry, whose sons sought the profession of the sword as the only fitting employment for gentlemen, the army doctor was in many respects different from an ordinary medical practitioner. He entered the army because, although he loved medicine and surgery much, he loved other things more, or at least as well. He liked wars, adventures, and travels in far lands, and he took delight in the society of men better placed by the accident of birth than himself, but neither more honourable nor better educated. Companionship in camp effaced the arbitrary distinctions of civil life; and the military doctor was recognised as an equal, and treated as a friend, long before he had proved his professional value in the hour of need. And as years rolled on, and the assistant-surgeon grew to be a surgeon, he acquired a real, even if an undefined, power. His regiment was his home, from which, during good behaviour, he could not be moved. He got to know the medical and private history of every one of his comrades; he knew how to mediate in difficult matters of leave of absence; he could arrange little outbursts, which dwindled down under his care into temporary illness, but which might otherwise have magnified into undignified quarrels and culminated in courts-martial. He was everybody's friend and a privileged person. Assistant-surgeons grew up around him, whom he ruled with a fatherly care, and who relieved him of the drudgery of hospital work, while he played the part of consulting-surgeon or physician, excepting in times of war or epidemics, when danger, wounds, or distress broke down all barriers of relative rank. He was, in fact, a very happy man, for he had obtained in position and in friends pretty nearly all he wanted. He had not much money, but he had more than wealth, for he had "honour, love, obedience, troops of friends." And then there came a frost—"a killing frost." Some evil genius asked, Why should the army doctor sit down the ruler of the mess-room, and have an assistant-surgeon to do his work for him? "Look at the facts," said the Reformer. "There are fourteen men in the regimental hospital; eight of them are suffering from discreditable diseases, four with blisters on their heels, and two with black eyes. Why should there be two medical men to attend to such cases as these? The hospital sergeant could administer the routine treatment from bottle No. 1, or No. 2, and dress the blisters as well as the doctors themselves." As for the hospital returns, they in fact were usually made out by the non-commissioned officer, while the surgeon and his assistant merely exercised a gentlemanly superintendence. The Reformer never thought of the "hard times"; he ignored the cholera outbreak in the East Indies, and the yellow fever in the West, when the doctors had more than repaid by tremendous overwork the ease and quiet of country quarters in England. Above all, the Reformer ignored the fact that the old-fashioned army doctor, when young, had given up his professional prospects so far as a future provision for old age was concerned, for the very reason that he accepted the life of occasional excitement, varied by intervals of repose, as an equivalent. The hard-headed Reformer said, "Five hundred men, with fourteen sick, and eight of these only in hospital, as a matter of form, don't want two doctors to look after them!" It is to be feared that the assistant-surgeons in later days were not true to their cloth. They were tainted with the faults of their age; they wanted to be surgeons before their time; they craved for brass scabbards; they longed for relative rank; and they thirsted for the "present

arms" of the sentry at the barrack-gate. We can remember when old army doctors were called in print "old pantaloons" by the youngsters, who wanted to wear their predecessors' trousers with the broad gold stripe. The youngsters disclosed the nakedness of the land in the shape of patients; they hinted how they could attend the fourteen men single-handed, and have plenty of time afterwards to ride the charger provided by Government, wear the brass scabbard and the shining spurs, and return, with a grace unknown before, the salutes of the sentries: and they were taken at their word. The lives of the old army surgeons were made wearisome to them: they were removed from their dearly loved regimental homes; they were deprived of their assistants; and they were made to work harder at the end of their career than ever they had done at the beginning. They lost all they had served for in the way of social position. It is true that a doctor in the army was, is, and always will be, "*the doctor*," and nothing more. He cannot command a regiment, he cannot give an order to the sergeant-major nor even to his patients; but, for all that, the army doctor of the old school was a real "power" in his regiment. It was sometimes, indeed, safer to quarrel with the colonel than with the doctor. But, once deprived of his regiment, an army surgeon is poor indeed, so far as influence is concerned. Nobody knows anything about him, excepting when he appears in the sick ward or officers' quarters, with his scalpel in his pocket; and acquaintanceship first formed under these circumstances rarely ripens into friendship. The army doctors who were not driven from the Service were first made miserable by the system of "unification." This was the first step towards the "New Warrant," which completes the destruction of the old state of things, although it was not probably intended to do anything of the kind. Unification was simply meant to satisfy the cravings of the economical Reformer, and yet leave the Medical Department untouched, and, according to some, more thoroughly united than it had ever been before. The Department under "unification," it was also supposed, would be actually fairer to everybody. When all doctors were members of a great staff corps everybody would get his turn of foreign service, and no more would be heard of surgeons remaining with cavalry regiments for twenty years in England, while others were hurried about from north to south, or east to west, on the staff, and hardly ever saw their native homes at all. It would be fairer to the public, also, that all medical officers should be available for special services quite irrespective of their supposed claim to be with their own regiments; and it would only be just that two medical officers should not be kept regimentally idle, while staff men were overworked elsewhere. But reform, however well-intentioned it may be, needs to be carefully introduced to prevent the infliction of unnecessary hardship on individuals; and reformers, as a rule, perhaps, are not men of delicate sensibilities: and certainly the heads of the Army Medical Establishment have not shown much sympathy for those who fell victims to the "unification system." The first reform crops are generally pretty well mixed with tares and dragons' teeth, and "Whitehall-yard" reaped hatred where it had sown unification. The older men complained with justice of broken faith, and the younger ones of broken expectations. The juniors had indeed got rid of their seniors, and had succeeded to their dignities, but there was very little dignity left. We have before us now a letter from a senior medical officer, who writes, in his despair, "I wish they would send us all to the 'right-about' at once, and give us our pension; consign the soldier to the local practitioner, and stop the pay of the former when unfit for duty."

This opinion of one of the old school, aggrieved by the new order of things, pleads as an excuse, to a certain extent, for the last innovation—the "New Warrant." The inventors of the "unification" system found they could not stop! Unification might be wise and good and prudent, but medical students would not present themselves to undergo the process. They had heard the bitter complaints of the old army doctors, and they learned to disbelieve in promises and pledges, and steps of rank and relative quarters, which had been explained away, and modified, and broken, until the Department had utterly lost its good name.

It became evident to all that it would be one way out of the difficulty *to get rid* as much as possible of the "military doctors" with all their traditional rights and privileges; and probably the idea of utilising the "local practitioner" forced itself upon many opposite minds at the same moment. There is, of course, something to be said in favour of such a step. There never was any necessity why two military medical men should have been employed in the olden time to look after the health of 500 soldiers. England is intersected by railways, and in most cases it could not be difficult to transfer a sick man from his regiment to the nearest station hospital. In the few cases where a man could not be moved, a local practitioner could be called in; and in epidemic seasons a medical officer from the station hospital could be specially attached to a regiment. But, as a rule, a medical officer in England with each regiment must be considered as an extravagance, *if a separate hospital and staff are to be kept up for the use of the few patients he may have to attend.* There is routine work enough to afford employment for one medical man, in the examination of prisoners and attendance at ball practice; but in England a complete establishment for each regiment cannot be otherwise than a waste of public money. But England is not Great Britain. There is India to hold, and Malta and Gibraltar to defend, and a hundred weak settlements to protect. Here the local practitioner cannot be utilised, and the army doctor cannot be dispensed with. It was necessary to invent somebody or something, to be both a local practitioner and an army doctor at the same time; or, at any rate, capable of being the one or the other at a very short notice. At last somebody hit upon the idea of short service, and invented the "last Warrant." Why, as it has succeeded so admirably in the ranks, should it not be tried with the medical students of the British hospitals? As each private soldier still retains his original trade, and falls back into its pursuit when his short service has expired, not a worse, but a better tradesman, from the polish he has acquired in the barrack-room, and the habits he has picked up in garrison towns, so might the civilian practitioner be enticed by the red coat, the cocked hat, and the sword, to give the best years of his life to army-doctoring, fully persuaded that the habits and refinements of military life would make him all the fitter to recommence work as a country practitioner! If, in his military career, the general practitioner in a red coat was no longer *of* a regiment, he would at least be *with* it; and if *society* was less open to him, he would have the more time to devote to professional pursuits. No wonder that the new system should have charms for "Reformers." To invent a new corps of army doctors, who should select the army for the exercise of their profession, and yet not be allowed to remain in the army long enough to become entitled to the few prizes the Army Medical Department affords, was much; to deprive them of the right of hanging on for pensions, was even more; and to keep the doctors in their proper places, was perhaps, to purely military eyes, the greatest temptation of all. The army doctor of the New Warrant was intended to be a model man—here to-day, and gone to-morrow; attached to a regiment at Calcutta in June, and ordered off to Lahore in July. No longer a companion, but an intruder in every mess, with no commanding officer to appeal to, no friendly major to consult, no subaltern to share his confidence, it might be expected that the doctor would at last learn his place, and, in his solitary life, find the solace in his "vade-mecum" which the lonely Roman Catholic priest obtains in the daily perusal of his "office." At home, the refusal of leave and of the indulgences extended to combatant officers would still keep him true to the duties of a professional life, and after a few short years he might be expected to retire most willingly and cheerfully from the Army Medical Department, wiser even than his years, though perhaps a little older too. *Will short service in the Army Medical Department answer? and will the present Warrant succeed in obtaining the required supply of doctors?* We have endeavoured to think out these questions carefully, and we have come to these conclusions:—That "short service" in the Army Medical Department will, and must, be *made* to answer, and that it can only be forced into success by more liberal terms than are offered by the Government at present. It is altogether a question of money, and of the value that each young medical man should put upon his own life. Competition is severe in these days, and the struggle for bread is hard enough; employers give as little as they can, and workmen exact as much as they can get. But people, as a rule, in the present age *know what they are doing when they accept employment.* From the highest to the lowest they look to their wages. The tinsel and frippery, the swords and feathers, may be taken as adjuncts to a certain position, but not as an equivalent for pay. Let the medical student bear in mind that the "romance of war" no longer can attach to the Army Medical Service; it has gone for ever. The cocked hat is there, but it is a useless encumbrance; the sword means

nothing, and the brass scabbard of a field officer is a mockery. If a young doctor enter the Service nowadays, he will not become necessarily *one of the family;* he will but wear the family livery and do the hard work,—so if he be wise let him look well to his wages.

FROM ABROAD.

The Diarrhœa of Teething.

From some interesting lectures on "Acute Diarrhœa," delivered by Dr. Thomson, Professor of Materia Medica and Therapeutics, University Medical College, New York, and publishing in the *New York Medical Record* (1876, Nos. 311 and 318), we transcribe some remarks of importance upon the diarrhœa of teething:—

"I have often suffered from toothache myself, with the invariable result of finding that an aching tooth can seriously disturb the stomach. It is not the pain alone which takes away the appetite, furs the tongue, and brings on a qualmish dyspepsia; for the divisions of the trigeminus are allied through more than one branch with the gastric nerves, so that not only a frontal headache accompanies an irritated gastric mucous membrane, but, *vice versâ*, a painful tooth will often in adults check the flow from the follicles in the stomach. It would seem, therefore, that we may infer correctly that the reflex irritation produced by one or several teeth pushing their way through the narrow bony bed in the undeveloped jaw of infancy may be severe enough to suspend the gastric secretion almost completely. Should this occur, the milk will soon be vomited with a very sour smell; and, simultaneously with this symptom, you have plain evidence that something is producing pain and disturbance in the bowels. Irregularities of local temperature—the unfailing signs of radiated intestinal irritation—first manifest themselves: the feet and hands turn cold and contract: the head becomes hot and the face streaked; and soon the vomiting is succeeded by an evacuation which has the same kind of fermented odour that is perceptible in the matter ejected from the stomach. There are other characters besides the odour, such as the collections of undigested casein. But we would direct special attention to the sour smell, for this reason: Though the gastric acid is itself normally acid, nothing that it is mixed with should smell sour, this being a certain indication of fermentative change caused by the deficiency, and not by the excess, of the proper acid. On the other hand, the intestinal juice is alkaline, but still is as effectual a preventive of fermentation as is the gastric juice, so that sourness is equally an evidence of a great deficiency in the normal secretions of the bowels, and due to the same cause, namely, arrest, through reflex irritation, of the functions of the digestive glands. The way to treat such a diarrhœa will, therefore, differ in several respects from the treatment of almost any case of diarrhœa in adults. The first thing to do is to put a stop to the nerve-irritation; and for this purpose we may adopt several different procedures. One of the oldest and most familiar is scarification of the gums—an excellent measure if done when needed, and that is only when there is hyperæmia of the gums. If they are swollen and hot, a few drops of blood drawn by the prick of a lancet relieves them greatly, on the principle that local blood-letting is one of the most effective vascular and nervous sedatives that we know of. We are utterly without an explanation of this fact; but the child is quieted in just the same way that the dreadful spasmodic dyspnœa of a thoracic aneurism is sometimes marvellously quieted by the trivial bleeding from two or three leeches applied at the top of the sternum, or the pain of pericarditis by the same at the præcordium, or the irritable stomach in acute hepatitis by the same at the epigastrium, or the headache of meningitis by the same applied to the mastoid process. There is no support afforded by these clinical facts to the advocates of general bleeding, for the amount of blood taken in the case of aneurism, for instance, is too little to produce the slightest change in the sac or its contents. But the cases where lancing the gums is called for are comparatively few. We should remember that the greatest aching usually accompanies the growing of the teeth through the bony canal, before they begin to encroach upon or irritate the gums at all; and hence, if the gums are neither red nor tumefied, you had better not attempt the operation, for it will be of little avail. The laity, and some physicians even, imagine that cutting the gums is for the purpose of making a way for the teeth to grow out; but a young gentleman, ambitious for a moustache, might as well prick holes in his lip to help the hairs appear, as the practitioner to think that a soft mucous membrane can really delay a growing tooth.

"We have, however, in the bromide of potassium an agent which possesses an incontestable power of arresting reflex irritability. Its free administration lessens even normal movements, as in winking; and if you are annoyed with excessive excitability in the fauces of patients whom you wish to examine with the laryngoscope, you can generally soon obviate this by giving half a drachm of the bromide; while the more the reflex irritability is morbid in its degree, the more effective will this agent be found. It is not an anodyne in the usual sense of the term, for I doubt if it relieves pain at all; but it certainly can prevent, by its paralysing effects on reflex processes, the toothache from disturbing travels to distant nerve-distributions. Whether this theory, however, be correct or not, I believe that I have found this drug exert a positive remedial action in the diarrhœa of dentition, given in five-grain doses every three hours or so. I need only mention also that it is of special use in those numerous cases where slight irritations are apt to induce infantile convulsions or spasmodic croup. Another effective agent for calming the nervous symptoms, and thus restoring the stomach and bowels, is cold to the head. I have found Potter's hydrostatic bag, filled with enough iced water to make a comfortable cushion for the child's head, act as nicely in checking restlessness and inducing sleep as the most approved medicinal prescription. Cold water applied to the head directly is objectionable for many reasons, so that if you cannot procure a water-tight receptacle, I would recommend your adjusting bottles of iced water about the head, which should first be protected by a thin napkin or handkerchief. When you take into consideration the great disproportionate development of the brain and nervous system in children, you will readily see the need there is for early attention to the deranged central circulation which is so apt to supervene in them, and which soon of itself must react upon the gastric and intestinal disorder. The paralysing effect on reflex action of immersion in lukewarm water is doubtless also the explanation of the benefits found from the use of the warm bath in these cases."

Prof. Thomson adds, however, that the primary object should be to get rid of the food, which, by fermenting in the alimentary canal, not only acts as a local irritant, but prevents the digestion of any matters subsequently taken, by inducing also fermentation in them. All real nutrition for the time ceases, and the child is in much the same condition, and has the same appearance, as if it had not been fed at all.

"I have never, therefore, seen cause to regret my beginning the treatment of such cases with the nursery remedy of castor oil; though I have seen cause to regret not doing so from a mistaken confidence in the previous purging having dispersed sufficiently the offending matters. We are apt to be too much influenced by the activity of the diarrhœa towards stopping the flux at once, lest it exhaust the patient. But it is scarcely possible to irritate the patient's bowels with the oil, however given, in comparison with the irritation which fermented cheese is capable of producing; and so often will the whole trouble promptly subside after a single good operation by this medicine, that I am inclined to recommend your beginning the treatment of infantile diarrhœa with it very much as a routine prescription. After it has acted, you may rely on your other measures with much more confidence than you have reason to entertain without it. Another indication, present from first to last in the course of the complaint, is to supply the deficiency of the gastric juice by artificial substances. You cannot do any harm by pepsin and a few drops of muriatic acid, but you may be doing therewith just what is needed to prevent a repetition in the abnormal change in the food; and when there is much gastric irritability, the addition of bismuth to pepsin is indicated. . . . The derangement of the digestive process of course demands also for a time that the stomach be allowed to do less work. The heat of the mouth and fauces (especially after vomiting) increases thirst so much that the child is likely to be nursed or fed too often. Drinks of cold barley- or rice-water in spoonful doses, or equal parts of milk and lime-water, are therefore very properly recommended, for the reason that, with no real appetite, the patient should be relieved with drinks that will tax the stomach the least; otherwise your best prescriptions may wholly fail. Should you find, say on the second day after beginning with these measures, that the diarrhœa

continues, and that the discharges are more frequent or watery, I would then begin with a combination of familiar correctives, which I have found best administered in Dr. West's rhubarb mixture. . . . The superiority of the rhubarb mixture (as compared with the usual mixtures containing sulphuric acid and laudanum, chalk mixture, ipecacuanha, or astringents) appeared to me so certainly demonstrated that it has influenced me in treating summer diarrhœa in young and old ever since. West's prescription is this:—Magnes. sulph. ℥j., tinct. rhei ℥ij., syr. zingib. ℥j., aq. menthæ ℥ix.; one drachm three times a day for children a year old. You will notice that there is no opiate in this mixture; and you should bear this in mind, for if you can check a diarrhœa of this kind without this drug, by all means do so. Instead of thinking of opium first, think of it last, when the bowel-trouble has mal-digestion as its beginning, because opium is invariably a hindrance in children to the proper secretion of digestive juices. The indication of opium arises only when the discharges not only continue profuse, but are also evacuated with a suddenness which betokens excessive peristaltic action. In such a case, the addition of a drop of laudanum to each dose of the mixture will generally suffice, for I prefer to give the sedative only in this combination, as the one least calculated to neutralise its interference with the digestive secretions."

REVIEWS.

On Alcoholism, the various forms of Alcoholic Delirium, and their Treatment. By Dr. V. Magnan. Translated by Dr. W. S. Greenfield. London: H. K. Lewis. 1876. Pp. 258.

Not only the medical profession, but also the general public, owes a debt of gratitude to Dr. Greenfield for having undertaken the translation of so important a work as the one before us, and for thus placing it within the reach of all readers. The book is not necessarily one for medical readers only; its bearings are universal, and its doctrine applies very widely: and the more extensively it is read, the better will it be for the moral and material comfort of every class of society. It is strange that there is no original work in the English language bearing on the subject now before us. No doubt a good deal has been written, not only in books, but also in pamphlets and in the periodical literature, on the delirium potatorum, and on the ultimate effects of alcohol in its different forms on the various organs of the body; but a systematic treatise on alcohol does not, we believe, exist. Further, under existing laws it would be exceedingly difficult to produce a work so thorough as this one, for in it clinical deductions on human beings are largely supplemented by experimental observations on animals, more especially dogs. It is marvellous how nearly the effects of alcohol on dogs resemble those produced in man; and such being the case, it is at once obvious what valuable conclusions, physiological, pathological, and clinical, may be arrived at from carefully conducted experiments. It will not be possible to follow our author minutely; we must rather content ourselves with a very brief *résumé* of his teachings, and refer the reader for more extensive details to the original source.

He says, "Chronic intoxication in its ultimate evolution follows two different paths, the one ending in dementia, the other in general paralysis. These two modes of termination correspond, the first to fatty degeneration, the second to diffuse sclerosis of the nervous centres." Such is the ultimate result of drink. It would, indeed, be difficult to say which is the less desirable.

The action of alcohol is studied, first as to its immediate effect on the system, then as to its effect after prolonged use. As illustrating the former, a case of alcohol administration in the dog is given, and its clinical effects are noted. First of all there is simple drunkenness, with excitement, hebetude, paralysis, anæsthesia, and coma. After the prolonged use of alcohol we see a change in the dog's behaviour: irritability, hallucinations, delirium, tremors, vomiting, gastro-enteritis, and death, either from cold, broncho-pneumonia, asphyxia, accident, or marasmus. Dr. Magnan also gives an account of absinthe poisoning, and shows how its effects differ from those produced by alcohol. Absinthe affects especially the head and neck—that is to say, its influence on the medullary and cervical regions of the cord is the more remarkable as alcohol acts in a directly opposite manner: the latter, in fact, brings on paraplegia first, before paralysing the anterior parts of the body. Absinthe, on the contrary, excites muscular shocks in the fore-quarters before producing general convulsions; vertigo and attacks of epilepsy being, indeed, the two degrees of poisoning by absinthe. In addition, however, one sees disturbances of intellect, which are very important in their bearing on this question; for, while alcohol requires to prepare the ground in order to give rise to hallucinations, absinthe excites the phenomena of hallucination from the very first.

Chapter II. gives an account of alcoholic delirium in man, tracing the symptoms and effects. Patients are classed in three classes—those with easy, complete, and rapid convalescence; those with slow convalescence and tendency to relapse; and such as are predisposed by heredity and have frequent relapses. Prophylaxis is also here discussed.

Chapter III. discusses febrile delirium tremens. The views here propounded are at variance with the opinions currently received in this country—that is, that delirium tremens, when uncomplicated by inflammatory disease, is a delirium without fever; the diagnosis, indeed, often hinging on this point. We agree with the author and translator in believing that this view is incorrect and untenable. The question of restraint is also discussed, and, if considered necessary, the best means for its application are described. Chronic alcoholism is considered in Chapter IV. Speaking of treatment, our author says, "Confinement, or, at any rate, vigilant supervision if allowed to live outside, appears to be indispensable." "These patients, in fact, as we have already had occasion to remark, weakened in their intellectual, moral, and affective faculties, are yielded defenceless to the caprices of their instinctive appetites." Chapter V. treats of combinations of alcoholism with various forms of mental derangement, and its association with intercurrent diseases.

Altogether the book is most interesting, and we confidently recommend it to all those especially who are engaged in psychological practice, and also to general practitioners.

An Elementary Treatise on Diseases of the Skin, for the use of Students and Practitioners. By Henry G. Piffard, A.M., M.D., Professor of Dermatology, University of the City of New York. London and New York: Macmillan and Co. 1876.

This is a truly ponderous volume. Out of curiosity we put it on the scales, and found it weighed just four ounces short of three pounds. That is a good weight for a students' book dealing with but a small portion of medical knowledge. These heavy books, with thick covers, large print, wide margins, and beautiful thick cream-coloured paper, are a mistake. Both students and practitioners want books easy to hold up; that will go in the pocket without tumbling through with a crash; and that put the value into the literary portion, and not into the cover. This is a general protest against the muscle-fatiguing tomes which medical publishers are now so fond of issuing, and of which Dr. Piffard's work is but an example. Turning to the contents, Dr. Piffard gives us, as usual, a chapter on the anatomy and physiology of the skin, which, although it enables him to introduce some excellent remarks on the origin of the cells of the upper and lower layers of the rete mucosum, seems to us quite out of place. Every student and every practitioner worthy of the name has an Anatomy and a Physiology to which he can refer, and there is no more need of attaching such a chapter to a work on diseases of the skin than to one on general medicine—the latter being an obvious absurdity.

Some useful little instruments for examining the skin are figured in the section on diagnosis, but we imagine that a trained eye is more valuable than any instruments, and that the student who wishes to know something of skin diseases should be urged to see, see, see cases. Dr. Piffard classifies skin affections in, in some respects, a new and rather startling manner. Of course, syphilides, parasitic diseases, and eruptive fevers fall naturally into their places. But some persons will wonder at finding ichthyosis among diathetic affections, and acne vulgaris, herpes præputialis, and xanthoma (or xanthelasma) among reflex affections; while in a class which is headed "affections of uncertain nature" we find huddled together *inter alia* the erythemata, pemphigus, purpura, prurigo, elephantiasis, keloid, scleroderma, scleriasis, lichen planus, vitiligo, etc.! Among non-parasitic local affections we find "intertrigo"; but surely there is no more reason for its being so

placed than there would have been for classifying under the same head any of the other local forms of artificial eczema to which intertrigo belongs.

Eczema, psoriasis, and pityriasis we find classed together (*à la* Hardy) as "rheumides," which Dr. Piffard explains is his translation of the French word "dartres." He enters into a long chemico-physiological explanation of his views as to this triple alliance, which we warn the student strongly against accepting, though our space will not allow us to enter into any argument on the subject. Curiously enough, the author stultifies himself somewhat, as far as "the diathesis of sub-oxidation" in pityriasis capitis is concerned, by admitting that Malassez's discovery of a fungus in this disease is correct, though he still believes that pityriasis has "its *fons et origo* in the conditions embraced by the rheumic diathesis." Following the French again, we have a chapter on the "scrofulides," which is just as puzzling as Hardy's original work, on which it is based. We are sorry to find Dr. Piffard falling back, from the solid ground of fact of the Vienna school, into the very loose soil of theory which Hardy and Bazin (and especially the former) have cultivated. The main value of this work appears to us to be the good *résumé* of recent foreign literature which each article contains. The chapter on molluscum contagiosum illustrates our meaning well. Too little stress is laid on diagnosis. For instance, in the "scabies" chapter, the regional distribution of scabies and pediculi corporis wants to be more clearly brought out. There are omissions of importance in many of the chapters. With regard to psoriasis, American statistics are wanted instead of those of Dr. McCall Anderson, and one is startled that not a word is said about psoriasis being the common hereditary skin disease *par excellence*. Under "urticaria" the eruption due to copaiba—a frequent source of mistake to students and young practitioners—is not alluded to. Arsenic and the constant current are not mentioned in the treatment of the neuralgia which follows herpes zoster. And the list of omissions might be much further extended. Dr. Piffard speaks of "impetigo contagiosa" as having been first isolated and accurately described by Dr. T. Fox in 1864; but few persons seem to be aware that the true describer was Thomas Bateman,(a) who, in 1836, writing of the impetigo favosa or honeycomb scall, speaks as follows:—"The acrimony of the discharge is also manifested by the appearance of inflammation, followed by pustules, ulceration, and scabbing, on any portion of the sound skin which comes into frequent contact with the parts diseased. Thus, in young children, the breast is inoculated by the chin, and the hands and arms by contact with the face. The disease is also contagious. The arms and breasts of the nurse are liable to receive the eruption; but it is not so readily communicated to adults as to children."

The illustrations in Dr. Piffard's book are largely derived from the much-pillaged work of Dr. Neumann. It is time that dermatologists who write books should furnish their own illustrations, instead of transferring plates wholesale from other people's volumes. We cannot say much for Dr. Piffard's own microphotographs, which seem to have been taken from very thick specimens, not always cut vertically. We object to the spelling of "perneo" for "pernio," a chilblain, at page 312; and to the adjective "paratrim*mum*," which Dr. Piffard has coined out of the classical noun "paratrimma." There are very few errors in typography. The general style of the book is rather dry, almost the only trace of (? unintentional) humour being where the relapsing form of herpes about the genitals is said to be a source of great annoyance "to those having much use for those organs"!

In spite, however, of its many defects, this is perhaps the best treatise on diseases of the skin which has appeared in English for some time.

Death of Professor Dolbeau.—Science, teaching, and practice have just incurred a loss that is much to be regretted. Scarcely forty-six years of age, M. Dolbeau has succumbed to an attack of cerebral hæmorrhage. Professor of Surgical Pathology, Member of the Academy of Medicine, and Surgeon to the Beaujon Hospital, he had acquired great renown, and he owed it to some important works, among which his "Traité de la Lithotritie Périnéale" will remain one of the great steps in the surgical progress of the epoch.—*Union Médicale*, March 13.

(a) "A Practical Synopsis of Cutaneous Diseases," eighth edition, edited by A. Todd Thomson, M.D. London: Longmans, 1836. Page 193.

GENERAL CORRESPONDENCE.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

[To the Editor of the Medical Times and Gazette.]

Sir,—In common with many others like myself, still outside the pale of the Fellowship, I have read with much interest the memorial presented to the Council of the College by actual Fellows. They seem to imply that any modification in the requirements will impair the value of the diploma, and be an injustice to those who have already obtained the diploma according to the present standard. I will not say anything concerning this latter consideration, except that the present standard has only been adopted during the past three or four years, and the number of those who have passed is very small. As regards the former proposition, I must say I venture to disagree, and for the following reasons:—1. Because the large majority of our present first-class men (who are simply Honorary Fellows), by their works and teaching and present position, have shown that such tests as are now applied are *not* necessary; and 2. Because a number of men, now F.R.C.S., who are rising to the topmost positions, have done so although they passed their Fellowship examinations at a time when the examination was probably even *less* difficult and *less* scientific than that which is now given for the Membership.

It may, no doubt, be argued that things are changed, and that the requirements of the examiners of to-day are not more difficult in proportion to the advanced state of our knowledge than were past requirements compared with the state of knowledge of former times. Such an admission would, however, be a plea in favour of relaxed conditions, as it would demonstrate that men who have been less well taught while students can nevertheless successfully compete with those who have been more thoroughly and more scientifically taught.

My chief reason for troubling you, sir, with this letter is to give some of the arguments which seem to me—an aspirant for the Fellowship—to tell in favour of a relaxation of the present conditions. First, and chiefly, I argue that minute and comparative anatomy are not necessary to the successful practice of *surgery*. And I believe the Fellowship is intended as a high-class diploma for such as desire to practise surgery, rather than as a qualification in anatomy. This even the memorialists must admit; and I would ask all the examiners—even the new ones, who have been elected in the belief that they were especially well up in anatomy—whether they have not to refresh their memories before going into the examination-room, and whether before each examination for the Fellowship they have not to get up some part or parts of their anatomy in order to be able to give a candidate a proper examination? Now, I do not want to disparage science, or to underrate the power which some men possess of getting up any subject which they set their minds to, but I have put my question in order to show how little anatomy is really required for a successful surgeon, and I would only ask that in examining men of some standing they should be put through a practical examination. I should despise a diploma which was simply given to me; but I should like to feel that every question I had to answer at my examination was dictated to the examiner's mind by the recollection of some case in which the knowledge he was asking for would be essential either to diagnosis or treatment.

It would indeed lower the intrinsic value of the Fellowship if a merely nominal examination were to be instituted, but I think that minute and comparative anatomy might give place to practical regional and surgical anatomy.

Then, as regards the second part of the examination, the examiners should be all the more rigid in their practical and *vivâ voce* parts, for this is, to my way of thinking, the real part of the diploma; and such additional rules and regulations might be imposed as would compel men to hold resident appointments in their various hospitals, and to become thoroughly acquainted with clinical surgery in all its bearings.

Neither can I agree to the statement that this proposed relaxation would encourage men to wait. The memorialists forget that this waiting would cost the better men, and those to whom the Fellowship would be a consideration, hospital preferment, and be a formidable barrier to early, and possibly all, success.

Other objections are also raised. One is that it would be

an injustice to existing Fellows. This is indeed a paltry argument; and there would be no advance if improvements might not be introduced because those who had gone before us had not had the same advantages. Finally, the Fellows seem to think that there are enough of them, and they could consequently shut the door behind them. This argument I leave to work its own remedy.

I believe, sir, it was in your journal that I read an interesting article on the "Supervision of Medical Schools," in the latter part of last year. In this you suggested that the College should supervise the instruction which is afforded at their recognised schools of medicine. I fully agree with you, and I believe that this would tend, more than any stringency in examination, to produce competent and well-informed students. I regret that my own experience prompts such a remark; I had to learn my anatomy as best I could, and now I feel what I lost through the want of a good practical teacher.

The College examiners can give stiff examinations, but if they do the College should see that the schools which they recognise provide ample and suitable teaching and teachers. This can only be ascertained by personal supervision. Diplomas give a right to practise, but they do not always suffice to make a teacher.

To sum up, I would ask that the "highest title which the College of Surgeons confers" should be really what it professes to be—a diploma in surgery, and not an anatomical test. Let it be "equal to any *surgical* qualification in the country." At present it is, in my opinion, hedged in by the stiffest and most uncertain anatomical examination which can be conceived, and which, while it continues in its present form, will shut it off from many who could "walk through" its surgical part. I enclose my card, and remain, Yours, &c., Spes.

THE TAUNUS WATER.

Letter from Dr. Schwartz.

[To the Editor of the Medical Times and Gazette.]

Mr. A. Wanklyn, writing in the *Medical Times and Gazette* of the 24th ult., respecting the carbonate of lime in drinking-waters, especially as regards the Taunus natural mineral water, so much approved of for dietetic purposes, has developed such erroneous views as regards its effects and usage, that the writer, to whom this water has been most favourably known in his own experience for a length of time, feels obliged to give the following minute answer:—

The Taunus water, filled at the spring without any artificial admixture because of its richness in fixed carbonic acid and carbonate of lime, can, as a matter of course, not be classed amongst the ordinary waters, such as are in daily use in the house, especially for the kitchen and industrial purposes, for which uses, at all events, the softer waters, containing less mineral salts and carbonic acid, are to be preferred. For ordinary drinking-water, the Taunus water has never been recommended by doctors, but only as a natural saline acidulated water, which, according to its analysis, is perfectly free from all organic ingredients, and, notwithstanding the large quantity of fixed carbonic acid, does not at all contain any other gases or strong mineral salts offensive to the palate. According to its analysis, the Taunus water is to be considered as a thoroughly pure natural soda-water, which for dietetic purposes is to be preferred to manufactured soda-water in the same degree as a natural wine is preferred to the artificial manufacture. That a water so rich in carbonic acid, springing from a great depth in the earth, must possess mineral salts, especially carbonate of lime, in larger quantities than all ordinary superficial river and well waters, is a matter of fact; and this property the Taunus water possesses like all natural acidulated waters, especially the Nassau Selters, and the ferruginous acidulated waters of Pyrmont, Rippoldsau, Imnau, etc., of which waters, for instance, the Pyrmont drinking spring possesses in 1 lb. (German weight) not less than 19·47 grains (German weight) of salts of lime. If carbonate of lime, which all natural acidulated waters possess in large quantities, is detrimental to the health, according to Mr. Wanklyn's statement, chlorotic patients would have to be dissuaded from using all the natural ferruginous waters, which, however, according to experience, are used daily by such patients in large quantities up to eight tumblers with the best consequences. In that case, also, carbonate of lime would not be ordered in grains, especially for young children, as an addition to their food, which, however, is done daily by the most experienced doctors, for the carbonic acid salts, particularly when not dissolved, would affect the stomach of the children a great deal more than that of grown-up people.

Mr. Wanklyn, in his great fear of the detrimental effect of carbonate of lime, should not forget that the human stomach is a living organ, and not a cooking utensil, or a boiler, which might become corroded. Carbonate of lime is well known to be one of the principal substances of the human body, especially of our bones, cartilage, and muscle systems, and it is really difficult to understand where the human body would find the lime it requires in great quantities for its existence, if the stomach could not digest it in its most proper solution, as is the case in the natural mineral waters. The Taunus water contains 1·4 gramme carbonate of lime in a litre, therefore about 0·7 in a half-litre bottle. Even the homœopathic doctors will not be persuaded by Mr. Wanklyn that such a small quantity of dissolved salts of lime could in any way be detrimental. All intelligent doctors who have learned to know, and have tasted the Taunus water without prejudice, will not allow themselves to be misled by Mr. Wanklyn's attack, which is as unfounded as it is one-sided.

As long as the Taunus water is delivered, as heretofore, by a conscientious administration, in pure and sound condition, it can be strongly recommended for medicinal and dietetic purposes in all cases where a perfectly pure acidulated effervescent drinking-water is required. I am, &c.,

Dr. Schwartz, Regierungs und Medicinalrath.

Cologne, March 11.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 27.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

On Necrosis without Suppuration.

Mr. Morrant Baker read a paper as above, with notes of a case of intra-osseous necrosis of the femur, without suppuration, for which amputation at the hip-joint was performed. The author began by relating the particulars of a case which was admitted into St. Bartholomew's Hospital, under his care, in August, 1872, with the following history:—The patient, a man aged twenty, was quite well until about ten weeks before his admission, when he began to suffer from pain and swelling in the left thigh. Both pain and swelling gradually increased, until at length, being unable to continue his work, he was admitted into the Holborn Union Infirmary, under the care of Mr. Norton, at whose request he was subsequently transferred by Mr. Baker to St. Bartholomew's Hospital. Before he left the Infirmary, however, as he was walking in the ward, the left leg gave way suddenly under him, and he fell: and it was subsequently found that the femur had been fractured in its middle third. At the time of the patient's admission into the Hospital there were the following symptoms:—The left lower limb, apparently shorter than its fellow by an inch or two, lay helplessly on its outer side, with the leg slightly flexed. In the thigh was a large tumour, hard and incompressible, which occupied the whole of the middle third of the femur, and extended below to within a short distance from the knee-joint, and above to the trochanters. In its middle third, where the swelling was greatest, the femur was considerably deformed by an ununited fracture. The integuments and other soft parts were quite natural. There was neither redness nor œdema; nor could fluctuation, as of confined fluid, be at any part detected; nor were there any constitutional symptoms indicative of inflammation or impending suppuration. The patient was said to have lost much flesh; and he was evidently in process of being gradually worn out by acute pain and sleeplessness. His temperature was below 100° Fahr. The femoral glands were not enlarged. There was no doubt in the minds of all who saw the patient that the case was one of malignant tumour of the femur; and all were unanimous in the belief that nothing short of amputation would give him any chance of relief. The limb was accordingly amputated at the hip-joint. The patient rapidly recovered flesh and strength after the operation, and in the course of a few weeks left the hospital well. On dissecting the limb, it was found that the

disease was not malignant tumour, but necrosis. Nearly the whole of the femur had perished; and at the seat of fracture there was but little union. But there was no sign of suppuration; and not a drop of pus could be anywhere detected even after section of the whole length of the bone. In some parts the dead bone was beginning to separate, while in others it was still immovable. A large quantity of new bone had been produced by both the periosteum and medullary membrane, and the dead bone was "locked" in a manner which must have rendered futile all attempts to remove the disease by any other method than amputation. The author then proceeded to the consideration of the questions which naturally arose with respect to conditions so remarkable; extensive necrosis without the formation of pus being, he said, so rare as to be almost unknown to surgical pathology. The following were the conclusions to which the various facts and arguments brought forward by the author seemed naturally to lead:— 1. That nearly the whole of the shaft of a long bone might perish; and that, nevertheless, suppuration, after several weeks, or months, or possibly even years, might be still absent. 2. That necrosis of a long bone might, in the absence of suppuration, closely simulate malignant disease, even to the extent of undergoing so-called spontaneous fracture; and that the latter event might not, for at least many weeks, be followed by suppuration. 3. That such an apparently strange deviation from the course of the symptoms usually accompanying necrosis was probably due to the fact that the death of the bone was the last of a series of changes, of which the earlier consisted of chronic inflammation, with hypertrophy and sclerosis. 4. That the symptoms of necrosis occurring in the course of chronic ostitis, more especially in adults, might be expected to pursue, and did pursue, a course different in many respects from that characteristic of the more common examples of necrosis. 5. That suppuration was not an early event, usually, in cases of necrosis from chronic ostitis. 6. That in such cases of necrosis the endosteum as well as the periosteum contributed a large quantity of new bone. 7. That it might be well, for the sake of distinction, to term this variety of necrosis in which the sequestrum was enclosed between periosteal and endosteal new bone, intra-osseous necrosis; whether with or without suppuration. 8. That there existed cases of intra-osseous necrosis, in which complete removal of the dead bone by a surgical operation was, from the nature of its connexions, a practical impossibility; and for which, therefore, if the symptoms were sufficiently distressing, amputation was the best remedy. 9. That in favourable cases, and when the disease was not extensive, the surrounding parts after suppuration might heal, although some dead bone were permanently confined within its new sheath; the separation of the dead from the living being indefinitely postponed. 10. That the peculiarity of the case which formed the text of the paper was to be found rather in the variety of spontaneous fracture, and of opportunities of examining the bone by section, in cases of necrosis from chronic inflammation, at an early stage, before suppuration had occurred, than in the nature of the case itself. The paper was illustrated by drawings and specimens of intra-osseous necrosis, with and without suppuration; and also, for comparison, by illustrations of chronic ostitis, which had led to hypertrophy and sclerosis, but not to necrosis.

Mr. Barwell considered that the diagnosis of such cases was very difficult, especially in the earlier stage, when the resemblance to malignant disease was striking, particularly when the glands were enlarged.

Mr. Thomas Smith said there had recently been under his care, at the Children's Hospital, a child supposed to have malignant disease of the femur. Rest in bed, however, improved it greatly; when the child got up, the pain returned. This alternation was repeated over and over again. Mr. Baker saw the patient, and thought the disease probably necrosis; so the child was sent home in the meantime. He was not inclined to operate unless urgently called upon to do so, as very likely he would be unable to remove the whole of the necrosed bone, and amputation might become necessary.

In reply to Mr. Croft, Mr. Baker said there was no pus in his case, and no cloaca in the ordinary sense of the word. There were one or two holes in the specimen, but these were produced in making a section of the bone.

Three Hundred additional Cases of Ovariotomy, with Remarks on Drainage of the Peritoneal Cavity.

Mr. T. Spencer Wells said he had arranged in a form similar to that employed by him in tabulating 500 cases of ovariotomy, brought before the Society between the years 1859 and 1872, the particulars of 300 additional cases, representing the whole of his practice, from the fifth to the eighth hundredth case—distinguishing the cases performed in the Samaritan Hospital from those in private houses and in nursing institutions. The mortality in the sixth series of 100 cases was twenty-nine; in the seventh and eighth, twenty-four. This very nearly corresponded with the general mortality in the 500 cases previously reported; but the author believed that the latter series comprised many more operations in proportion, performed under very unfavourable or almost hopeless conditions. In many cases where formerly he thought it right to put so very unfavourable a prognosis before a patient and her advisers that they probably did not desire or approve of operation, he had latterly been encouraged by recoveries in some cases apparently almost hopeless to express a more hopeful opinion; and although in some cases very unexpected recoveries had been recorded, the result had often been what was feared, and the influence upon the number of deaths in proportion to the recoveries was quite appreciable. The author then discussed the influence of drainage of the peritoneal cavity—the most important of recent modifications of operative procedure—upon the results. He traced the history or the practice from the early days of ovariotomy, when drainage by the ligatures securing the pedicle was the rule of practice, to its disuse when the *extra*-peritoneal treatment of the pedicle, and the *intra*-peritoneal method by ligature or cautery, were very generally adopted. He considered the occasional use of puncture and drainage, with or without simple or antiseptic injections, when called for after operation, to be no foundation for recent recommendations to prepare at the time of operation for drainage or injection in every case. Of the 300 cases then brought before the Society he had only made provision for drainage at the time of the operation in eight, and in only eleven other cases did fluid afterwards escape by opening of some portion of the wound, or by vaginal puncture. In some few of the fatal cases he thought either primary or secondary drainage might have been useful, but he believed that drainage should not be a general practice in ovariotomy, but should be reserved for the exceptional cases where collections of blood or serum might be expected to follow the operation. The author then described the different modes of draining, and of using simple or antiseptic injections; reserving for another communication the important question of the more complete adoption of antiseptic precautions before, during, and after ovariotomy.

Mr. Bryant had used drainage in five cases, and in four the results were good. In three he had used a glass tube, and in one a hardened indiarubber tube. In three the adhesions were extensive, and the peritoneum after separation was red. There was a good deal of oozing of blood.

Mr. Barwell desired to know what were the indications of the entrance of a tube into Douglas's pouch.

Mr. Thomas Smith said that, though he could ask Mr. Wells a good many questions, he would confine himself to a few. He thought that it was quite possible to procure such statistics as those brought forward by Mr. Spencer Wells, by timid practitioners refusing to operate in dangerous cases; and that in this way lives might be sacrificed. He was opposed to any such procedure. The earlier ovariotomy statistics of the Samaritan Hospital, compared with those of larger hospitals, showed a mortality of 21 per cent. in the one, and 76 per cent. in the others. Since that time the success of the operation at the larger hospitals had been greater. There were, however, two ways of estimating the fatal results of ovariotomy. In large hospitals three sets of cases were included under this head—(1) completed cases, (2) cases begun but not finished, and (3) cases where only an exploratory incision had been made; while in the Samaritan Hospital statistics only completed cases were included. Were the latter statistics assimilated to the former, he thought the results would be a good deal different from those now given. Again, in these statistics there were compared the results of one most skilled in performing the operation with those of others—some fairly qualified, others quite unqualified, to perform the operation. Another point was, that though in large general hospitals they could get the same ventilation and hygienic conditions, they could not obtain such good nursing and careful supervision as in a smaller one. On the whole, the success at the Samaritan Hospital was a personal success: it depended mainly on the operator himself,—on his experience and consequent resources;

his judgment and readiness to meet emergencies; his courage; and withal a modesty seeking not a public display. It was to these and such-like qualities that Mr. Spencer Wells owed his success.

Sir Joseph Fayrer would like to know Mr. Spencer Wells' experience of antiseptics in the operation.

Mr. Hulke said that some years ago ovariotomy cases had been placed in the general wards after operation, and all, he believed proved fatal. When the patients operated on had been placed in a separate ward, the mortality had been much less. Out of six operations he had had, four had been successful.

Dr. Graily Hewitt congratulated Mr. Spencer Wells on his results. He had himself performed the operation about twenty-five times, but his results were not nearly so favourable as those of Mr. Spencer Wells. He was also of opinion that the high mortality in the last series of 300 cases was due to the bad cases sent to Mr. Spencer Wells for operation. He thought it best to leave the pedicle out of the wound; and it was in this direction that any great improvement was to be made.

Sir James Paget said it was personally to him most gratifying that on the last occasion he should preside at an ordinary meeting of the Society such a paper as that brought forward by Mr. Spencer Wells should have been read. Ovariotomy he considered one of the greatest of modern surgical achievements, not only as regards Mr. Spencer Wells' own splendid results, but as regards the success of other surgeons. The knowledge of all relating to peritoneal surgery had thereby been greatly increased, and this influence for good had thence extended to other departments of surgery.

Mr. Spencer Wells, in reply, made some important remarks on the use of a drainage-tube. He said it did not follow that, because a great deal of fluid escaped when a tube was used, as much fluid would collect if a tube had not been used. It was quite possible that the presence of a tube might lead to the secretion of the fluid which escaped, or at least increase secretion. He should not use a tube simply because ascites had been present, or ovarian fluid had been free in the peritoneal cavity. He should restrict its use to cases where the peritoneal cavity could not be completely cleansed, or where some bleeding might be feared after closure of the abdominal wall. If fluid collected some days after the operation, and formed a swelling between the uterus and the rectum, it could easily be removed by a trocar introduced through the vaginal wall. In cases of mesenteric cysts, or cysts of the broad ligament, the treatment by enucleation or by drainage must be decided by the peculiarities of each case. The publication of medical details in the annual reports of hospitals, circulated to the public, was open to very grave objection, and Mr. Wells had opposed the use of such details in the reports of the Samaritan Hospital; but he did believe that they had been of great use in stimulating the surgeons of general hospitals to a generous rivalry; and in proving that, if they did not wish to be outdone by smaller institutions, they must pay equal attention to the sanitary condition of the wards, to the nursing of the patients, and to all the details of management which could influence results. The success in the Samaritan Hospital could not be now, as it might have been before perhaps, what Mr. Smith called a "personal success"; for, out of the fifty-five operations performed in 1876, his colleagues, Mr. Thornton and Dr. Bantock, had contributed fourteen recoveries and only one death; whereas, of his own forty cases in the year four had died. The practice of grouping together cases of completed ovariotomy with cases of incompleted operations, or of mere exploratory incisions, could not be justified. It would be absurd to say that a patient, who recovered for a time after an incision in the abdominal wall and the escape of some fluid from the peritoneum, was a successful case of ovariotomy—no ovarian tumour having been removed, or perhaps existed. And, whether the result in statistical tables was favourable or the reverse, an incomplete operation should be recorded in a separate list, and should not be allowed to lead to false estimates of the mortality of ovariotomy when completed. The important question of antiseptics in this operation must be left for further observation. Mr. Wells, on completing his eight hundredth operation, had almost decided to try one hundred cases in succession with every antiseptic precaution; and if he had done so, and had attained the same result as he had done without any alteration in his former practice, the conclusion would have been quite startling; for he had done twenty-seven cases since the eight hundredth, and so far not one had died. If this had happened under antiseptics, it would have been almost impossible to resist the conclusion that it was something more than a coincidence. Mr. Wells thanked the Society for the manner in which his paper had been received, and especially thanked Sir James Paget for his very kind remarks, which would more than repay any surgeon for years of hard work.

THE PATHOLOGICAL SOCIETY.

Tuesday, March 6.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Chronic Interstitial Pneumonia, and Hæmorrhage into the Supra-Renal Capsules.

Dr. Greenhow showed these specimens from the body of a man of twenty-nine, who had suffered from winter cough for four years, and from wasting and increasing debility for three months before admission. He was spare, pallid, anxious, and prostrate. There was impaired resonance in places over the lungs, with very fine crepitation at both bases; the spleen and glands were not enlarged; the white corpuscles of the blood were increased in number. The condition was diagnosed chronic interstitial pneumonia, with some other doubtful lesion. The debility progressed till death. Post-mortem, the lungs were found enlarged, with interstitial thickening and distension of the superficial lymphatic vessels. The bronchial glands were enlarged, as were also the mesenteric. The right supra-renal capsule was adherent, enlarged, and contained a recent black blood-clot, as large as half a walnut; some patches of fibroid growth were found in its substance. The left capsule was four times its normal size, and adherent; and its substance was represented by a sac containing a clot of blood. Dr. Greenhow said that this was apparently Addison's disease of the capsules in an early stage; and the symptoms corresponded. Yet the hæmorrhage had probably no causal connexion either with the symptoms or with the fatal termination. The association of the interstitial lung-disease with blocked glands and distended lymphatics was interesting. Another small hæmorrhage was found under the pleura, as large as a hazel-nut.

The Organisms characteristic of Vaccinia.

Mr. Godlee read a paper on the results obtainable by inoculating vaccine-lymph and other fluids in various media. He began by detailing the method by which the fluids are preserved in his experiments, which is the same as that followed by Mr. Lister in his observations upon the lower organisms. The object of the experiments, which were begun four years ago, was to see whether, by inoculating the blood or juices of patients suffering from diseases in which organisms are supposed to play an important part, any special development could be obtained. With this view, the blood of patients suffering from ague, typhoid fever, pyæmia, and erysipelas, and the pus of cases of acute necrosis, were employed, but no development at any time took place. Vaccine-lymph was then tried, because it is known that in it the medium of infection, whatever it may be, is present. A minute quantity was placed in small vessels containing milk, turnip-infusion, urine, hydrocele-fluid, and a solution of tartrate of ammonia and phosphate of soda, and it was found that in most cases, if the temperature were maintained at 90° to 100° Fahr., an organism of constant appearance was developed, and a definit change occurred in the fluids. This took place in all the fluids used except the last: urine became alkaline; turnip-infusion and hydrocele-fluid turbid, with a deposit, but retained their original reaction; and milk became either turbid or completely solid without appreciable change of reaction. The organism did not develope in all cases, and the energy of its growth varied considerably. Some children were then vaccinated on one arm with some hydrocele-fluid and milk in which the organism was active; the blandness of the former fluid having been ascertained by an inoculation on the arm of the experimenter. No result was obtained. The other arm received ordinary lymph. A similar negative result was obtained by inoculating a calf. The following conclusions were arrived at, though with some diffidence:—1. That the granules in stale lymph are really organisms. 2. That they may be cultivated in various media. 3. That for this a temperature about equal to that of the human body is

required. 4. That characteristic changes are produced in the fluids. 5. That as at present grown they are incapable of originating vaccinia. It was argued that, although the obvious conclusion appeared to be that these organisms had nothing to do with the causation of the disease, this was not at present proved; and analogies were adduced from several animals and plants, as well as from the action of the small-pox virus, to show that the descendants of an individual might manifest totally different characters from their parent. It was thus possible that cultivation in fresh media had altered the properties of this organism. The possibility of an irritating action of the fluid part of the lymph was also referred to, which, by weakening the tissues, might make them more fit for the growth of an organism. The paper concluded with an apology for the name that had been given to it—the observations on small-pox being at present too few and incomplete to warrant any deduction.

The PRESIDENT said that Mr. Godlee had shown that the organisms in vaccine-lymph could be multiplied in certain fluids. The question was—Were these organisms characteristic and distinguishable? Certainly caution was necessary. With respect to Mr. Godlee's comparisons, he ventured to consider some of them hardly apposite. Again, as regarded the variola poison in the cow, there were now many observations that threw grave doubt upon the relation between vaccinia and variola,—pointing to these poisons being rather antidotes than modifications of each other.

Mr. JABEZ HOGG said that objection must be made to the title of the paper. The granules might not be the germs of vaccinia; for all fluids contained granules when putrefaction set in. Extraordinary difficulty existed in drawing conclusions from such appearances.

Dr. SQUIRE pointed out certain facts respecting the effect of variolous inoculation on the cow. He also advised caution in drawing conclusions respecting the importance of the germs in vaccine-lymph. The particles in it might convey the action without assuming the growth of a characteristic germ.

Dr. THIN said that after Mr. Godlee's observations on vaccinia it would be interesting to make investigations on the fluid of other skin diseases, such as acne. It was possible that the germs reached the skin from the air.

Mr. GODLEE replied to the President that the analogy to which he had referred was used as an illustration only; and to Mr. Hogg that the organisms he had described were perfectly distinct from bacteria of putrefaction.

ARTERIO-CAPILLARY FIBROSIS.

Sir WILLIAM GULL read a paper upon researches on this subject by himself and Dr. Sutton. He said that they had already written upon arterio-capillary fibrosis, and shown that chronic Bright's disease with contracted kidney was but a part of the disease. The term had been suggested by them as one that might cover all forms of the disease, and they believed that the adventitia of vessels underwent this change in every case. Considering what they had said then as fairly proved, Sir William Gull and Dr. Sutton had proceeded in the further development of their research, and had extended it to other organs. Before proceeding to describe the results obtained in the first of the new series—namely, the spinal cord—the authors briefly summarised their previous observations. In May, 1872, they had pointed out that not only (1) in well-marked cases of chronic Bright's disease with contracted kidney, but also (2) in slight affections of the kidney, and even (3) when the kidney was hardly altered at all, the heart was found enlarged, and the vessels diseased; that in all three cases the change in the vessels was a fibroid alteration of the walls; and that this was accompanied by fibroid change of the interstitial tissue of various organs. Chronic Bright's disease with contracted kidney, it had been shown, therefore, was not essentially renal, but other organs were associated in the process. Since that date Sir William Gull and Dr. Sutton had examined many other parts of the body, and the result seemed to establish the belief that after middle-life there was a change of all the tissues in a fibroid direction, and that renal disease was only a part of this; that careful observation might detect the beginning of this process; and that in some cases the kidney might be early, in others late, to be affected. The clinical history of the process had not yet been finished; it had not yet been begun. Attention had been too much confined to the state of the heart and kidney. Dr. Johnson had criticised their conclusions; yet repeated observation had but strengthened them in their opinion. With respect to muscular hypertrophy of the vessel-wall, there certainly appeared to be such a change in the larger arterioles; but it was a most difficult matter to say whether thickening was not in some cases due to contraction,—indeed, one of the two authors was convinced that it was not possible to say. Nor was the normal thickness of the muscular coat of arteries of the same calibre uniform. Passing on to their observations on the spinal cord, as the first of the new series of organs, Sir William Gull and Dr. Sutton first described the process by which they had obtained their microscopic specimens, and then gave a brief account of the normal histology of the spinal cord, particularly pointing out the presence of a connective-tissue stroma among the nervous structures. The simplest of all the morbid changes found were œdema and exudation, which appeared as small homogeneous masses, called "colloid bodies," consisting of albumen that had escaped from the vessels, and coagulated after death. In the same specimens the fibres were found swollen with exudation; the nerve-tubules were suffering compression; hæmatine granules were present, and even fibroid thickening was already proceeding from centres. The walls of some of the arterioles were markedly thickened; and in some of the larger vessels the muscular fibres seemed either hypertrophied or atrophied, as the case might be. Thus the earliest part of the process was an exudation with its effects, and an increased nuclear growth ending in fibrosis. As the process advanced (as had been well seen in specimens taken from the posterior column of the dorsal portion of the cord), the change became more marked: the arterioles and capillaries were greatly thickened by new material, and surrounded by it, while the growth involved the tissues around, invading the connective-tissue septa, and compressing the structures between them. In a more chronic stage the fibroid change was found confined to small areas, and those chiefly superficial; the septa were much thickened, their connective-tissue nuclei being surrounded by more protoplasm; and a felt-like substance extended outwards into the less diseased parts. Tracing the process onwards, small foci of thickening could be found, where, beyond the previous changes, the nerve-fibres were so much affected that the axes-cylinders were hardly recognisable; and the fibroid thickening of the arterioles and capillaries very great. In still more advanced cases, the larger connective-tissue septa had been found four times their natural thickness, and passing off therefrom a felt-like fibroid tissue; hardly a healthy nerve-fibre, or even an altered one, could be seen; broad areas of fibroid substance replaced areas of nervous substance. These and somewhat similar, or even more marked alterations, appeared to the authors to be identical with what Rindfleisch described as "inflammatory induration"; the mischief starting from small foci, and ending accordingly in irregularity of the surface. Each focus had a red spot in the centre—a section of a blood-vessel: for it was the result of a chronic inflammation; the adventitia being thickened and filled with nuclei; the lumen being perhaps increased; and the muscular fibres altered. This was Rindfleisch's description of the same change under another name. There was no evidence yet how the plasma escaped, which gave rise to the process, whether by blocking or by other means. But it did escape into the wall and beyond it; and arterio-capillary fibrosis was the result. The authors then gave a summary of the results of their investigations on the cord, pointing out the proportion of cases in the different stages associated with contracted kidney and with heart disease. With respect to the part of the cord first affected, they said that naturally the fibroid change was most marked where connective tissue was most abundant; the process extending from the surface inwards, or from the grey matter outwards, and from the adventitia of the vessels into the surrounding tissues. In all three respects the process closely agreed with that seen in the kidney. And in the cord, as in the kidney, acute changes might supervene; and in both organs the effect of the disease on the active elements was irregular, compressing and atrophying, as it did, some, and leaving others unaffected. Thus it happened that both cord and kidney continued to possess much of their functional activity, though apparently extensively diseased. Again the authors pointed out that in a certain proportion of their cases the kidneys were not diseased; and it was evident that fibrosis of the cord might coincide with, or precede, or, as part of a general fibrosis, be altogether independent of, renal disease.

The PRESIDENT said that there were two distinct questions raised by this paper—(1) as to the occurrence of fibrosis of the walls of the vessels; and (2) as to the conditions that might give rise to such a change. Till lately it had been considered

that the renal disease caused blood-disease, and this in its turn vessel-disease; but Sir William Gull had shown that the kidneys were not essentially affected. Still there might be other causes of morbid conditions of the blood than renal disease; and the blood being thus disordered, even healthy kidneys might not be able to depurate it, and general fibrosis ensue.

The discussion was then adjourned.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 8:—

Atkinson, Henry Seymour, Queenstown, Ireland.
Bond, James William, 50, Torrington-square, W.C.
Rogers, William Henry, 15, Paragon, New Kent-road.
Satchell, William Morris, Tunbridge Wells.
Stewart, Frederick George, 29, Merrick-square, Borough.

Erratum.—Horatio Edward Walker, who passed the primary examination on the 1st inst., was a student of Guy's, and not of the London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BLAKER, THOMAS F. J., M.R.C.S.E., L.S.A. Lond.—House Surgeon to the Brighton and Hove Lying-in Institution.

GOULDER, FRANK S., M.R.C.S.E., L.R.C.P. Lond.—Junior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Deputy Inspector-General of Hospitals and Fleets, Thomas Nelson, M.D., has been placed on the Retired List from the 29th ult., with permission to assume the rank and title of Inspector-General of Hospitals and Fleets from the same date.

ROYAL NAVAL ARTILLERY VOLUNTEERS.—The following appointments have been made:—Liverpool Brigade, Armand Bernard, M.D., William Williams, M.D., to be Surgeons, with seniority of March 6, 1877.

BIRTHS.

ANDERSON.—On March 9, at 4, Upper Berkeley-street, Elizabeth Garrett Anderson, M.D., of a son.

HOOPER.—On March 3, at Newhall, near Burton-on-Trent, the wife of A. Hooper, M.D., of a daughter.

LUMLEY.—On March 5, at Northallerton, the wife of B. Lumley, M.R.C.S., of a son.

PRITCHARD.—On March 6, at 41, Guilford-street, Russell-square, the wife of Urban Pritchard, M.D., F.R.C.S., of a daughter.

PURVIS.—On March 12, at Royal-hill, Greenwich, the wife of John Prior Purvis, M.R.C.S.E., of a daughter, stillborn.

SCOTT.—On March 4, at Crescent-road, Bournemouth, the wife of T. Bodley Scott, M.R.C.S., L.R.C.P.E., of a son.

MARRIAGES.

BROWNE—CARTER.—On March 10, at St. James's, Piccadilly, Elliotte Sanderson Browne, L.K.Q.C.P., of Heathfield, Putney, to Abigail Borche, daughter of the late Francis B. Carter, of Shanganagh Castle, Loughinstown, Ireland.

FAWCETT—WILLIAMS.—On February 12, at Trichinopoly, William James Fawcett, M.B., R.A., to Eliza Mary, daughter of General W. T. Williams, Commanding Southern Division Madras Army.

GREEN—HOLMES.—On March 8, at St. Michael's, Chester-square, Henry Wathe, eldest son of Henry Thompson Green, M.D., of the Island of Capri, to Fanny Jane, fourth daughter of Thomas Collins Holmes, Esq., of Kilburn.

DEATHS.

ANDERSON, SELINA LOUISE, wife of A. F. Anderson, M.D., Colonial Surgeon, at the Sepoy Lines, Singapore, on January 31.

BROWN, MARY CAROLINE, wife of T. E. Burton Brown, M.D., and fourth daughter of C. J. Hewlett, Esq., of 6, Tavistock-place, at Anarkullee, Lahore, Punjaub, on March 11, aged 34.

BUDD, HARRIOT COTTON, wife of Richard Budd, M.D., at Barnstaple, on March 10.

MACKAY, ALEXANDER EUGENE, M.D., F.R.C.P., Deputy Inspector-General of Hospitals and Fleets, at 104, Clifton-hill, St. John's-wood, on March 10, aged 55.

MURIEL, JOHN THOMAS, M.R.C.S.E., second son of John Muriel, of Ely, at Hadleigh, Suffolk, on March 5, aged 47.

O'FARRELL, ROSEY, youngest daughter of Harward O'Farrell, M.D., of Boyle, at the Convent, St. Leonard's-on-Sea, on March 11, aged 14.

RAMSAY, EBENEZER JOHN, M.R.C.S., at Colombo, Ceylon, on December 9, aged 27.

SWEETNAM, MARY ELEANOR MARTHA, wife of Staff-Surgeon Stephen Sweetnam, L.R.C.S.I., R.N., of H.M.'s *Impregnable*, at 10, Victoria-place, Stoke, Devonport, on March 6.

WILLIAMS, ALEXANDER, L.R.C.P.E., M.R.C.S.E., late Secretary of the Veterinary Department, Privy Council Office, at Chelsea, on March 6, aged 48.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Resident Medical Officer. Candidates must be registered as legally qualified medical and surgical practitioners, and furnish testimonials as to moral character and professional ability. Applications, stating age, to be forwarded to Mr. Chas. Woodcock, Secretary, 65, Market-street, Bradford, on or before March 24.

BRECKNOCK COUNTY AND BOROUGH GENERAL INFIRMARY.—Resident House-Surgeon. Candidates must have a medical and surgical qualification. Applications, with testimonials, to the Secretary, Brecknock, Brecon, on or before March 20.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Senior House-Surgeon. Candidates must possess a registered medical and surgical qualification. Applications, with testimonials, to the Chairman of the Medical Board, on or before March 21.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY.—Physician. Candidates, who must be F. or M.R.C.P. Lond., are requested to attend, with their diplomas and testimonials, at the Dispensary, No. 60, King-street, Regent-street, W., on March 29, at 4 p.m.

WIMBORNE AND CRANBORNE UNION, DORSET.—Medical Officer. Candidates must be registered under the Medical Act of 1855. Applications, stating age and medical qualifications, with testimonials and references, to Frank H. Tanner, Clerk to the Guardians, Wimborne Minster, on or before March 21.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Surgeon's Assistant. One qualification preferred. Applications to the Chairman of the Medical Committee, on or before March 19.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Alderbury Union.—Mr. C. H. Roberts has resigned the Fourth District; area 17,568; population 3140; salary £80 per annum. Also the Workhouse; salary £45 per annum.

Basingstoke Union.—The Third District is vacant; area 15,993; population 2286; salary £85 per annum. Also the Workhouse; salary £40 per annum.

Cosford Union.—The Kersey District is vacant; area 14,824; population 6097; salary £44 3s. 9d. per annum.

Hartlepool Union.—Mr. John Fergus has resigned the Greatham District; area 12,771; population 2381; salary £30 per annum.

APPOINTMENTS.

Bury Union.—Thos. Wilson, M.D. St. And., M.R.C.S. Eng., to the Second Tottington District.

Croydon Union.—Charles J. H. Smith, B.M. Univ. Lond., M.R.C.S. Eng., L.S.A., to the Ninth District.

Hackney Union.—Robert H. Smith, M.R.C.S. Eng., L.S.A., to the Workhouse.

Havant Union.—Thos. P. Stephens, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Third District.

DAIRY CONTROL IN GERMANY.—The German Society for Public Health at Berlin has appointed a commission for the control of such dairies as are in the hands of private individuals, in order to secure a supply of pure milk for that city.

ACADÉMIE DE MÉDECINE.—At its meeting on the 6th inst., the Academy elected M. Lancereaux into the Section of Pathological Anatomy, by the votes of forty-two of the eighty-one Academicians who were present, M. Parrot receiving thirty-nine votes.

ROYAL COLLEGE OF SURGEONS.—Notice has been given that there will be an election for a member of the Court of Examiners in the vacancy occasioned by the retirement of Mr. H. Spencer Smith, who has completed the term for which he was elected, but who will offer himself for re-election.

MONUMENT TO STROMEYER.—Measures are being taken to erect a monument to this distinguished man in his birthplace, Hanover; and a committee, consisting of some of the most distinguished men of all professions in Hanover, has been formed to carry out the necessary arrangements. Subscriptions will be received by Herr Emil Meyer, 32, Schiller-strasse, Hanover.

SMALL-POX IN NORTH AMERICA.—According to the weekly report of the German Sanitary Office, one of the most frightful visitations of small-pox which has ever been recorded has lately occurred at Gembic, a Mormonite colony of 7000 persons on the east side of Lake Winnipeg. On the average there were 180 deaths per diem. The same disease is ravaging the western side of the lake. The Indians at Fort Thunder are being decimated by this disease, and are retreating southwards. The fur trade has been stopped in the whole north-west district by order of the authorities.

THE RUSSIAN ARMY MEDICAL SERVICE.—We have already announced that the supply of civil surgeons who are willing to assume military service in the Austrian army in case of war is very much below the numbers required. Nor is Russia any better off in her supply of army medical officers. In the summer of last year the entire *personnel* of the army consisted of 2120 physicians, 250 apothecaries, 173 veterinarians, 5877 surgeons (*Feldscheerer*), and 1010 surgeons' pupils. About one-eighth of the last two categories belong to the veterinary branch of the army. If the entire army were mobilised there would be a deficiency of between 2000 and 3000 medical officers, the supplying which would be extremely difficult, or even quite impossible, without the aid of foreigners.—*Wien. Med. Woch.*, February 10.

THE GREAT ORMOND-STREET CHILDREN'S HOSPITAL.—Some British residents at St. Petersburg have established a cot in the above Hospital, to be called "The St. Petersburg Cot." The amount required for the support of a patient (£40), the result of a successful bazaar held for the purpose, has just been received by the Hospital Committee, and is to be continued annually. The Misses Annie and Mary Field, of St. Petersburg, were the originators of the suggestion, and with the approval of their young friends the cot is designated "The St. Petersburg Aunt Judy's Cot," because their attention had been first drawn to the sick children's hospital by reading the accounts given in the *Aunt Judy's Magazine*. The young readers of this magazine have recently completed the permanent endowment of two cots—one for a girl, the other for a boy—in the wards of the Hospital.

THE CISLEITHAN AUSTRIAN MEDICAL FACULTIES IN 1876.—During the year 1876 the medical faculties of the five universities—Vienna, Graz, Innsbrück, Prague, and Cracow—were officered by 317 teachers, viz., 64 ordinary professors, 62 extraordinary professors, 111 assistant and adjoint professors, and 80 *privat-docenten*. The total numbers of the students for the winter session were 1636, and for the summer session 1608. Of these 587 were foreigners (including Hungarians under that title) in the winter session, and 652 in the summer session. The Vienna Faculty, of course, had the great bulk of these—viz., 508 foreign students in the winter session, and 583 in the summer session; the foreigners, in fact, constituting more than a half of the total number (906 in the winter and 974 in the summer) of students.—*Wien. Med. Woch.*, February 10.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

In a Fix.—Take for your guidance the old classical axiom, "*In medio tutissimus ibis*," and find safety in your *middle* man.

Aëronaut.—Yes; John Jefferies, M.D., an American physician, who settled in London in 1780, undertook two aërial voyages, the second of which was made January 7, 1785, from the cliffs at Dover, across the British Channel, into the forest of Guinnes, in France, and was the only successful attempt that had then been made to cross the sea in a balloon. In 1789 he returned to Boston, where he practised till his death in 1819.

W. F.—The following are no doubt the lines by Dr. Erasmus Darwin to which you refer; they will be found in the "Botanic Garden," cant. ii.:—

"Onward he steps; disease and death retire,
And murmuring demons hate him and admire."

Mr. Simpson.—The election rest entirely with the Fellows of the College, of whom there are about 1400.

Beer-drinking.—1. According to the report of the Inland Revenue, the beer manufactured by licensed brewers, and consumed in England, was 29·2 gallons in 1866, and 35·1 gallons in 1876, per head—*i.e.*, very nearly six gallons per head of population above the consumption of 1866. There was a considerable increase in England—43 gallons per head against 37·3 gallons. In Scotland there was a slight decrease in proportionate beer-drinking, but in Ireland the consumption doubled, being now 14·2, against 7·9 per head of population in 1866. The increase is entirely supplied by licensed brewers. The Commissioners show that private brewing during the last ten years has greatly fallen off. 2. Boston took the initiative in establishing retreats of the class advocated by the late Dr. Dalrymple. Mr. Albert Day, who was one of the originators of the movement, was appointed superintendent of the Washington Home on its opening in 1857. During his residence in this establishment Mr. Day joined the medical department of Harvard University, and went through the usual course, although he made a particular study of the diseases arising from the abuse of stimulants, such as delirium tremens and chronic alcoholism.

A Pupil.—In a sketch of the life of Dr. Robert Knox, the anatomist, it is stated that, as a medical teacher, his students from 1826 to 1835 annually averaged 335, and in the session of 1828-29 he had 504 pupils. For want of room he was obliged to lecture three times daily on the same subject; and when the College of Surgeons vacated their old hall in Surgeon's-square in 1832, he built a very large class-room on the site, and moved there. Enormous classes for many years filled his lecture-room. In 1828-29 he commissioned the late Sir William (then Mr.) Fergusson, who had previously assisted him in his class-work, to give demonstrations on surgical anatomy, which was then first introduced into anatomical teaching. For several years Fergusson was the chief demonstrator; and in January, 1833, Dr. John Reid joined Knox and Fergusson in conducting the anatomical rooms.

Dr. Campbell.—The observation was made by Bolingbroke, that "folly and knavery have prevailed most where they should be tolerated the least; and presumption has been excused most where diffidence and candour are on many accounts the most necessary."

L.D.S.R.C.S. Eng.—The person named is not "M.D." of any recognised university. You can write to the Association, but it is hardly a case for them to take up.

Quekett Club.—Professor Quekett was a Fellow of the Royal Society; he died at Pangbourne, near Reading. His remains were deposited in that churchyard, where a handsome marble tomb is "In memory of John Thomas Quekett, F.R.S., F.L.S., M.R.C.S. Eng., Professor of Histology, and Conservator of the Hunterian Museum at the Royal College of Surgeons of England, born at Langport, Somerset, August 11, 1815, died at Pangbourne, August 20, 1861, aged forty-six years. His memory will ever be cherished by all who knew him, and by the thousands who have profited by his wonderful stores of science. 'There is a spirit in man, and the inspiration of the Almighty giveth them understanding' (Job xxxii. 8)."

HUNTER AND JENNER.

At a sale of the collection of autographs of a nobleman, on Wednesday week, by Messrs. Sotheby, were three very interesting letters of John Hunter, and the same number of Edward Jenner. Owing to the very stormy weather there was but a small attendance of buyers; consequently the prices they realised were most inadequate: the Hunter's sold for £3 7s., and Jenner's for £2 3s. The following are copies of these interesting documents, viz.:—

"To Mr. Jenner, Surgeon, Barkley, Glostershire. "Dec. 3, 1770.

"Dear Jenner,—I just received the favour of yours. I have just now forgot the case of the Hydatids, but if there was anything that struck me, I dar say it is laid by. They are frequently in the Kidnies, but I should doubt your oil of Turpentine having any merit in bring them away. My reason for supposing them animals is because they move after they have been extracted. I have taken them out of the Head or brain of a sheep, and they have contracted in difft. parts of them when put into warm water. I should be glad to imploy you if I knew in what, but if anything comes across my imagination I will think of you. The measly Pork are Hydatids.—I am affraid of your friend Mrs. Littler, there is a hard Tumour that almost fills the Pelvis, most probably the uterus. How does Mrs. Jenner do? Dar you bring her to London? What family have you got? My compts. to Mrs. Jenner, and believe me to be, dear sir,

"Your most obedient and most humble servant, "JOHN HUNTER."

The next letter is dated January 19, 1773, and directed to "Mr. Ed. Jenner Surgeon, Barklay," but appears from insufficient address to have been "Returned to Dr. John Hunter, London, for a better direction":—

"Dear Sir,—I shall write to you at present what relates to your Patient. There can be no doubt of an aneurism, or rather a wounded artery; you must not trust to nature, but tie [altered to "tye"] the artery, and the best way is my operation as it is called,—cut through or into the tumour longitudinally, scoop out the Blood, and search for the cut artery and tie it above and below. "Yours, &c., "JOHN HUNTER."

The third letter is dated London, November 8, 1773:—

"Dear Jenner,—I have not troubled you with any letter this long time, nor have I heard from you. This moment I do not know if I sent you the Butter flys; if they are not sent they shall this week. I want you to pursue the Expt. upon the heat of the Hedge Hog this winter, and if you would send me a colony of them I should be glad, as I have expended all I had, excepting two; one an Eagle eat, and a Trap caught the other. Mrs. Hunter and I was at Bath the other day, and came home by the way of Gloucester; wish'd much we could have stay'd a day to have waited upon you. Let me hear from you. "I am, dear Jenner, yours, "JOHN HUNTER."

In the same sale is a letter from the celebrated Edward Jenner to his son "R. F. Jenner, Esq., Stevens' Hotel, Bond-street, London," in which after discussing family matters he proceeds:—

"I cannot but lament my friend Moore's obstinacy in not yielding to what every day's experience points out as clear and conclusive. It is impossible that Vaccination can go on without obstruction till this impediment is removed. My circular will do some good; but if its contents were compressed and incorporated with the directions which the N. V. Estabt. sent out with the Vaccine Lymph, we should see a salutary change in the minds of the people very quickly. I this day heard of the 23rd death by small-pox in the comparatively small town of Wotton.—Bravo David Taylor! "Your affectionate father, "EDWARD JENNER."

In another interesting family epistle to his son, then pursuing his studies at Exeter College, Oxford, he says:—"Now is your time; make the most of it. You may drink deep of a pure stream, or you may sup up Puddle. Both are to be found within the precincts of an University."

All Jenner's letters are deeply interesting; in another to his son, still at the University, and which the disciples of good Father Matthew should have secured for republication, he says—"I trust you have attended to my suggestions with regard to the Wine, and that you have only sent for a sufficiency for present use. You will be coming home ere long, and we can talk more about this *poisonous* business when we meet. You know my first and unalterable opinion of Wine, as far as regards its deleterious effects on the human constitution, etc., etc."

COMMUNICATIONS have been received from—
Dr. Woodman, London; Messrs. Calvert and Co., Manchester; Dr. Herman, London; Dr. Braxton Hicks, London; Mr. Every, London; The Secretary of the Society of Medical Officers of Health, London; The Secretary of the Statistical Society, London; Mr. Inopen, London; Dr. Iliff, London; Dr. Wickham Barnes, London; Mr. Crowther Kemp, London; Dr. Jas. Dunlop, Glasgow; Mr. W. F. Terry, Tiverton; Mr. A. H. Newth, Hayward's Heath; "In a Fix," London; Mr. T. M. Stone, London; Mr. F. Lowndes, Liverpool; Dr. Sparks, Mentone; Mr. Ledeboer, London; The Secretary of the Royal Institution; The Secretary of the Pathological Society, London; Mr. W. E. Poole, London; Mr. B. R. Wheatley, London; Dr. A. E. Aust-Lawrence, Clifton, Bristol; Dr. Thos. Stretch Dowse, London; Dr. Bruce, London; Mr. John Chatto, London; Mr. J. T. W. Bacot, Seaton, Devonshire.

BOOKS AND PAMPHLETS RECEIVED—
Clerical Memorial to the Bishops on Intemperance—St. Bartholomew's Hospital Reports, vol. xii.—Twelfth Annual Report of the Sanitary Commissioner with the Government of India, 1875—Small-pox: a New Treatment of this Disease, wherein the Dictates of Nature are specially considered. By A Layman—J. Parrot, L'Athrepsie—J. M. Charcot, Lectures on the Diseases of the Nervous System—Transactions of the Obstetrical Society of London, vol. xviii.—Danby P. Fry, The Lunacy Acts, with an Introductory Commentary.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Home Chronicler—Monthly Letter of the English Anti-Tobacco Society—Enciclopedia Médico-Farmaceutica—Guy's Hospital Gazette—Commentario Clinico di Pisa—Western Review of Science and Industry—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Analyst—Canada Lancet—Boston Journal of Chemistry—Glasgow Medical Journal.

APPOINTMENTS FOR THE WEEK.

March 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Prof. Henry Morley, "On the Effects of the French Revolution upon English Literature."

19. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. J. Braxton Hicks, "On the Association of Eczema with Diabetes." Dr. T. Lauder Brunton, "On Arsenic in the Treatment of Albuminuria."

20. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Goodhart, "Cerebral Aneurism from Embolism." Mr. Bryant, "Aneurism of the Femoral and Popliteal Arteries from Embolism." Dr. George Johnson, "On the Changes which occur in the Bloodvessels in Bright's Disease." (Microscopical Specimens will be on view at 8 o'clock.) Dr. Gowers, "Atrophy of one Kidney, great Hypertrophy of the Heart, and Atheroma of the Arteries."

Royal Institution, 3 p.m. Prof. Garrod, "On the Human Form: its Structure in relation to its Contour."

Statistical Society, 7¾ p.m. Capt. P. G. Craigie, "On the Cost of English Local Government."

21. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Royal Institution, 3 p.m. Dr. W. Pole, "On the Theory of Music."

23. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. Barwell, "Excision of a Lingual Epithelioma by Dr. Petrequin's Thermo-Cautère." Mr. Clement Lucas, "Excision of Lower Half of Ulna for a Myeloid Tumour" (a living subject). Mr. George Brown, "Excision of Tongue for Cancer supervening on Ichthyosis of twelve years' standing" (a living subject). Mr. Warrington Haward, "Recurrent Cancer of Tongue treated by Ligature of Lingual Artery." Dr. Southey, "Case of Idiopathic Tetanus."

Quekett Microscopical Club, 8 p.m. Meeting.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. Gladstone, "On the Influence of Chemical Constitution upon Refraction of Light."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 10, 1877.

BIRTHS.

Births of Boys, 1306; Girls, 1237; Total, 2543.
Average of 10 corresponding years 1867-76, 2382·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	913	869	1782
Average of the ten years 1867-76	789·7	748·6	1538·3
Average corrected to increased population ...	...	...	1646
Deaths of people aged 80 and upwards ...	...	...	64

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	4	3	...	1	...	2	...	1
North	751729	55	9	...	...	8	1	3	1	4
Central ...	334369	1	5	...	...	1	...	1	...	...
East	639111	18	8	6	1	9	...	3	2	1
South	967692	19	7	8	3	9	1	11	...	4
Total	3254260	96	33	17	4	28	2	20	3	10

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·706 in.
Mean temperature	36·9°
Highest point of thermometer	46·2°
Lowest point of thermometer	27·5°
Mean dew-point temperature	31·1°
General direction of wind	Variable.
Whole amount of rain in the week...	0·47 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 10, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Mar. 10.	Deaths Registered during the week ending Mar. 10.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2543	1782	46·2	27·5	36·9	2·72	0·47	1·19
Brighton	102264	43·4	63	35	49·8	29·0	36·8	2·67	0·46	1·17
Portsmouth ...	127144	28·3	81	36	52·6	30·0	39·4	4·11	0·45	1·14
Norwich	84023	11·2	62	45	48·0	30·0	37·5	3·06	0·63	1·60
Plymouth	72911	52·3	30	26	53·0	29·5	41·5	5·28	0·68	1·73
Bristol	202950	45·6	142	112	50·9	29·1	39·1	3·95	0·30	0·76
Wolverhampton ...	73389	21·6	56	37	49·4	26·1	35·5	1·85	0·51	1·30
Birmingham ...	377436	44·9	334	174	...	...	...	...	...	...
Leicester	117461	36·7	82	76	46·2	30·8	37·2	2·89	0·52	1·32
Nottingham ...	95025	47·6	67	53	49·1	29·7	38·7	2·61	1·05	2·67
Liverpool	527083	101·2	417	250	45·0	32·4	37·5	3·06	0·45	1·14
Manchester ...	359213	83·7	292	209	54·0	28·0	36·9	2·72	0·46	1·17
Salford	141184	27·3	137	92	48·6	27·0	36·0	2·22	0·41	1·04
Oldham	89796	19·2	76	68	...	...	...	...	...	...
Bradford	179315	24·8	144	78	50·2	30·0	37·3	2·95	0·35	0·89
Leeds	298189	13·8	241	135	52·0	31·0	38·9	3·28	0·82	2·08
Sheffield	282130	14·4	223	107	47·5	29·2	37·1	2·84	0·39	0·99
Hull	140002	38·5	105	71	45·0	30·0	36·8	2·67	0·56	1·42
Sunderland ...	110382	33·4	83	47	53·0	31·0	38·9	3·83	0·76	1·93
Newcastle-on-Tyne	142231	26·5	95	61	...	...	...	...	...	...
Edinburgh	218729	52·2	147	90	52·4	29·0	37·7	3·17	0·95	2·41
Glasgow	555933	92·1	406	358	...	...	...	...	...	...
Dublin	314666	31·3	196	210	54·5	27·0	41·2	5·11	0·14	0·36
Total of 23 Towns in United Kingdm	8144940	38·3	6022	4152	54·5	26·1	37·8	3·23	0·55	1·40

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·71 in. The lowest reading was 29·15 in. on Wednesday, March 7, and the highest 29·96 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ABSTRACT OF

THE CROONIAN LECTURES

ON THE

DIFFERENCE BETWEEN THE SEXES IN REGARD TO THE ASPECT AND TREATMENT OF DISEASE.

By J. BRAXTON HICKS, M.D., F.R.S.,
Physician-Accoucheur and Lecturer on Midwifery and Diseases of Women and Children at Guy's Hospital, etc.

LECTURE I.

THE divergencies as to the variations in disease with regard to sex, although rather of degree than of essence, present some very salient appearances, valuable for reflection; for the obscure condition of the one may receive light by the more prominent state of the other sex. Thus, as Dr. Barnes has recently pointed out, the condition of pregnancy affords a series of ready-made experiments, throwing light both on physiology and pathology. And it must be borne in mind that woman differs from man in having given to her an organ intimately connected with the sympathetic system, almost entirely supplied by ganglionic nerves, subject to great changes of form, size, and structure; capable of being seen, handled, and treated with an ease denied to any similar organ, at least in extent. Only in rare cases has the stomach been so immediately under examination; the bladder rather more frequently so; but then there is in it but little variation of form and growth. It is, then, by taking advantage of the opportunity of observing the effect of the greater changes in the uterus, and its various sympathies, that we gain some insight into the minor changes in other parts supplied in like manner.

It is not my intention to discuss the differences of sexual organs, excepting so far as their form, shape, and actions tend to disease more in one than in another. Both sexes begin with ovaries, though the testis springs from a different spot, not far from the ovary. Hence, though we have been accustomed to consider the ovary and testis to be homologous, in reality they are not so.

In both sexes are the ovaries and their ducts; these in the male becoming obliterated, while the testis is added at a slightly later period, joining and making use of the Wolffian body and its duct; while, on the contrary, the Wolffian body becomes effete in the female. Thus, we seem to have an explanation sufficiently satisfactory for those curious anomalies where, in the same animal, a testis is found on one side, and an ovary on the other.

A point of interest arises here: how far the general differences in the sexes—I mean the secondary sexual characters—are dependent on these changes in the sexual organs; or how far they are only part of the mutation, the common result of a primary force extending to the whole body: for we may argue that it is neither from the ovaries, uterus, nor testes alone, nor from the nervous system alone, that the influence springs which makes the difference between man and woman; but rather this distinction is a consequence of an influence acting before the appearance of either. In support of this view, we may point to those cases of total absence of ovaries, uterus, and vagina, where the rest of the body and habit is essentially feminine in character.

There is, of course, no doubt that the sexual organs react in their influence on the nervous centres, and *vice versâ;* and also this impression extends to those parts in sympathy with them, and thus, in due course, the whole economy is swayed.

As to the relative frequency of errors of development, there is a marked difference in the sexes.

With regard to the heart, Geoffroy St. Hilaire, in his work "Anomalies de l'Organisation," endorses the fact pointed out by Schüler, Nasse, and Meckel, that cyanosis is much more frequent in the male. Most of these cases result from deficiencies of development, either before or immediately after birth. And this fact coincides very much with the relative frequency of occurrence of congenital deformities, resulting from defect of development in other parts. This is well shown in the following table, for which I am indebted to my colleague Mr. Bryant, being taken from his note-book:—

	No. of cases.	Male.	Female.	
1. Spina bifida . . .	30	13	17	
2. Ectopia vesicæ . . .	20	14	2	4 (doubtful)
3. Epispadias, or hypospadias .	26	22	2	2 (?)
4. Hare-lip	64	44	20	
5. Hare-lip, with cleft palate(a)	21	17	4	
6. Malformation of bowel .	8	2	6	
7. Malformation of extremities (not including talipes) .	46	27	19	
8. Malformed ears . . .	4	3	1	

It is curious to note that, whilst in deficiencies of the anterior median line males far exceed, in deficiencies in the posterior females rather preponderate. Altogether it appears that the male is peculiarly exposed to deficiencies of development; although one would have been prepared for the opposite result, if we consider the male a development upward from the female. I mean that one would have expected a more vigorous action in the male than in the female—more, at least, than enough to carry it further than the female in actions common to both; though one might have not been surprised if there had been any arrest in the male genitals, as in forms of hermaphrodites.

Let us now pass on to the consideration of circumstance. which remarkably influence the existence of the fœtus at births It is a well-ascertained fact, universally sustained and very regularly so, that more males are born than females, in the proportion of 105·8 males to 100 females. But this excess of life on the part of males is reduced in the following manner:—The male infant is well known to be larger than the female at full term; so that, on the average, the male is ten ounces heavier than the female, while the length is half an inch greater. This, perhaps, would not be of so great importance had not the cranium of the male been more completely ossified than that of the female; so that this, coupled with an increase of circumference—on an average half an inch—renders its delivery through a narrow pelvis more difficult than the female's, because of its being less capable of being moulded to a shape easy for passing. In consequence of this, the birth of a male child is more difficult and dangerous to the mother.

There can be no doubt that the male runs a greater risk in its nativity than the female; and this risk is caused by the more protracted and laborious labour which its larger and harder head necessitates. The more firm ossification of the male head, though doubtless a protection to the brain, is more obstructive to delivery than that of the female; and this tells upon the male, more especially in cases where the mother's pelvis is somewhat reduced in size, either generally or partially.

From these considerations, therefore, it would appear that the death of the male in birth and shortly afterwards is not so much the result of direct pressure on the brain, but rather the ill result is owing to obstruction to the circulation in the uterus, placenta, and funis, causing effusion of blood in various organs, and provoking inspiratory movements, which cause an invasion of the larynx and bronchi by the fluids in the passages; in other words, chronic or sudden asphyxia. This being the case, a further deduction is capable of being made—namely, that the longer the labour, if the pains are forcible, the greater the risk to the child, *cæteris paribus;* and, indeed, the truth of this inference is clearly supported by examination of the facts, which need not here be detailed, as they can be found in all modern works on obstetrics. The full recognition of this leads one at once to make a practical rule—viz., that if the head of the child in labour be detained in the parturient canal after this is fairly opened and the uterus in full action, then the abstraction of the child by art is the more likely to save its life the earlier assistance is given; and not only to save its life at the time, but to save it from the evils which continue their force after birth. No doubt it is difficult precisely to lay down rules as to the time when assistance should be given. This is not the place to discuss this question: opinions vary; but all modern practitioners, I think, accept the rule given above as a guide in practice, which, indeed, has redeemed modern obstetrics from the old opprobrium of "meddlesome midwifery."

But there is one more circumstance which cannot be overlooked when we seek for explanation why the severer affections of the brain are more frequent and dangerous in the male child than in the female, and this particularly up to nearly

(a) Almost all the cases of double hare-lip are met with in males.

the end of the second year. I have mentioned already that at birth the skull of the male head is in a more advanced state of ossification than the female. This is so noticeable that, before the child is born, one is able to pronounce rightly in eight or even nine out of ten cases whether it be male or female.

The protection the more solid skull affords to the male brain during birth exempts this latter from the disturbance and sometimes injury to which the brain of the female is exposed in consequence of the mobility of the skull; though, as before shown, it may increase its risks by asphyxia.

These observations tend rather to oppose the opinion of some, who put against the forceps-pressure all those evils which afflict the brain of the child; whereas it is generally in the more ossified skull, and therefore less yielding, that we employ them,—consequently more in males than in females.

But when irritation and hyperæmia of the encephalon occur after birth, as specially during dentition, this solidity tends to increase the effects of pressure as compared with the more yielding and mobile skull of the female; for probably all have noticed that where the sutures and fontanelles are late in closing, the effects of dentition are not so severe, whether in male or female. At the same time, we must not forget that to which I have just now alluded; the easily moulded skull of the female gives some risk to its owner, in that the brain is subjected to greater pressure, and sometimes severe disturbance to its shape; while, the sutures being more capable of overlapping, the edges are apt to penetrate the longitudinal sinus, and thus cause effusion of blood or internal cephal-hæmatoma, as I have occasionally noticed.

Let us now follow the relative liability of the sexes as they proceed towards maturity. The records of the relative frequency of disease in the sexes are pretty clear in attributing to the male a much higher rate of susceptibility to *acute hydrocephalus* than the female. I need only quote the statistics of Dr. J. Risdon Bennett, where he shows that, out of equal numbers of each sex, 1707 males and 1349 females died of this disease.

In regard to *convulsions*, taken as a prominent symptom in the broad idea of the public statistics ending in death, we find, for two years taken at a haphazard, that, in 1866, 12,438 males and 9353 females were attacked within the first year of life; and, during the second year, 1668 males and 1513 females; after which time the proportion becomes more equal, and later the excess is slightly more on the female side. In 1868, during the first year, 11,689 males and 8905 females; during the second year, 1480 males and 1367 females.

Of course, we must bear in mind that, convulsions being an accompaniment of other conditions, we must take the above rather as an evidence of serious disease, and compare it with the statistics of acute hydrocephalus, from which it is separated in the Registrar's reports.

In regard to liability to *laryngismus stridulus* (convulsion of the larynx), we find males decidedly in excess. In Reynolds's "System of Medicine," we find Dr. Hughlings-Jackson assenting to this, and quoting Vogel, Gee, and Mackenzie in confirmation. Thus, he says, "of Gee's cases, thirty-four were males and fourteen females."

It is curious to note here that *rachitis*, which has been shown by Sir W. Jenner, Gee, and others to be very frequently found with laryngismus stridulus, is also more fatal in males than females. Thus, in the Registrar's report for 1866, we find there died, males 66, females 38; and in 1868, males 69, females 49.

It is also to be noticed that the death-rate in males exceeds that of the females in most of the affections of the larynx. Thus, in *croup*, the proportion of deaths was as 100 males to 82·89 females, as quoted by Churchill. Trousseau gives 22 males for 8 females, and 17 males to 5 females.

In *pertussis* we find that the death-rate is about equal.

The same may be said of the diseases classified as *paralysis* by the Registrar-General, though it is difficult to say whether the condition called infantile paralysis is thereby indicated.

Hitherto, in the diseases to which I have alluded, the male has been the most affected; but in that which will next engage our attention—namely, *chorea*—this proportion is reversed, and in a marked degree. The difference is not much up till the end of the fourth year; but after this, on the average, we find from two to four times more females than males.

Yet, like most, if not all, of the other conditions in which we find marked preponderance in one or the other sex, it must be remembered it is not confined exclusively to females; and, therefore, when we seek for the cause we must seek in a direction where we find a factor common to both, but especially intense or prominent in the female. What is that condition? Looking at the tables, we find the increased proportion of females affected very noticeable at six years old. Up to that age there was very slight difference; but, from that period to the latest at which it has been noticed—namely, forty-seven—the excess is strongly preserved, although the general frequency is much diminished. Again, during pregnancy, we find that a considerable number of those attacked had already been subject to it in childhood.

It would be apart from the intention of these lectures, and indeed it would be presumptuous on my part, to attempt to discuss the causation of chorea. I have merely endeavoured to show the line of research which, followed out, may lead up to the solution of the difficulty. It would be well to bear in mind that about the time of the increased frequency of chorea in the female, her heart begins to exceed in frequency, and so continues through life. Possibly, other differences may be discovered by careful inquiry.

As we proceed in these lectures we shall, I think, find that an exalted sensitiveness of the nervous system gradually supervenes; so that, at any rate, we have increased vascular action and nervous sensitiveness to assist as predisposing agents.

Very few authors allude to any distinction between the sexes with regard to the severity of the process of teething. Yet the Registrar's reports show that males die in a much greater ratio than females; thus, in 1866, we find, under the head of "teething," 2384 males died, and only 1909 females; again, in 1868, there died 2221 males, and 1924 females. And this is quite in accordance with the facts already brought before you—namely, the more susceptible cerebro-spinal system and more unyielding skull in the male.

I alluded above to the tendency there is to transmit *sexual* peculiarities. Numerous instances are recorded by Darwin, both abnormalities as well as diatheses, and notably the hæmorrhagic; yet this rule does not obtain in syphilis, so far as I have been able to learn. No indication is found in the Registrar-General's report, and Mr. Jonathan Hutchinson tells me that, although he had taken much trouble to ascertain, he cannot find that boys are more liable to congenital syphilis than girls, although the proportion of the male parents afflicted with syphilis far exceeds that of the female.

A CLINICAL LECTURE
ON THE
COMMUNICATION OF SYPHILIS FROM A MOTHER TO HER FŒTUS.

By JONATHAN HUTCHINSON, F.R.C.S.,

Senior Surgeon to the London Hospital, Surgeon to the Moorfields Ophthalmic Hospital and the Blackfriars Hospital for Skin Diseases.

Gentlemen,—We were discussing not long ago the subject of the transmission of syphilis from a tainted fœtus to a previously healthy mother. I drew your attention to certain remarkable differences in the character and severity of syphilis under its three methods of communication—by a chancre, by hereditary transmission, and by blood-communication between fœtus and mother. We found that in the latter form it is a far milder disease than in either of the two former. There is yet another group of cases in which the communication takes place directly from blood to blood, without the intervention of a primary sore; and it is worth our while to inquire how the facts stand in regard to it. I refer to the communication of taint from a mother to a healthy fœtus in utero, the mother having acquired a primary sore at some period more or less advanced in her pregnancy.

All authorities admit, I believe, that this kind of communication is possible. M. Diday writes—"Is it not universally admitted that if a mother contract syphilis during her pregnancy, she may communicate it to the fœtus? Assuredly yes." Yet very few facts bearing upon the subject have as yet been put on record. Now, apart from the mere establishment of the truth, there are several interesting points upon which we should like to be informed. Does the period of the pregnancy at which the taint is acquired exercise any influence in modifying the course of the disease in the fœtus? Does the disease thus

acquired by the fœtus through blood-communication resemble the inherited form or that following a chancre? You will see that although it is acquired during intra-uterine life, it is not precisely inherited,—that it is not conveyed by the sperm or germ at the initial moment of existence, but is acquired in a special manner by the fœtus after its tissues have undergone some degree of development. Thus we are not at all justified in assuming that it will closely resemble the inherited disease. Nor, on the other hand, is it to be taken for granted that it will closely accord with the form of very mild disease which we usually notice in women who acquire it from their offspring. For the mother in whose blood chancre-syphilis is breeding is by no means in the same condition as the fœtus whose tissues are, it is true, tainted, but in whom no evidence of taint will probably be seen until a month after birth. In the mother's blood the disease is in its utmost vigour of new life.

Another question which may become of medico-legal, as well as of pathological importance, concerns the shortness of the period before delivery at which it is possible for the mother to convey taint to her fœtus. To elucidate these points I will cite such facts as I can.

We had some years ago under care in this hospital a mother and infant, both of whom suffered at the same time, most severely, from secondary syphilis. In both the eruption was most copious, and showed a tendency to ulcerate. So severe was the disease in the child, that, in spite of careful treatment, it withered away and died. There was nothing in the case, excepting, perhaps, the copiousness and pustular character of the eruption in the child, in the least different from what we see in the inherited disease. You will note, however, that, as it died so young, the period at which the inherited form begins to differ from the other had not been reached. Now, we knew the date at which the mother contracted the disease pretty correctly in this case, for she had come in the first instance just before her delivery with an indurated chancre. We may say that this sore had been contracted about six weeks before delivery. None of the eruption appeared until after that event. Thus, probably during the last week of the child's intra-uterine residence the blood of the mother contained the virus in its most active stage, the exanthem being just about to appear. The facts prove that a pregnant woman contracting syphilis in the seventh month may communicate a taint to her child, and that the latter may present very severe secondary symptoms during the first few months of its life.

In another case, which I well remember, many years ago I had opportunities for following up the history of the child to puberty. I saw this lady at the instance of Dr. Barnes, and in consultation with Mr. Andrews. When I was called in (about two months after delivery) the infant had a rash, and the mother still had remains of the primary sore. She had contracted the disease from her husband about five weeks before her confinement. The wife suffered decidedly, but not very severely; but the husband was under my care for more than a year. In this instance mercury caused diarrhœa, and, I believe, but little was given to the child. It pulled through, however, and lived to display, at the age of five, characteristic interstitial keratitis; it also had syphilitic arthritis, with effusion into both knee-joints, and some persistent thickening of the tibiæ. These have all now passed off, and at the age of ten he is in fair health, but bearing the unmistakable evidence of his taint. In this instance, then, the disease in the child, although acquired only just before birth, has closely resembled in all respects the inherited form.

In October, 1870, a married woman, named P., came under my care, at the London Hospital, on account of a chancre on her tongue. She had first noticed the sore six weeks before her application, and she was covered by a papular eruption, which had been out three weeks. She knew nothing as to when or how the sore had been contracted. Making allowance for the incubation stage, we may suppose that the sore had probably been present two or three weeks before it attracted her attention. She brought with her a healthy-looking baby five weeks old, which, according to this calculation, was born a week after the sore became troublesome, and a month or so after the contagion. Now, this child remained quite free from symptoms until nearly eight weeks old, when a well-marked syphilitic rash came out. It was treated as usual, and recovered. I am not aware whether any symptoms have occurred since infancy. The dates in this case fit exactly with the assumption that the mother's blood did not become infective until just before her confinement, at the date of her noticing the sore on her tongue.

You will see that the child had an eight weeks' period of incubation after birth, which would be about what might be expected if the taint were obtained just before birth. Rather, perhaps, I ought to say that it is what might have been expected if inoculation had been practised at that date; for we must not assume, without evidence, that when the poison is received directly into the blood a similar incubation period is necessary. I am indebted to my colleague, Mr. Waren Tay, for having seen this patient.

In the next case which I have to mention, I did not see the patient during her syphilis, nor her child during infancy, and am obliged, therefore, to rely upon her statements as to the facts. The case is of importance as supporting the belief that syphilis received by a child in utero is the same disease as that obtained by true inheritance. You will note that the child suffered from keratitis at the usual age.

Mrs. L., a woman who had previously borne two healthy children, contracted syphilis from her husband during her third pregnancy. Her child, a girl, at the age of twelve, was under my care at Moorfields with troublesome keratitis. She had characteristic teeth, and there was a history of protracted symptoms during infancy. I do not know the exact date of the pregnancy at which the disease was acquired.

In 1872 I saw, with my colleague Mr. James E. Evans, an infant suffering from congenital syphilis, whose mother was believed to have acquired the disease during her pregnancy. The assigned date was about three months before delivery.

The above facts are, I think, sufficient for our object, although I by no means deny that additional ones, if well verified and exact, might be worthy of record. We, however, have enough to justify us in the belief that when a pregnant woman acquires syphilis her offspring will in all probability suffer; and that this may occur as late as the eighth month. Infants born under such circumstances—that is, having imbibed a poison direct from the mother's blood during the last month of intra-uterine life—usually display the secondary phenomena of syphilis during the second month of life; sometimes they suffer very severely. At late periods they go through attacks of keratitis, etc., exactly as in syphilis the result of inheritance. It would be hasty to assume from such facts as we have that this is invariably the case; and I must especially ask your attention to the circumstance that none of my cases illustrate the maternal acquisition of syphilis in the early periods of pregnancy. What would be likely to happen to a fœtus only a month or two old if its mother should receive the virus of syphilis, we do not know. Very possibly abortion would occur in a majority of cases; and it may be that some of the examples of erratic syphilis in infants occur in those born under these circumstances. Anyone who may have the opportunity of observing such facts ought certainly to make them the subject of careful study.

Dislocation of the Ensiform Cartilage of the Sternum.—M. Polaillon recently related to the Paris Société de Médecine an example of this rare affection occurring in a primipara thirty-five years of age. Her pregnancy went on in the normal condition until the seventh month, she trying to conceal it by wearing very tight stays. At the seventh month, however, without any apparent cause, she felt a sudden and sharp pain at the epigastrium, which, supportable at first, becoming exasperated by the busk of her corset, obliged her to leave this garment off. She also perceived at the pit of the stomach a small movable projection which did not exist there before. The pain persisted until the end of the pregnancy, and was much aggravated by any pressure or contact. It was also increased when the stomach was full and during digestion. During labour it became *atroce*. On examining the epigastrium after delivery, a hard transverse projection was felt at the end of the sternum, of about a centimetre and a half in extent, having a depression just above it, at the bottom of which the anterior surface of the body of the sternum was perceived. On pressing back the skin, the little body could be easily seized, and moved in a vertical direction, and brought forward to the front of the sternum. It evidently consisted of the separated ensiform cartilage, the base of which was carried backwards, while its point carried forwards caused the skin of the epigastrium to project. All attempts at reduction were unsuccessful. Seen two months afterwards, the appendix still retained its abnormal position, having become fixed in this by adhesions, and now causing very little inconvenience.—*Union Méd.*, February 27.

ORIGINAL COMMUNICATIONS.

ON NERVOUS SYMPTOMS WITH EAR DISEASE.(a)

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed; etc.

The author thought it desirable to consider together the very different symptoms which are dependent on, or are associated with, ear disease. Excepting when considering Aural Vertigo, he would speak only of cases in which there was discharge from the ear, signifying disease of the walls of the tympanic cavity, and, as it often did, disease of the temporal bone. To limit his subject still further, it was supposed that the patient had had discharge for some time before any extra-aural complications ensued: this was a simplification of the subject, as—especially in a child—it might be very difficult or impossible to tell whether there was recent acute otitis or meningitis, or both. To the aural surgeon, the condition spoken of is a disease of an important organ of sense; to those practising in general medicine and surgery, it is very often indeed bone disease, and that of an important part of the cranial wall. The defect of hearing which accompanies it is bad enough, but this is, in comparison, nothing to such graver evils as cerebral abscess and meningitis. Old ear disease often kills people, and sometimes kills them rapidly. Insurance companies know this, and act upon it. Caries of a bone is bad; caries of a cranial bone is particularly bad; but, from its numerous important anatomical relations, caries of the temporal bone is worst of all. The author handed round the following reprint of two paragraphs from Tröltsch "On the Ear" (Roosa's translation), in which the anatomical relations of the external auditory canal and of the tympanic cavity are succinctly stated:—

"I have already called your attention to the short distance of the dura mater and the cerebrum from the upper wall of the *external* auditory canal, and also to the proximity of the transverse sinus and of the mastoid cells to the posterior wall. This proximity explains why these parts are sometimes involved in the inflammation, even when the caries is confined to the auditory canal. The anatomical relations are still more important in the cavity of the tympanum, since its lower wall or floor is frequently separated from the jugular vein only by a thin translucent layer of bone. Again, the largest artery of the head—the internal carotid, with the venous sinus surrounding it—takes its course on its anterior portion. These are separated from the cavity merely by a delicate and frequently defective bony lamella. Furthermore, its roof or upper wall, which, with the superior petrosal sinus, lies between the mucous membrane and the dura mater, is not unfrequently thinned, and even perforated; and besides, even in adults, there is usually a gap in the bone, the petro-squamosal fissure.

"The inner or labyrinth wall, finally, offers only slight resistance to the transition of the inflammation to the facial nerve; and through its two fenestræ, which are only closed by membrane, to the external ear; and then to the meatus auditorius internus, which is covered by the membranes of the brain. Close under the mastoid process, which is intimately connected to the cavity of the tympanum, is the transverse sinus, which makes up the whole of these important relations."

The list of nervous affections is (1) neuralgic pain, (2) Bell's paralysis, (3) scrofulous tumour, (4) cerebral or cerebellar abscess and meningitis, (5) pyæmia, (6) hemiplegia, (7) epilepsy or epileptiform seizures, (8) aural vertigo. Some of these can only be said to be *associated with* the ear disease. Pyæmia is not a nervous affection, but is conveniently considered along with the others for diagnostic purposes.

1. The neuralgic pain was cursorily considered: it was probably only symptomatic of an exacerbation of the tympanic disease—symptomatic in the same way as pain in the brow was of acute iritis, or pain down the nose of glaucoma. As a rule, *this* sort of pain did not precede or usher in cerebral abscess or meningitis; but, sometimes preceding paralysis of the face, it misled to the diagnosis of "rheumatic" paralysis of the portio dura nerve.

2. The author had seen facial palsy with double tympanic disease—a clinical rarity, but one not standing in need of special interpretation. He made the following remarks on the one-sided facial palsy:—(*a.*) In no case of uncomplicated facial palsy had he ever seen any paralysis of the same side of the palate. An oblique position of the uvula is of no moment: it is common in healthy people. One-sided paralysis of the palate goes almost always with paralysis of the vocal cord of the same side; it depends, the author thinks, on disease of the bulbar part of the spinal accessory nerve or of its nucleus. Were he to meet with paralysis of one side of the palate in a patient who had also Bell's paralysis, he should make the diagnosis, not that it depended on aural disease, even if there were aural disease, but of *intracranial* disease: there would be two lesions, and thus there would, if they came on slowly or at different times, be a step towards the diagnosis of the *nature* of the disease, for two such palsies would point to syphilis. (*b.*) Uncomplicated facial paralysis with ear disease is not a cerebral symptom; it is not an intracranial symptom; it is scarcely an ear symptom; it is rather a bone symptom. (*c.*) It is occasionally the precursor of fatal intracranial mischief, but, as a matter of fact, not often; and when so, it is independent of it—that is to say, the ear disease, by distinct processes, happens to do two entirely different things at once, or in quick succession. (*d.*) It is erroneous to infer that because the process by which the palsy results is a gross one, recovery will not follow: complete recovery often does. In this matter the author is in accord with Tröltsch and Roosa. (*e.*) The facial palsy does not even show much extension of the tympanic disease, but only slight extension in an unfortunate direction. The nerve in one part of its course is separated from the cavity by a thin scale of bone, and sometimes (Toynbee says) lies just under the mucous membrane. The occurrence of intense pain in the head would be of infinitely worse omen than this facial palsy.

3. In some cases of chronic ear disease the author had found in the cerebrum or cerebellum a mass of tubercle, in the place, so to speak, of an abscess from ear disease. Except perhaps, for chronicity of the cases, there was nothing to determine betwixt the symptoms of these cases and cerebral abscess. He could not say that there was any real relation; the cases spoken of were not cases of tubercular meningitis, nor was there tuberculosis of other organs. Tröltsch and Buhl have noted the occurrence of tubercular meningitis and acute general tuberculosis in cases of chronic otorrhœa, and they believe there is a connexion between the two things.

4. The author placed together abscess and meningitis, because, since the symptoms of abscess were often very acute, he did not know how to tell whether there was meningitis or abscess in many cases of acute cerebral disease occurring with ear disease. If an attempt were made at diagnosis, the prediction of abscess, since (at least in the author's experience) it is most common, would mostly be verified. Perhaps the very early occurrence of optic neuritis, were the appearance well marked, would point to abscess. It was thoroughly well known that a cerebral or cerebellar abscess may be "latent"; as Wilks and Moxon put it, "a man with ounces of pus in his brain may continue to do good mental work, and have full use of his limbs." When symptoms do come on, even in cases where the abscess is well encysted, and therefore old, the course of the case is often acute; hence the difficulty in the diagnosis from meningitis. The symptoms in some cases of cerebral tumour are quite similar, and very often the only means of deciding is by finding or not finding ear disease. This is not quite decisive, for, as stated, there is sometimes tumour (scrofulous) in cases of aural disease. Then, as a rule, the earliest symptoms of fatal cerebral or cerebellar abscess (as of tumour) are only such as severe headache and vomiting. The rule is that, in ear cases, such unmistakable nervous symptoms as hemiplegia, convulsions, and tetanoid states, come on late; and in many cases of cerebral or cerebellar abscess from ear disease they do not come on at all. The occurrence of headache and vomiting, both in cases of abscess and tumour, misleads to the erroneous diagnosis of stomach and liver derangement. The intensity of the headache, its occasional occurrence in unusual places—at the occiput, for example—its persistence, and the "purposeless" nature of the vomiting, often with clean tongue, would negative that diagnosis. If the ophthalmoscope were used in all cases of intense headache, mistakes in diagnosis would often be corrected. There is often optic neuritis, but, as it frequently happens that this pathological condition is unattended by any symptom (defective sight), it is usually not looked for. Occasionally acute intracranial disease is erroneously inferred, in cases of ear disease, from the occurrence

(a) Read before the Harveian Society of London, March 15, 1877.

of active mental symptoms (delirium). This is, the author thinks, very poor evidence of the existence of acute primary brain disease of any kind, and should not be trusted until acute non-cerebral disease has been carefully excluded. Although the brain is the organ of mind, the trustworthy symptoms of acute affection of it, or of its membranes, are not mental, but are such as severe headache, vomiting, constipation, retracted belly, and alterations of pulse, especially slowness and irregularity. Delirium does occur in some cases of acute cerebral disease, but rarely to such a degree as in acute non-cerebral affections. It should never be forgotten that, with rare exceptions, a man who has acute brain disease first comes to us when he has severe headache and vomiting, and not for anything wrong with his mind. Supposing that we could be sure there was abscess, we cannot usually tell whether it be in the cerebrum or cerebellum. We can only decide when there occurs such a symptom as hemiplegia, or unilaterally beginning convulsions, or partial aphasia, to point to the cerebrum; or reeling or tetanoid states to point to the cerebellum; but in cases of cerebral abscess, however caused, these symptoms often occur late, and the author has never seen any of them in cerebral or cerebellar abscess from ear disease. A patient may recover for a time from symptoms of cerebral abscess, just as he may from symptoms of cerebral tumour; the encysted abscess, like the tumour, mostly (especially early in the case) causes symptoms, not by destroying or squeezing nervous organs, but by acting as a "foreign body," causing a local encephalitis. It is possible that this secondary acute process passes off when recovery follows, leaving some softening. It is clinically important to know that a patient, with abscess from ear disease, may, after being acutely ill, and yet apparently not near death, die suddenly. So it is in some cases of tumour. As in these cases there is no rupture of the abscess, and sometimes at least no rupture of vessels of the tumour, and as there is agonising pain, the author thinks it is the pain that kills, and considers it very important to relieve severe pain in such cases by narcotics.

5. *Pyæmia.*—This is well known to occur from ear disease, and may be mistaken for meningitis or abscess. Negatively, there is no excessive pain (there may be a swollen optic disc); there are often severe rigors, and great rises and falls of temperature; the presence of delirium, especially without severe headache, would tell in favour of pyæmia. Recovery may follow. There may be both pyæmia and meningitis, as there often are after injuries to the head. In meningitis from injury to the head there may be no severe pain.

6. Hemiplegia occurs sometimes in children who have ear disease. Cases were spoken of in which the paralysis was on the side opposite the ear disease, and in which there was no convulsion and no loss of consciousness at the onset. In no such case had the author had a post-mortem examination. But, as (excluding case where there was valvular disease of the heart, rheumatic fever, or signs of "coarse" brain disease) the causation of hemiplegia in children was exceedingly obscure, it was right to suggest the possibility of venous thrombosis leading to local softening, to insure definite search at post-mortem examinations. Roosa had seen two cases of hemiplegia with ear disease. In one patient, a boy of ten, in whom the hemiplegia was of the same side as the ear disease, as both the auditory and portio dura were paralysed on the same side as the arm and leg, it is a possible thing that there was some disease pressing on the crus cerebelli; there is no doubt that, as Brown-Séquard has long ago stated, disease here would account for the symptoms the patient had. Roosa thinks there was hæmorrhage betwixt the dura mater and the bone. Roosa's other case was a man of sixty-two, and here the hemiplegia was on the side opposite the ear disease; in a man of that age the paralysis might, at least, quite as well be interpreted by local softening from arterial thrombosis, a pathological process unconnected with the anral affection.

7. Epilepsy or epileptiform seizures occasionally occur with ear disease. In a disease so calamitous and so obscure as epilepsy, we could not afford to overlook any associations. Admitting a relation, the accepted explanation would be that the ear disease provokes the seizures by reflected irritation. The author does not accept that hypothesis; he has been erroneously said to do so. Were this the process of causation, the treatment of the aural disease is the important matter; but, then, no medical man neglects to treat otorrhœa under any circumstances whatever. The author suggested another hypothesis—the possibility that the aural disease led to disease in Hitzig's and Ferrier's "region"; for, in some cases, the aural disease was associated with epileptiform convulsions, starting in the hand, face, or foot of the opposite side. In one such case, the author had found a large tubercular or scrofulous tumour of the hemisphere on the side of the ear disease, and on the side opposite the convulsions. He thought it possible that the disease is sometimes local softening from venous thrombosis, the convulsions depending on instability of grey matter around the part softened. He had no direct evidence of this, but he thought he had some indirect evidence of it. He related a case in which a man who had phosphorus necrosis of the jaw had, during an acute illness, frequent epileptiform affections affecting the left side of his face, both sides of the thorax, and slightly the left arm. (In passing, the anthor remarked that this case was one of those verifying Broadbent's now well-known hypothesis, that there is a double representation in the brain of the bilaterally acting muscles.) In the intervals of the attacks, there was paralysis of the face almost as complete as in ordinary Bell's paralysis of the face. At the necropsy there was, although not ear disease, yet an equivalent state of things, there being pus in the right lateral sinus, and from this a vein with creamy contents was traced to that part of the right side of the brain which was most diseased; about the anterior end of the Sylvian fissure there was purulent softening and red softening. As the lesions were more wide-spread, and as the case was acute, the evidence were only very indirect towards the interpretation of chronic cases, but was, the author thought, worth consideration in that regard.

8. *Aural or Auditory Vertigo, or Menière's Disease.*—The author believed that almost any kind of ear disease would cause paroxysms of vertigo and reeling, with faintness and vomiting. He stated briefly various kinds of disease of the ear he had seen associated with the paroxysm, expressing his opinion that the paroxysm always depended on trouble of the auditory expansions in the labyrinth, whether from actual disease therein or disturbances from without. He insisted that, besides cases with paroxysm, these were, so to speak, chronic cases. With ear trouble, it was not a very uncommon thing to find slight giddiness and trifling reeling when the patient walked. These cases had, he thought, not received sufficient attention. He referred to the case of a medical man, deafness of the right ear occurring immediately after the discharge of a heavily loaded gun; the patient always afterwards tended to the left. To the case of another medical man, who, besides having paroxysms with right-sided deafness, was always giddy if, when lying down, he turned over from right to left; to the case of a patient, the subject of Menière's disease, who would become giddy and feel as though pushed forwards whenever she bit anything crisp. The explanation suggested of this last case was, that the symptoms were owing to contraction of the tensor tympani, a muscle acting along with the masticatory muscles. The paroxysms were generally explained by the laity, and not unfrequently by medical men subjects of the affection, as being caused by stomach and liver derangement. The author urged that the mere concurrence of deafness with the paroxysmal or chronic symptoms should not alone settle the diagnosis. He passed in brief review the most characteristic symptoms of five great varieties of vertigo—(1) stomachic, (2) nervous (often sexual) exhaustion, (3) ocular, (4) epileptic, (5) aural or auditory. Great attention should be paid for diagnosis to what Knapp has called the limitation of the "field of audition," to the loss of perception of certain notes: if the loss were of some *intermediate* notes, it would, the anthor thinks, point to disease in the cochlea. He tried to show how we should distinguish betwixt a case of chronic unsteadiness from aural disease, that from cerebellar disease, and that from ocular palsy. Finally, he gave his speculations as to the *modus operandi* of the ear disease. There were two sets of symptoms—*a*, "vital" (faintness, perspiration, irregularity of pulse, etc.); *b*, locomotor (vertigo with or without reeling). He attributed the former to disturbance of, or actual disease in, the cochlear division; the latter to disease or disturbance of the semicircular canal divisions. The former division was, he suggested, chiefly afferent to the medulla oblongata, the auditory nucleus having (Lockhart Clarke) close connexions with the vagal and spinal accessory nuclei. The latter division, he thought, represented that part going, according to Lockhart Clarke, to the cerebellum. The "vital" and locomotor symptoms were due to disturbance of the medulla oblongata and cerebellum respectively. He referred to Goltz's theories, to the experiments by Vulpian and others on the semicircular canals. He mentioned that Pierret had recently spoken doubtfully as to

the existence of relations betwixt the auditory nerve and the cerebellum. Cyon has recently found that irritation of each of the semicircular canals is followed by a particular ocular movement—a very significant thing towards the interpretation of auditory vertigo.

ON THE

RELIEF OF PAIN IN CARCINOMA UTERI.

By A. E. AUST-LAWRENCE, M.D.,
Physician-Accoucheur to the Bristol General Hospital.

The subject of the various forms of cancer must always be an anxious care to medical men, inasmuch as the pain in most cases is of such an intense kind that death is welcome to the patients to relieve them of their agony. Considering the great importance of relieving pain in cases where we cannot hope to do more, I have given most remedies a trial; and it is with the object of bringing some of them more prominently before the profession that I am induced to pen a few lines on the subject.

I have, unfortunately, generally under my care in hospital and private practice about from twenty to thirty cases of cancer of the uterus, vagina, or rectum; and the experience of the past twelve months has led me to rely, to a great extent, on the following treatment for the relief of pain:—In cases of medullary cancer of the uterus, and also of advanced epithelioma in the same region, I have been struck with the marked relief often derived from the administration of ergot, in doses of thirty minims every six hours. There is a relief from the intense throbbing which, as a rule, only subsides with each attack of hæmorrhage, which of course brings with it great exhaustion. I consider the ergot acts in the ordinary way, by lessening the amount of blood in the uterus; and it may also check, to a slight extent, the rapid breaking-down of the affected part. A case of medullary cancer in a young woman, thirty-one years of age, was rendered very much less painful by ergot than by any other remedy which was tried. I have a case now under my care of sarcoma of the uterus, the pain of which is very much relieved by full doses of ergot.

Another drug I have found of great value is croton chloral hydrate. This, in my experience, has not very much power to lessen the pain at the seat of the cancer, but it is very valuable in lessening the reflected pains in the back, thighs, and groins; and this it has done in several of my cases to a very marked degree. As a local remedy I have found carbolic acid very valuable. I apply it full strength by means of a little piece of cotton-wool through a very small speculum to the cancerous surface, and then order a lotion with one drachm of the glycerini acidi carbolici to half a pint of water, to be used as an injection night and morning. I have found this drug, used in the way I mention, of great value.

Of course other drugs suggest themselves to everyone, such as opium, Indian hemp, bromide of potassium, etc.; but what I wished to show is that ergot is a very valuable agent in helping to control pain in these cases, that locally I have had better results from carbolic acid than from anything else. I might also add that a very valuable way of relieving pain in these cases is by small blisters in the groins, dressed with an ointment containing morphia.

I trust that the importance of the subject will be a sufficient apology for trespassing on your valuable paper, and that the few hints I have given may be of use to some one labouring in the same field.

Scarcity of Subjects in Paris.—Paris, which formerly used to be so abundantly supplied with subjects, is now, according to the *Union Médicale*, suffering from a scarcity somewhat like that which prevails in London. The students of the Ecole de Médecine have recently been informed that, they can only dissect at the Ecole Pratique for half the time formerly allowed for their 20 frs., on account of the number of applicants and the scarcity of bodies. It often happens that, in spite of every wish on their parts, the students are only able to dissect a thigh or an arm during the session. This paucity of subjects is said to be due to the intervention of the religious societies, who buy up for the purpose of burial the bodies of unclaimed persons who die in the hospitals. It is suggested that the example of Germany should be followed, and unclaimed bodies be brought by rail, preserved in ice if necessary, from the hospitals of provincial towns situated within a radius of thirty leagues around Paris.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASES OF STRANGULATED HERNIA.

(Under the care of Mr. HULKE.)

In acute strangulation, where the taxis, under complete relaxation attained with an anæsthetic, fails, the patient's safety lies in an immediate operation. Time is here not to be measured by hours, but by the rapidly advancing pathological processes which are hurrying on to a condition of gut, etc., from which few recover. In the first three cases herniotomy was done within twelve hours. In the first case the supplemental pouch or sac found in front of the aponeurosis of the musculus obliquus externus was probably formed by the patient's own misdirected efforts to reduce the rupture. Similarly placed and symmetrical pouches of much larger size than this were met with in a case recorded some years ago by Mr. Hulke in the *Royal Medical and Chirurgical Transactions*, vol. xlix., page 189. There, as here, they were associated with congenital rupture. In being placed superficially to the muscles, they differ from those bulgings of sac between the muscles and fascia transversalis which, as Mr. Birkett has pointed out, simulate a true reduction *en bloc*. In this, and in the second case, the strangulated gut was already within twelve hours dappled with extravasated blood. In the latter the rupture was direct, and the aperture extremely small. The third case might serve to point a "counterblast" to the use of tobacco. The only noticeable circumstance here was the presence of large intestine in the sac, to the exclusion of small. Doubtless the knot which followed the leap two years previously was a piece of omentum which led the way to the later descent of the gut. The fourth case illustrates the damage which may be done by immediate and improper attempts at reduction by the taxis.

Case 1.—*Congenital Rupture—Acute Strangulation—Operation twelve hours later—A Supplemental Pouch in front of the Inguinal Canal—Recovery.*

In this case the pathological changes due to the strangulation were, doubtless, increased by the injudiciously violent and ill-directed efforts of the patient. The pouch-like upward extension of the sac in front of the inguinal canal was probably caused by these, and the narrowing of the neck of the sac at the external abdominal ring consequent on the long use of a truss. A very remarkable instance of such an extension of the sac along each groin nearly to the superior spine of the ilium, associated with non-descent of testes, is recorded by Mr. Hulke in the *Royal Medical and Chirurgical Transactions*, vol. xlix.

A tailor, aged twenty-five, was admitted into Broderipp ward on the afternoon of July 30 last. The left side of his scrotum was distended by a globular swelling, which partially hid the testes. The lower front of this swelling was translucent. Above this, separated from it by a groove, was another swelling, lying parallel to the inguinal canal, but superficial to it. His face was pale and anxious; pulse small, 72; temperature 98°. He had worn a truss from infancy till his twelfth year; then discontinued it till five months ago, when he resumed it because the rupture, which he had fancied cured, occasionally descended. Yesterday he rose at 6 a.m., without, as usual, putting on his truss. At seven o'clock he was seized with pains in the belly, dragging from the groin to the navel, and he soon found his scrotum swollen. At ten o'clock he began to vomit, and he continues to do so whenever he takes anything. He has himself perseveringly tried to push back the rupture. Herniotomy at 7 p.m., about twelve hours after the descent and strangulation. Reduction could not be attained without opening the sac. The upper swelling was a superficial effect of the sac pushed upwards in front of the aponeurosis of obliquus externus muscle above the external abdominal ring. It contained a few drachms of bloody serum, and a knuckle of small intestine lay partly in this and partly in the upper part of the lower swelling. It was very œdematous, of a deep mulberry colour, and dappled with capillary apoplexies. When this was reduced, several ounces of nearly colourless serum welled out of the bottom of the scrotal com-

partment of the sac, which also contained the testicle. Antiseptic precautions were used at the operation and afterwards. The wound suppurated. On September 16 he was convalescent.

Case 2.—Very Acutely Strangulated Direct Inguinal Rupture—Operation—Recovery.

J. G. B., aged twenty, a messenger, was admitted into Broderipp ward at 5 p.m., October 12, 1875. His face and hands were pinched and bluish. He retched frequently. His pulse was very small and weak, 106. No account of his illness could be obtained from him. He lay moaning constantly, and repeating, "Horrible pain!" with his hand on his navel. A very tense oblong swelling protruded through the external abdominal ring into the upper front of the scrotum. Herniotomy was done at once. The sac was as thin as tissue-paper. It contained a knuckle of small intestine, almost black with intense congestion and hæmorrhage. It had escaped through an opening in the conjoined tendon not larger than a large goosequill. On dividing the constriction, clear serum oozed from the belly. Antiseptic precautions were observed during the operation and afterwards. His bowels acted on the third day. The wound healed by first intention, except at its lower angle, where a drainage-tube was brought out. He left convalescent the second week in November.

Case 3.—Acutely Strangulated Oblique Inguino-Scrotal Rupture—Operation—Recovery.

W. T., aged nineteen, an errand-boy, who had never smoked, took his first cigar, which made him very sick. He vomited through the night, rose at half-past seven o'clock the next morning, and whilst carrying his breakfast along the street to his place of work he again retched violently. Whilst heaving he felt something give way just below his navel, and then had great pain in the left groin, doubling him up and keeping him bent forwards. He continued in great suffering, frequently vomiting, and in the evening (April 14) was brought to the hospital. In his right groin and scrotum was a very acutely strangulated rupture of the size of an orange. The taxis had been already tried. Repeated under ether, it again failed. Herniotomy. Reduction could not be attained without opening the sac. It contained a loop, about six inches long, of large intestine, and a considerable mass of omentum. The first stool was passed on April 19, the fifth day after the operation. He made a good recovery, and was up wearing a truss on May 19. He said that about two years before, after leaping a fence, he became first aware of a knot of the size of a walnut, in the left side of the scrotum, which had never since gone away, but it had never inconvenienced him.

Case 4.—Omental Rupture—much Bruising by Violent Taxis—Operation—Recovery.

A. C., aged forty-three, a corpulent baker, was admitted into Broderipp ward on July 4, 1876, with a rupture of a curiously cylindroid form, filling the left inguinal canal, and descending into the scrotum nearly to the testis. The skin about it was reddened and bruised by immoderate taxis, self-applied. He had been ruptured for more than three years, and had generally worn a truss. Eight days before he had neglected to put this on, and laid it aside; four days afterwards, whilst walking, the rupture swelled and became painful, obliging him to go to bed. Next morning, the rupture continuing unreduced, he put on his truss over it and tried to work, but was soon in so much distress that he took off the truss. At night he fomented and poulticed the rupture without lessening its bulk, and in the morning put on his truss and went to work; but, as on the day before, he was soon unable to bear the truss, and took it off. In the evening he again tried fomentations and was inverted, but without relief. A medical man was lastly called in, who sent him to the hospital. Herniotomy; sac opened. It contained a mass of omentum, deeply congested and stained with extravasated blood, and softened as if in an early stage of gangrene. This was cut off, the constriction relieved, and a drainage-tube left in the wound. Some sloughing and rather free suppuration followed. He left convalescent on August 4.

Case 5.—Femoral Rupture—Strangulated five hours—Herniotomy—Sac Unopened—Recovery.

A housemaid, aged thirty-seven, was admitted May 22 last with a strangulated femoral rupture, which extended along the groin to one inch of the anterior-superior iliac spine. It was very tense; no impulse was imparted to it when she coughed; it was very painful. She vomited frequently. For twelve months she had occasionally had a lump in the groin, which at first used to disappear when she was in bed, but not latterly. Five hours before being brought to the hospital, whilst straining at stool—for she was constipated,—the rupture swelled, it became very painful, and she was soon after sick. Herniotomy; sac unopened. First stool on eleventh day, after an enema. Discharged convalescent June 13.

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Medical Times and Gazette.

SATURDAY, MARCH 24, 1877.

THE CANTHARIDES CASE.

At the Cornwall Lent Assizes, held in the town of Bodmin, a young man named Hennah, or Hannah, was charged before Lord Chief Justice Cockburn and a jury with "administering to Mary Anne Rowe a poison called cantharides, with intent to injure, aggrieve, or annoy." It was not denied that the defendant, as charged, did on a certain day give the prosecutrix two "broad-figs" containing cantharides. On getting home she was proceeding to eat them, when her father detected something glistening in them, and he at once ordered her to throw the figs away. It was then found that what was glistening was cantharides. A few days afterwards the defendant came to her house and told her father that he intended the figs containing cantharides for a girl named Robins, and asked for forgiveness; but it was contended that, whether it was intended for this person or anybody else, the prisoner would still be guilty of attempting to annoy by means of a noxious drug.

After having been thrown away, one at all events of the figs was picked up again, and handed to the authorities. It was examined by a dispensing chemist of St. Austell, who found in it a grain and a half of solid cantharides, which quantity he said was insufficient to produce any effect on the human system. He estimated a fatal dose at twenty-four grains. The facts as already stated were not denied, but the prisoner's counsel urged that there was no offence in law. No noxious thing had been given, since it was proved that

what was contained in the fig examined would have had no effect.

The Lord Chief Justice, after consultation with Baron Hawkins, returned into court, and gave the following decision:—"The statute requires, in order to constitute an offence, that there shall have been the administration of a noxious thing; and we think, in order to make out an offence, the thing administered must be of such a character as to satisfy rigorously the requirements of the law—namely, that it must be a noxious thing. I think there must be a distinction between a thing only noxious when given in excess, and a thing which is a recognised poison, and is known to be a thing noxious and pernicious in its effect. A distinction is to be made between poisons such as prussic acid and strychnine—poisons of a well-known and established character—and a thing which is only capable of doing mischief when it is administered in excess. Upon the medical evidence before us, cantharides, or, as it is commonly called, Spanish fly, is administered medicinally, and in small quantities, and up to a certain extent it is incapable of producing any effect at all. What is important to the present case is that the quantity administered was incapable of producing any effect. The statute makes it an offence to administer, although not with the intention of taking life, but of doing any serious bodily harm, any noxious thing with intent to cause injury or annoyance; but unless the thing is a noxious thing in the quantity administered, it seems exceedingly difficult to logically say there has been a noxious thing administered. The thing is not noxious in the form in which it has been taken; it is not noxious in the degree or quantity in which it has been given and taken. We think, therefore, that the indictment will not hold. It would be a very different thing if the thing administered, as regards either its character or degree, were capable of doing mischief; but because it happens to fail in a particular instance from some collateral or unforeseen cause, owing, maybe, to the vigour of the constitution of the person to whom it was administered, or some cause of that description, if it was capable of doing mischief it would be within the statute. But here the quantity was incapable of doing any mischief, and therefore we shall not be justified, although it was administered with the intent of producing inconvenience or annoyance, in saying that it is within the statute, seeing the thing is not, in the form administered, noxious. Therefore, under those circumstances, the case is not made out against the prisoner, and you are bound to find him not guilty."

The prisoner was accordingly acquitted, and discharged with a caution to be careful for the future.

Such a decision as this, coming as it does with the authority of two such lawyers as Sir Alexander Cockburn and Baron Hawkins, cannot but be received with a feeling akin to stupefaction. Henceforward the intent is nothing; the result is everything. Such a thing as assault with intent can have no existence if the end be not accomplished. But these are questions for lawyers, not for us.

In point of fact, the case cannot be dealt with or considered from a purely legal aspect, as in all such instances there must be a substratum of fact to go upon, and in this particular instance the facts seem to have been put before the Court in a most imperfect manner.

In the first place, if there was proof of the legal identity of the fig examined with one of those given to the girl, there was no proof of the quantity of cantharides found in it being the same as that administered. Less it could not have been; more it might have been. The quantity found, however, was a grain and a half. Only one fig was examined, and the whole question seems to have been argued out on this one fig. The total quantity of cantharides administered does not seem to have been referred to, even if it was discovered. The only person called to give evidence as to the effects of cantharides was this same pharmaceutical chemist of St. Austell; and we beg leave to submit that in such matters he was no authority at all. The gentleman may have been highly educated; and, doubtless, so were the gentlemen sitting at the bar: but surely any one of them would have been rather surprised had he been invited to step into the witness-box and give evidence as to the effects of cantharides in large and small doses. The dispensing chemist was, technically, no better trained than they; and in this respect alone the prosecution ought to have broken down. It was wrong of the Chief Justice to accept such evidence when a man's freedom was at stake; and surely it was a ridiculous misnomer to call such evidence "medical evidence."

Nor can the distinction attempted to be drawn by the Lord Chief Justice between substances essentially and relatively noxious be any better maintained; for the poisonous substances named by him—prussic acid and strychnine—are largely used in medicine with the most beneficial results, and are by all who use them looked upon as being much more manageable than cantharides, which are very, very rarely used internally, and hardly, if at all, in the solid form. The only official list of poisons we have is that appended to the Pharmacy Act, and there cantharides ranks alongside arsenic, prussic acid, and strychnine.

Never was a more unfortunate judgment. How such a confusion of ideas could have arisen in the mind of a man like the Lord Chief Justice, we cannot tell. That Hennah gave the girl the "doctored" figs was not disputed; nor was it called in question that his intent was to injure, aggrieve, or annoy the prosecutrix. If this is no longer an offence in point of law, it is high time the law was made compatible with common sense.

CHANGES IN THE BLOODVESSELS IN BRIGHT'S DISEASE.

Dr. George Johnson made another interesting communication on this subject on Tuesday evening last. Like Sir William Gull and Dr. Sutton's paper, it was brought before the Pathological Society, and the very large gathering of members which met to listen to the discussion amply testified to the great interest which the subject has everywhere excited. Nor could it be otherwise, for it is one of immense importance, and the very great frequency with which these morbid changes are met with in all classes and grades of society, renders it incumbent on those whose opportunities are so manifold to endeavour to elucidate a branch of morbid pathology, which may not incorrectly be considered as essential to a proper and rational management of a disease which, if ever curable, is curable only by meeting it at its onset; and prevented by warning against habits of life which infallibly lead to its development.

Referring to former papers and views on this subject, Dr. Johnson said he felt quite content, as Sir William Gull had suggested at the last meeting, to leave it to the profession to judge between them, and he confidently awaited their verdict. He was quite unable to accept the altered condition of the smaller vessels as one due to fibroid change. To him it was a simple and a natural hypertrophy of the muscular coat of the arteries. In one of the specimens these gentlemen had shown, a portion of the muscular coat—the circular muscular fibres—was considered to be of the nature of hyalin-fibroid; while that which he (Dr. Johnson) considered as the longitudinal layer of the muscular fibres was described by his opponents as the unaltered muscular layer. This Dr. Johnson considered "a curiously inaccurate description" of what, after all, was a very well-known histological fact—viz., that all arteries, having muscular walls at all, always had the muscle arranged in two layers. "It is evident, therefore," said he, "that they believe the outer layer in the renal artery to be the counterpart of the so-called hyalin-fibroid layer in diseased arteries of the pia mater. The fact being that this layer in the pia

mater is external to the muscular layer, and is composed of the distended fibrous tunic, while in the renal artery the fibrous tunic is usually inconspicuous, and that which they mistake for it is the hypertrophied circular layer of muscular fibres." "Now, this erroneous description of the thickened renal arteries serves in part to explain the difficulty which the authors find" in establishing hypertrophy of the muscular walls, "since it proves that they are so prepossessed by their hyalin-fibroid change as to mistake for it the most unquestionable example of arterial hypertrophy." To the assertion that the muscular layer varies in thickness in different parts of the same vessel, and that it is often manifestly diminished in thickness, Dr. Johnson replied that he was quite of the same opinion; only he explained it as a degenerative change in the hypertrophied muscle, similar to that often found in the substance of the heart under similar circumstances. Having thus passed in review and criticised the various doctrines held as to the microscopic appearances in the arterioles, he proceeded to discuss the cause of the hypertrophy—for, in spite of all that has been urged, he still regards it essentially as a hypertrophy. Sir William Gull and Dr. Sutton, as we stated in a former article, regard this not as hypertrophy, but as part and parcel of a general *fibroid* degeneration of the entire system; they argue "that the state commonly called chronic Bright's disease with contracted kidney is not essentially renal." Dr. Dickinson, who believes that the changes are chiefly due to hypertrophy of the muscular coat, holds that the impediment to the circulation is in the capillaries; and that "the function of the arterioles is by their contraction to assist the heart to drive the blood onwards. In consequence of the capillary obstruction, the heart and the arteries, whose common function is jointly or alternately to carry on the blood, become habitually distended, are stimulated by distension to over-action, and by over-action to hypertrophy." Dr. Johnson's own view is that the arteries close, to shut out, as it were, blood which is charged with foreign or effete matter, much as the glottis closes against noxious vapours: that it is therefore a reflex action, and is first set up by an antecedent condition of the blood.

Before proceeding to criticise the theory of interstitial fibrosis, Dr. Johnson explained his views on contracted granular kidney. He holds that the first change consists in disintegration and destruction of the glandular epithelium of the convoluted tubes, the products showing themselves during life in the form of granular and other casts. The appearances under the microscope of such a kidney have led to the doctrine of interstitial fibrosis, while in reality the changes are only altered and atrophied tubules. They have lost their epithelial lining, and have collapsed, while the more stable and more resisting arterioles and capillaries may have become very slightly thickened. One of Dr. Johnson's strongest objections to the theory of a new interstitial fibrosis is the fact that the intertubular capillaries may even be quite normal, while the characteristic intratubular changes may be seen in various stages of progress. We feel bound to differ from Dr. Johnson, having frequently seen the appearances he speaks of. But side by side we have also seen the epithelial lining of the tubules almost intact, while the surrounding stroma, which normally is exceedingly small in quantity, was greatly increased, and presented the appearance which Dr. Johnson considers due to collapsed or atrophied tubules. Dr. Johnson argued that a fibroid degeneration would close on the tubules and compress and destroy them. Such a destructive change could, however, only occur very late in the disease, and it is even highly probable that life would be destroyed long before any such complete metamorphosis could take place.

Dr. Johnson did not address himself sufficiently to what was, after all, the spirit of the discussion. He confined himself chiefly to the condition of the bloodvessels; while Gull and Sutton, in support of their former *special* conclusions, advanced others of a more *general* character. The latter observers first of all described certain changes—"hyalin-fibroid"—in the vessels, which Dr. Johnson endeavoured to prove to be the mechanical results of the reagents employed in mounting. They, in order to prove themselves right and Dr. Johnson wrong, continued their researches, and extended them from the vessels to other organs, and they used other mounting material. The result has been to show that the same kind of "hyalin-fibroid" new growth is found in almost every organ of the body; and at the last meeting of the Society they showed it in all stages of development in the spinal cord, where of course there could be no hypertrophy of muscle with which to confound it; and Dr. Johnson was not able to bring up any facts to invalidate these researches. He should have been prepared to explain the undoubted presence of this *general* fibroid degeneration; instead of which he chiefly argued from the appearances found in the smaller arteries.

There may be truth on both sides, but, for our part, we have long held and felt that the state commonly called chronic Bright's disease with contracted kidney may not always be essentially renal, and that there may be an antecedent stage consisting of something more than mere dyspepsia, which is itself probably a symptom only, or an altered blood condition which is rather a consequence than a cause of the disease. We believe, too, that such was the feeling of the vast majority of the members of the Pathological Society at the termination of the interesting discussion on Tuesday last.

EPIDEMIC JAUNDICE.

The *Berliner Klin. Wochenschrift* (Nos. 7, 8, and 10, 1877) contains an interesting account, by Staff-Surgeon Dr. C. Köhnhorn, of Wesel, of a severe epidemic of catarrhal jaundice which occurred in 1872, in the Fifth Rhine Infantry Regiment, to which he was attached. The first case was observed on March 15, 1872, and, up to the end of May, fifty-eight cases in all occurred. These cases were not, however, equally distributed over the three battalions of the regiment, but thirty-eight occurred in the first battalion, which was 547 men strong; thirteen in the second battalion, 562 men strong; and seven in the fusilier battalion, containing 537 men; the percentage of cases being 6·93, 2·31, and 1·30, respectively, for the three battalions. The remarkable point about this epidemic is that it was almost absolutely restricted to the Rhine regiment, and that in five other regiments stationed in the same neighbourhood only a single case was reported in March, April, and May. The question naturally arose, To what circumstance was this peculiar distribution due? All the cases of jaundice were of a catarrhal nature, and hence attention was especially directed to discovering the cause of the gastro-duodenal catarrh, on which the hepatic symptoms certainly depended. At first the commission of inquiry could find nothing wrong with the diet of the soldiers; but after careful investigation had shown that there was nothing which could be found fault with in the construction of the barracks, or in the soil, the drainage, ventilation, and other external surroundings of the affected regiment, and that there was nothing in the duties which the men had to perform that would render them more liable than the other neighbouring regiments to this special form of disease, inquiry had at last to be re-directed to the question of food. Without entering into minute details, we may say that it was eventually proved that the cause of the epidemic was a preponderance, in the rations of the affected regiment, of pork and dried peas and beans; and also that the number of cases in the three battalions of the Fifth Rhine Regiment was directly proportional to the quantity of these articles of food supplied to the

men. The investigation also brought to light a curious fact: that all the soldiers attacked by catarrhal jaundice, with a single exception, were in *their first year of service;* and that the older men, who were more seasoned and possessed of greater resisting power, remained unaffected by the prolonged ingestion of the above indigestible foods. In the above epidemic, all the cases recovered, and they ran the usual course of simple catarrhal jaundice; but, as Dr. Köhnhorn points out, the disease, though harmless in itself, is by no means to be regarded as a matter of no consequence, for it renders those whom it attacks unfit for their occupation for weeks, or even months Thus, in the case before us, the average time which each patient was under treatment was twenty-five days; the shortest time that any case was under treatment was five days; the longest, seventy-seven days; and the total duration of the treatment of all the cases together was 1458 days. Other epidemics of catarrhal jaundice among soldiers, similar to the above, and due to too great uniformity in feeding, have been reported in Germany. One especially, which attacked the First Bavarian Army Corps before Paris in February, March, April, and May, 1871, deserves notice. Out of 33,380 men (the average strength of the army corps), 799, or 2·4 per cent. of the whole corps, suffered from catarrhal jaundice; in some of the regiments as many as 5 per cent. of the soldiers being attacked. It was proved that the disease was due in this instance to the fact that the men were almost entirely fed on fresh mutton and salt beef, and especially the latter. Owing to the season of the year, and to other circumstances, fresh vegetables were unattainable, and they were replaced by rice (to which the men had an extreme objection) and by rations of pea-sausage (*Erbswürst*) once or twice a week. It is an interesting fact that a cavalry regiment of 1240 men, which was posted somewhat further from Paris, and was able to obtain occasional supplies of fresh vegetables and potatoes, and especially salad made with dandelion (*Leontodon taraxacum*), had not a single man on the sick-list from jaundice. Dr. Köhnhorn mentions other instances of similar epidemics, and his paper is well worth the perusal of military surgeons.

THE WEEK.

TOPICS OF THE DAY.

A DISCUSSION is at the present time being carried on as to the advisability of remodelling or removing Westminster Hospital. The Duke of Westminster recently put forward an appeal to the public for funds to enable the Committee to proceed with important structural improvements and extensive repairs, which he states to be indispensably necessary to place the Hospital on a level, in sanitary completeness and general efficiency, with the best-constructed London hospitals. For this work it is estimated that at least £12,000 will be required. But it has also been suggested that, as this Hospital now stands within a quarter of a mile of two others (St. Thomas's and Charing-cross), and less than a mile from a third (St. George's), it would be better to remove the site to some neighbourhood—such as Pimlico, Chelsea, or Battersea—at present unprovided with a large charitable institution of this kind. One argument in favour of its removal must certainly be allowed to have some force, viz., the difficulty of adapting modern sanitary improvements to old buildings—a course which is always costly, and never thoroughly satisfactory. And, moreover, one advocate for the removal of the site points out that, through recent improvements, the neighbourhood in which it now stands is being rapidly converted from an area of squalor and destitution into a quarter of palatial mansions and expensive offices. The present site would undoubtedly realise a large sum if disposed of; and, provided there are no greater objections than appear on the surface, it does seem that the Committee might with advantage consider the question of removal which has now been raised.

A curious case was tried last week at the Leeds Assizes, which strikingly illustrates the "nicety" of the law. Three men were charged with feloniously wounding another, with intent to do him some grievous bodily harm. The prosecutor had been so severely kicked and beaten that his life was in jeopardy for several weeks; but, singularly enough, according to the doctor's evidence, there was no breaking of the skin, and consequently no "wounding" within the meaning of the statute. Under these circumstances, as there was unfortunately no second count charging the assailants with feloniously causing grievous bodily harm, the Judge had no option but to direct the acquittal and discharge of the prisoners. The case may serve as a hint to medical attendants to be cautious how they use the word "wounded"; but it also illustrates strongly the carelessness with which our critics the lawyers often use language, frame indictments, and even draw up Acts of Parliament.

An inquest held before Dr. Hardwicke, last week, revealed a shocking state of affairs, which, according to the evidence of the police, they are powerless to prevent. A man, fifty years of age, who had formerly occupied a good position in society, was, on the morning of the 9th inst., found in an insensible condition in the cellar of 13, Gilbert-street, Clare-market, by one of the lodgers in the house. The deceased was almost naked, and had evidently taken refuge in the cellar from the cold weather. The police had him removed to the St. Giles's Workhouse Infirmary, where he died the next morning from exhaustion, while suffering from dropsy, accelerated, if not altogether caused, by starvation and exposure. A juror said the case was a disgrace to the parish, which called upon them to pay heavy rates for the care of the poor. Further inquiry elicited the fact that hundreds of persons in the Drury-lane district nightly took refuge in the passages of houses to sleep. A police-sergeant said the police had no authority to interfere in such cases; they reported cases of windows and doors being found open at night-time, but they could not compel the people to shut them, and they certainly could not enter the houses to see who was sleeping there. The coroner and the jury were of opinion that the police should have power to enter these dwellings to see how people were living, so as to be able to report to the sanitary authorities, if need be, as to whether people was complying with the law in reference to underground dwellings, etc. The sergeant promised to report the opinion to the proper quarter, and the jury returned a verdict of "Death from exhaustion."

A crowded meeting of the Sanitary Institute of Great Britain was held last week at the rooms of the Society of Arts, Adelphi, under the presidentship of the Duke of Northumberland, to consider the report recently issued by the Committee appointed by the President of the Local Government Board upon the disposal of town sewage. Among those present were Sir Joseph Bazalgette, C.B., Vice-President of the Institute, by whom the subject for consideration was introduced, Dr. B. W. Richardson, F.R.S., Dr. Overend Drewry, Dr. Farr, etc. The proceedings having been opened by the chairman, a discussion ensued, each speaker being restricted to ten minutes. The result of this arrangement was that each one in turn exhausted his allotted time before he got into the body of his subject. But, differing as most of the speakers appeared to do on the main question, all seemed to agree in the proposition that a modified system is necessary to meet the requirements and conditions of different districts. An adjournment of the meeting till the 11th prox., for the purpose of hearing those gentlemen who had not had time to speak, was proposed by the President, and unanimously agreed to.

On the 15th inst. (the sixty-third anniversary of the institution), at a meeting of the Court of Governors of the Royal Hospital for Diseases of the Chest, City-road, the Lord

Mayor formally opened the new wing of the building which was founded last year by the Princess Louise. A very influential gathering of the patrons of the charity assembled on the occasion. The new waiting-rooms for out-patients were pronounced to be ready for use as soon as the meeting terminated; they are well adapted for the purpose, warmed and ventilated. After certain alterations and renovations have been carried out in the old building, double the number of in-patients will be able to be accommodated; the rooms heretofore used for out-patients are to be made into wards, and a few weeks only will be required to render them fit for occupation. It was also announced to be the intention of the Committee to erect more wards on the freehold land recently purchased in the rear of the Hospital.

The Select Committee of the House of Commons appointed to inquire into the working of the Lunacy Laws, held a meeting last week, the Right Hon. S. Cave, M.P., presiding. Mr. Percival, Secretary to the Lunacy Commissioners, gave evidence. He described the position of the various classes of lunatics, and said the Commissioners believed that, as a rule, the statutory regulations for the management of asylums were carefully observed. Mr. Percival was asked by Sir Trevor Lawrence if it was true that any person armed with the certificates of two medical men on the Register can have another person taken to a lunatic asylum. Witness replied, "Yes; he might take him there, subject to his being received." He added that the Commissioners had never expressed any opinion that these certificates were insufficient.

In an action which was tried at the Nottingham County Court on the 13th inst., the Society of Apothecaries, represented by the Medical Defence Association, obtained judgment for a penalty of 20*l.* against a chemist who was alleged to have carried on a system of prescribing without being possessed of the necessary qualifications. The defence urged was that the prescribing had been only occasional; had been confined to "simple remedies for simple diseases"; and that the law permitted chemists to prescribe over the counter, but not to visit patients in their homes. A case was granted to enable the defendant to appeal to the higher courts.

The Astronomer-Royal reports that during the week ended the 10th inst. there were 17·4 hours of sunshine in London, out of 78·7 hours during which the sun was above the horizon. On the 8th inst. the sun shone 5·4 hours, and on the 10th 5·2 hours. On the 4th and 6th inst. it did not shine at all.

The town of Sydney, which has hitherto enjoyed a happy immunity from small-pox, is, according to the latest accounts, striving hard to prevent the disease getting a footing in the locality. The first cases were imported there in one of the Torres Straits mail-steamers, without their being announced. Whether this was, or was not, done inadvertently, is to be tested by the trial of the captain and doctor as soon as the ship is released from quarantine. Some days had elapsed before the existence of the disease was known to the authorities, during which period the passengers and crew had landed and dispersed. Prompt and vigorous measures were taken by the Government to deal with the danger as soon as it was disclosed; but latest accounts were unable to state positively whether the spread of the disease had been entirely arrested. Two deaths were reported in an infected family placed in quarantine, and there are three cases among the crews of her Majesty's ships on the station. As the last three cases are of quite recent development, it is impossible at present to say how far the mischief may have spread. One good result of the evil is, that the city authorities have been stimulated to unusual efforts for the purification of the city, and many dirty corners hitherto allowed to pass unnoticed are now being made to put on a cleanly appearance.

In presiding last week at the annual meeting of the Provident Dispensary at Leamington, Lord Leigh, Lord Lieutenant of Warwickshire, spoke in favour of a scheme for a training nursery to be connected with the institution, observing that anyone visiting the poor must be struck with the incompetent nurses to whom they were frequently left during illness, and expressed a hope that trained nurses would speedily be generally available.

A memorial has been addressed to the President of the Local Government Board by the North-Western Association of Medical Officers of Health, the principal points of which may be briefly summarised as follows:—1. That on the occurrence of a case of zymotic disease, the medical attendant shall be required, under a penalty for neglect, to inform the head of the family or other responsible person of the nature of the complaint; and that the person so informed shall be in turn required, under a penalty for neglect, to report the case to the medical officer of health for the district. 2. That as regards schools, it may be lawful (*a*) for the local sanitary authority to close all day-schools during the prevalence of infectious disease; (*b*) for the local sanitary authority to inhibit the attendance at schools of children from infected houses. The memorialists pray that a Bill may be brought forward during the present session of Parliament, embodying these provisions.

If intemperance is at all affected by the total quantity of spirit consumed in the country, tho past year should show a great diminution of cases of drunkenness. Duty was paid in 1876 on 29,950,288 gallons of home-made spirits for consumption as beverage in the United Kingdom; this quantity is less by 155,819 gallons than that of the preceding year. The 16,438,135 gallons for consumption in England show a decrease of 304,633 gallons; but the 6,971,138 gallons for Scotland show an increase of 98,668 gallons, and the 6,541,015 gallons for Ireland an increase of 50,146 gallons. The 11,487,795 proof gallons of foreign spirits, entered for consumption in the United Kingdom in 1876, were 294,855 gallons less than the quantity imported in the preceding year. The two returns together show a total decrease of more than 450,000 gallons.

The Public Health (Ireland) Bill, introduced by Sir M. Hicks-Beach, was issued this week. It extends over 110 pages, and contains a memorandum indicating the changes in the law which it proposes to make. The objects of the Bill are to consolidate into one Act the various provisions with respect to sanitary matters and burial-grounds of the several Acts, no less than twenty in number, now in force in Ireland, and to amend the same where amendment is required.

RE-OPENING OF CHARING-CROSS HOSPITAL BY THEIR ROYAL HIGHNESSES THE PRINCE AND PRINCESS OF WALES.

Their Royal Highnesses the Prince and Princess of Wales formally re-opened this Hospital on Wednesday last, the 21st inst. It was closed some time ago in order to allow of some thorough and greatly needed alterations being made. The construction of the old wards impeded the free circulation of air. The obstructions have been removed, and the whole made uniform and neat throughout. An excellent ward, containing thirty-two beds, has been obtained on the third storey for children. The old sliding casement windows have been replaced by louvre windows, which secure a perfect ventilation of the wards. The closets, lavatories, and bath-rooms have been re-arranged, and constructed on the best sanitary principles. The sculleries have been completely separated from the wards, and provided with through-ventilation. The wards are now in a perfect hygienic condition, and uniformity of temperature is maintained day and night by means of hot-water pipes and ventilating stoves. The out-patients' department has been remodelled, the dispensary enlarged, and better accommodation secured for the comfort and convenience of

out-patients. These and numerous other improvements have vastly improved the salubrity and cheerfulness of the Hospital, increased the number of beds to 180, aud rendered it in every way more thoroughly adapted to carry on the great and useful work of the charity. The walls of the wards are lined throughout with Parian cement—a hard and non-absorbent material. The floors are of oak, and these have been oiled to present an impermeable surface, without being so dangerous as a polished floor. The boxes to contain patients' clothes are also made of oak for obvious sanitary reasons. The fittiugs of the bath-rooms and lavatories are of the most complete description, hot water being supplied both for service and (in coils) for warming aud drying on each floor. A shoot for dust aud another for foul linen are provided in each ward-kitchen, communicating with appropriate receptacles in the basement. The whole of the underground drainage of the Hospital was re-arranged in 1872, pipe-drains being in all cases substituted for brick, and new bath-rooms and stacks of water-closets were added. The opening ceremony was exceedingly simple, yet very interesting. The Prince and Princess inspected the whole of the Hospital, and spoke a kindly and appropriate word to almost every patient. After prayers and the reading of an address, the Prince, in declaring the Hospital open, on behalf of himself and the Princess, expressed the great pleasure they felt in being present. They had been greatly charmed with what they had seen in the wards, and were struck with the excellent order and mauagement which were everywhere evident. The Prince also, with great good taste, paid a high compliment to the medical staff; and he spoke also favourably of the nursing arrangements, which he cousidered of paramount importance. We venture to congratulate the Prince on his manly and appropriate speech; it was well delivered, and was prompted by his visit to the wards, which had evidently been as kindly as it had been critical in its character. We were very much pleased with the wards; they looked exceedingly pretty, and may well serve as models, not only from an artistic, but also from a hygienic point of view. We wish the Hospital and its risiug school every success in the new career which was so happily inaugurated on Wednesday last.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

At the meeting of this Society held on February 28, an important paper was read by S. J. A. Salter, M.B., F.R.S., "On certain Ethical Questions involved in the Practice of Dental Surgery." The author having expressed some doubt as to the exact applicability of the title of his paper to its real subject-matter, apologised for having to bring before the Association particulars of a case in which he was personally concerned, and in which legal proceedings had been initiated against him by a patient through the misrepresentation of another (so terming himself) professional man; and although the legal processes were abandoned, through the author's determination to fight the case, and from its inherent falsity, he was nevertheless subjected to much annoyance and expense for a considerable period. The accusations were mainly that he had induced an attack of acute mania by the misfit of artificial teeth, and that the uunatural pressure had produced under-hung jaw. The former he considered too absurd for refutation, and the latter was completely upset by models of the mouth, which Mr. Salter had preserved, takeu before and after the use of the artificial teeth. Mr. Salter remarked that dental surgeous are particularly exposed to adverse criticism, when there is such an intention, as they practise both a profession and a mechanical craft, upon each of which adverse strictures may be cast. He strongly urged the unfairness of judging of cases *ex post facto*, and without knowing the antecedent coudition of the patient and all the surrounding circumstances which led the now-blamed practitioner to act as he did; that the second attendant had the unfair advantage of knowing what may have failed, while the previous treatment itself destroyed much of the evidence of the antecedent conditions. Mr. Salter concluded by saying that without in any way attempting to palliate malpraxis, or to protect the practitioner from its consequences when it really occurred, he would urge that in all cases the medical or surgical witnesses on both sides should confer together, and also with the professional defendant, before going into court, so as to ascertain as far as possible the whole of the origiual facts, and not be guided by one-sided and partial information; and he would have it held that a professional man giving evidence in a court of justice without thus endeavouring to obtain a full knowledge of the truth, should be deemed to have committed a gross breach of professional decorum: and the author expressed a belief that if some such practice as this were adopted, trials with medical men as defendants would be almost put an end to. A very interesting discussion, in which the President, Messrs. Coleman, Napier, S. H. Cartwright, Stevenson, Cattlin, Edgelow, Winterbottom, and Parkinson took part, ensued upon Mr. Salter's paper, regret being expressed that many persons assumed the title of dentists, who, being wholly unqualified, were bound by no recognised code of honour and were amenable to no definite laws of etiquette, such practitioners too often imposing upon an ignorant public by appraising their own services by the depreciation of others' work, such unprofessional practices alone being sufficient to prove the necessity for dental surgeons possessing some medical or surgical diploma, which would bind those possessing it to observe the written and unwritten laws of professional practice and etiquette. The author's suggestion—that in all trials in which medical testimony was given, those rendering it respectively on behalf of the plaintiff and defendant should primarily confer together—was cordially approved, for when this is not the case the witnesses come into court biased by accounts which, especially in medical cases, are too often wholly incorrect if not utterly fallacious, the medical witnesses often being deceived themselves, as they might be occasionally in certain cases of diagnosis, by the imagination of the patient or his frieuds. Several other examples of breaches of etiquette were brought forward, aud the members of the Association pledged themselves to arrest such unprofessional conduct as far as lay in their power. The discussion was the means of elicitiug some important ethical questions in relation to the treatmeut of patieuts coming by chance into the hands of other than their ordiuary atteudants; and two important motions, proposed by Mr. S. J. A. Salter and Mr. Coleman, were uuanimously carried.

THE ARTISANS' DWELLINGS ACT.

A PUBLIC inquiry was held last week in the board-room of the Whitechapel Board of Works by Mr. Cubitt Nicholls, in connexion with the Goulston-street, and Flower and Dean-street, Whitechapel, improvement scheme. The inquiry was conducted by authority of the Home Secretary, the purpose beiug to ascertain the correctness of the official representations made to the Metropolitan Board of Works by the Medical Officer of the Whitechapel District, as to the areas to which the inquiry relates being unhealthy areas, into the sufficiency of the scheme provided for their improvements, and into any local objections which may be made to the scheme. Dr. Liddle, the medical officer, testified that he considered it essential for sanitary purposes that property in the neighbourhood of Middlesex-street should be taken. Some of the houses were of a good description, but there were others which were not. In the district in question the ventilation was insufficient, which showed its effect on the inhabitants by their general paleness, and the difference of their appearance from those who live in open spaces. There were also prevalent diseases showing

a low condition of health, and the death-rate was very high. Mr. Sequeira, surgeon, thought that these localities were unhealthy, and that the scheme proposed was desirable to make it healthy. There was an excessive amount of preventable diseases, owing to the closeness and general unhealthiness of the area. He thought it most important that the streets should be widened. The death-rate was considerably above the proper average, though it was difficult to get correct statistics, owing to the number of people who died in hospitals and workhouses; but it seemed incontrovertible that the mortality was considerably in excess of the proper average. Sir Joseph Bazalgette supplied some statistics in connexion with the districts in question, and showed to what extent it was proposed to widen the different thoroughfares. It was further elicited in evidence that a house-to-house inquiry had been made, and it was stated that part of this site was unfit for human habitation. The design was to find accommodation for the persons displaced. The objections to the scheme having been heard, the case was concluded, and the Commissioner will report to the Secretary of State for the Home Department. Mr. Nicholls sat also at the Vestry Hall, St. Martin's-in-the-Fields, on Saturday last, to hear and consider the report of the Medical Officer of Health, Mr. Skegg, for the district of St. Martin's, on the demolition of property in Bedfordbury and the adjacent courts and alleys. Bedfordbury was denounced as being "the plague-spot" of St. Martin's; and Sir Joseph Bazalgette, who was in attendance, said that the scheme contemplated the destruction of houses covering an area of one acre, and that on this ground, in fifty-seven houses, there lived nearly 800 people, giving an average of 2·19 per room, many of which are so small that the family bed occupies nearly half the space. And again, on the 20th, Mr. Nicholls, by direction of the Home Secretary, attended at Guildhall to institute an inquiry about a scheme for putting the Act in force in a part of the City of London. The area taken into consideration at that sitting was that of Petticoat-lane. Dr. Sedgwick Saunders, Medical Officer of Health, and Public Analyst to the Commissioners of Sewers and the City of London, and some other medical men, gave evidence as to the unhealthiness of the area, and the unfitness of many of the dwellings for human habitation; but as the inquiry was adjourned till April 6, we will reserve further notice of the subject til after the next sitting. Finally, on Wednesday, March 21 Mr. Nicholls, by appointment of the Home Secretary, held an inquiry at the Vestry Hall, Southwark, to investigate the scheme prepared by the Metropolitan Board of Works for improvements in Elizabeth-place, King-street, Lant-street, Harrow-street, and Blue Ball-alley, in the parish of St. George-the-Martyr, Southwark. The area to be dealt with comprises 91,052 feet near Waterloo-road. Objections were made to parts of the scheme, and Mr. Nicholls said that he should notice these objections in his report to the Home Secretary, and that he also should visit and inspect some houses as to the condition of which there was a conflict of evidence.

SMALL-POX IN LONDON.

The death-rate in London has risen with the increased coldness of the weather, and 1800 deaths were registered in London for the week ending March 17, exceeding by 153 the average numbers in the corresponding week of the last ten years, the increase of the population being allowed for. The annual death-rate from all causes rose to 26·6 per 1000; and the deaths referred to diseases of the respiratory organs rose to 687, from 471, 524, and 675 in the three preceding weeks. The deaths from small-pox, which had been 84 and 96 in the preceding two weeks, further rose last week to 100; of which 42 were certified as unvaccinated, 30 as vaccinated, and 28 were "not stated" as to vaccination. The deaths of 14 children under five years of age, and certified to be unvaccinated, were referred to small-pox. Of the 30 fatal cases at all ages certified as vaccinated, 19 were aged between twenty and forty years, no reference to revaccination appearing in the certificates.

Of the 100 deaths from small-pox, 46 were recorded in the Metropolitan Asylum Hospitals, 6 in the Highgate Small-pox Hospital, 1 in St. Thomas's Hospital, and 2 in other public institutions; the remaining 45 cases occurred in private dwellings. Excluding one case admitted to hospital from Colchester, and distributing the remaining 54 hospital cases, it appears that 12 of the deceased small-pox patients had resided in Southwark, 13 in Bow, 7 in Islington, 5 in Pancras, and 5 in Mile-end Old Town; in all, 13 belonged to the West, 16 to the North, 4 to the Central, 35 to the East, and 31 to the South groups of districts. The fatal cases showed a decline in North London, whereas they had increased both in the West and East groups of districts. Small-pox continues most fatally prevalent in East London, where the deaths referred to this disease were more numerous last week than in any previous week since the commencement of the epidemic. The Metropolitan Asylum Small-pox Hospitals contained 952 patients on Saturday last, including 109 convalescent cases at Limehouse, against 898, 902, and 922 at the end of the three previous weeks. The new Metropolitan Asylum Hospital at Fulham contained 45 convalescent small-pox patients on Saturday last. The number of new cases admitted to these hospitals during the week were 212, against 230 and 223 in the two previous weeks.

ROYAL IRISH ACADEMY.

At the annual stated meeting of the Royal Irish Academy, held on Friday evening, March 16, Sir Robert Kane, Knt., M.D., was elected President in room of Dr. Stokes, who had resigned in consequence of failing health. There was a keen contest for the distinguished honour of the presidential chair, but at the last the contest lay between the Rev. Professor Haughton, M.D., D.C.L., Fellow of Trinity College, Dublin, and Sir Robert Kane. It is no disparagement to the new President to say that the contest was a close one. Nor is it any discredit to Professor Haughton to have been beaten by so illustrious an opponent. Sir Robert was born in 1810. He is LL.D. of the University of Dublin, a Fellow of the Royal Society, and a Fellow of the King and Queen's College of Physicians. In 1846 he received the honour of knighthood at the hand of Lord Heytesbury, then Lord Lieutenant of Ireland, in acknowledgment of his scientific and economic writings. He was President of the Queen's College, Cork, from its foundation until his resignation in 1873. Of the retirement of Dr. Stokes, the amiable and gifted scholar, archæologist, and physician, we would speak in terms of the liveliest regret, and especially because of the reasons which have led him thus to surrender that chair he was so well qualified to fill. We can only hope that freedom from the cares and anxieties of office will restore, in some measure at least, his strength, and tend to prolong his most valuable life.

THE SANITARY CONDITION OF THE TOWN OF SELBY.

In his third annual report on the sanitary condition of the town of Selby, for the year 1876, Dr. Franklin Parsons, the medical officer of health, gives a short account of what has been done for the protection and promotion of the public health. Soon after the passing of the Public Health Act of 1851, the town was thoroughly sewered, provided with a pure water supply, and improved in all respects. As the prevalence of scarlet fever, however, during the latter half of last year has brought the sanitary reputation of Selby rather under a cloud, and raised doubts in some minds as to whether any benefits have been derived from the costly improvements undertaken,

Dr. Parsons calls in the aid of statistics to prove the good which really has been done. Thus, he shows that for the nine years 1846-53, before the works were completed, the average death-rate was 29·3 per 1000; for the niue years 1855-63 it was 25; and in the five years 1869-73, 22·6; in the last three years it has been the same; and but for the excessive mortality of the last quarter of 1876, the death-rate for this latter period would have been but little over 21. Dr. Parsons remarks that the preseut sanitary condition of Selby may, on the whole, be said to be good, so far as matters are concerned with which the Local Board has power to deal, but the condition of the sewers requires attention, the fall not being great enough for them to be self-cleansing. Scarlet fever is the only zymotic disease that has been to any great extent prevalent in the town during the past year, and even this would, very probably, have been confined to a few cases had means been at hand to isolate cases at the commencement of the outbreak. A proposal, however, of Dr. Parsons to establish a fever hospital has (for the present only, let us hope) fallen to the grouud.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

THE following return, showing the number of Fellows admitted to the Fellowship of the Royal College of Surgeons by examination in each collegiate year, from December, 1844, up to May, 1876, inclusive, will be of considerable interest to the profession at the present time:—

From July,	to July,	Number.	From July,	to July,	Number.
1844	1845	39	1860	1861	15
1845	1846	24	1861	1862	17
1846	1847	14	1862	1863	19
1847	1848	19	1863	1864	16
1848	1849	14	1864	1865	17
1849	1850	39	1865	1866	19
1850	1851	9	1866	1867	23
1851	1852	10	1867	1868	25
1852	1853	11	1868	1869	32
1853	1854	10	1869	1870	37
1854	1855	8	1870	1871	18
1855	1856	6	1871	1872	18
1856	1857	17	1872	1873	20
1857	1858	12	1873	1874	11
1858	1859	11	1874	1875	17
1859	1860	18	1875	1876	25

TYPHOID FEVER IN ST. PANCRAS.

DR. STEVENSON, the medical officer of health for this parish, has reported on the cause of the outbreak of typhoid fever in a certain part of the parish. He has traced it unmistakably to milk supplied from a certain dairy. His conclusions were based on the following, among other facts:—That a considerable portiou of the patients sickened within a few days of one another, and that the disease was confined to a limited area. This strongly suggested a common cause, and it was found to be the milk. It appears that of thirty-four cases of typhoid fever which occurred in January and February, twenty-nine had used a particular milk. Of these, during five days (February 5 to 9), no less than nine, and possibly twelve, fresh cases appeared in eleven separate houses, and all persons attacked had used the suspected milk. Then, in further support of the milk origin, it was found that in only *three* of the twenty-two houses where there was typhoid were there any sanitary defects which might reasonably have been assigned as a cause. This mass of evidence is certainly very weighty; indeed, it seems quite irresistible. We regret to see that the Sanitary Committee did not get any conclusive evidence from which farm the infected milk was procured; we should think it quite a matter for the Privy Council to take up. A most careful inspection of each of the three farms ought at once to be undertaken by an experienced officer, and meanwhile the milk-supply should be altogether stopped.

SECONDARY DEGENERATIONS OF THE SPINAL CORD IN CASES OF CORTICAL LESIONS OF THE BRAIN.

THANKS especially to M. Charcot, English physicians are now familiarised with the possibility of spinal cord disease consecutive to brain disease. This great teacher has the rare felicity of gathering around him fellow-workers who carry on and extend by microscopic examination and otherwise his investigations in nervous diseases. M. Pitres, one of his pupils, has verified in a series of cases M. Charcot's contention that these secondary degenerations of the spinal cord have special relation to lesions of the motor regions of the cortex (*Progrès Médieal*, February 17, 1877). A brief summary may be given of the five cases recorded by M. Pitres:—

1. A patient, aged seventy-six, admitted to the Salpétrière with pneumonia; no hemiplegia. At the post-mortem a large area of old softening was found in the right hemisphere. It had destroyed the posterior half of the island of Reil, the two posterior thirds of the inferior parietal lobule, and the posterior half of the first and of the second temporal convolutions. It will be observed that the softening did not attack the motor cortical region. The remainder of the brain healthy, and the spinal cord did not manifest, either to naked-eye or microscopic examination, any secondary degeneration.

2. A patient, aged eighty-one, admitted for atrophic scirrhus of the breast; demented; no hemiplegia. Post-mortem there was fibroid obliteration of the trunk of the left posterior cerebral artery, and an old focus of yellow softening in the first and second spheno-occipital convolutions. Corpora striata healthy; no changes in the rest of the brain or inthe spinal cord.

3. Patient, aged eighteen, the subject of left hemiplegia consecutive on convulsions which first came on when six years old, during convalescence from measles; partial epilepsy; spasmodic contraction of the limbs of the left side. Death in tle epileptic condition, after a series of 297 fits. Post-mortem, a plàque of cerebral atrophy in front of the right fissure of Rolando, involving the ascending frontal and part of the first and second frontal convolutions. The internal capsule of the right side less than that of the left; the same thing held with respect to the right cerebral peduncle, the right half of thepons, and the right anterior pyramid. A longitudinal band of sclerosis occupied the hinder part of the left lateral column of the cord. Besides this, in the cervical region there was a smal sclerosed bundle in the internal part of the right anterior column.

4. Patient aged seventy-nine. Right hemiplegia dating from four years of age; spasmodic contraction of the right limbs; sensation preserved. At the autopsy, some old yellow softening, which had destroyed the lower two-thrds of the ascending parietal of the left side. The other parts of the cortex and the great ganglia healthy, but the left half of the pons smaller than the right. Grey atrophy of the left anterior pyramid prolonged down the right lateral column, showing well-marked sclerosis on microscopic examination.

5. Patient aged ten. Right hemiplegia occurring as sequel to infantile convulsions; partial epilepsy; paresis with contracture of the right limbs; sensation preserved. At the autopsy, softening and atrophy of the paracentral lobule and of the quadrate lobule. The softening extended scarcely a centimetre into the upper end of the ascending frontal and of the ascending parietal convolutions. Ganglia intact. Sclerosis of the posterior part of the right lateral column.

In summing up these cases, M. Pitres points out that we have to do with lesions of the cortex, leaving the great ganglia intact. In the first two cases, where the cord was healthy, although the cortical lesions were extensive they did not involve the motor region of the cortex, and there was no hemiplegia. In the three other cases the cerebral lesions were much less extensive, but they were situated in the motor cortical region, and they had determined at the same time

both a permanent damage to motility and secondary degeneration of the cord. In workhouse infirmary, as well as in general hospital post-mortems, not infrequently large areas of cerebral softening are found to which the symptoms during life gave no clue. In view of the above researches, it is exceedingly desirable that the locality of these areas should be carefully recorded, and, if possible, that a microscopic examination should be made of the spinal cord.

THE CHARITÉ HOSPITAL AT BERLIN.

This famous Hospital celebrated its 150th anniversary on January 4. After a service in the Hospital-church, at which the Empress of Germany and a number of distinguished personages were present, the Empress presented a portrait of the Emperor to the directors of the institution in the great lecture-theatre. The following dates in connexion with the progress of the Hospital, representing, as they do to some extent, the stages of development of medical science in Germany, as well as the successive directions which this development has taken, are not unworthy of notice. The Charité Hospital, from the time of its foundation in the year 1727 by Frederick I. of Prussia, was for many years not much more than a simple hospital, the only educational purpose which it served being as a place where military surgeons acquired a knowledge of the merely mechanical manipulations of practice. In the year 1798 its resources were first utilised for systematic scientific instruction by the foundation of a medical clinic for military surgeons. Soon afterwards the University surgical clinic was also transferred to the Charité. In 1814 an obstetric clinic, and in 1816 a surgical clinic (of which Dieffenbach was at the head from 1824 to 1840), were founded. In 1828 a separate ophthalmic clinic was created, which from 1868 to 1870 was directed by von Graefe. In 1825 a clinic for syphilis was opened, which from 1853 to 1865 was directed by von Bärensprung. The University medical clinic was transferred to the Charité in 1828, and was directed till 1839 by Bartels, from 1839 to 1859 by Schönlein, since which time it has been in the hands of Frerichs. In 1830 a special clinic for children's diseases was opened, and is at present directed by Henoch. In 1858 the so-called "propædeutic clinic" was founded, and entrusted to Traube; and in the same year a gynæcological clinic was opened under the direction of the late Professor Martin. In 1862 a special clinic for skin diseases, directed by von Bärensprung, and later by Lewin, was commenced. In 1865 a clinic for mental diseases, and another for diseases of the nervous system, were founded, and until 1868 were directed by Griesinger. In 1831 a special pathologist was attached to the Charité, and the post was held from 1833 to 1846 by Froriep, and from 1846 to 1849 by Virchow. We have mentioned the names of a few of the present staff of the Charité, and we might add to the list many well-known names. The second volume of the "Charité-Annalen," or Charité Hospital Reports, which was published last year, is in itself a powerful testimony to their scientific ability.

THE DENTAL HOSPITAL OF LONDON.

At the annual meeting of this institution, held in the lecture theatre, at 40, Leicester-square, under the presidency of the Treasurer, R. C. L. Bevan, Esq., the report—which congratulated the governors on the progress of the Hospital during the past year (24,433 cases having obtained relief, being an increase af 1684 over the number so relieved during 1875)—was unanimously adopted. The chairman urged upon the governors the necessity of renewed exertions for the improvement of the financial condition of the Dental Hospital, which, in common with all similar institutions, had suffered somewhat from the depression of trade, and the diversion of charity to foreign objects. The meeting then proceeded to the election of a chairman to the Committee of Management in the place of Campbell de Morgan, F.R.C.S., deceased, which resulted in the unanimous choice of John Eric Erichsen, F.R.S., Surgeon Extraordinary to the Queen.

MEDICAL PARLIAMENTARY AFFAIRS.

Militia Surgeons.—By a Royal Warrant dated July 19, 1876, surgeons of Militia have been deprived of the larger proportion of their incomes derived from the appointment. Mr. Hardy has consented to receive a deputation of the medical body of the metropolis after Easter, as the subject is receiving a good deal of consideration from the War Office.

Public Health.—Leave was given to Sir M. Hicks-Beach to bring in a Bill to consolidate and amend the Acts relating to Public Health in Ireland.

Cattle Plague.—Further inquiries were made by Earl Fortescue respecting the spread of cattle plague. The Royal Agricultural Society had framed a resolution against the importation of live stock from abroad, as being the only practical means of preventing the importation of cattle plague. The Duke of Richmond and Gordon replied, that the disease was distinctly traced as coming to this country *viâ* Hamburg and Deptford, and he reiterated at some length the statements that he had previously made, detailing the dates and locality of outbreak, and the measures promptly adopted for checking the sprcad of the disease; and he thought it not unfair to announce that the stringent measures adopted had succeeded in arresting the progress of that very fatal and insidious disease. He alluded to the great difference between the trade in live stock and the trade in carcase. If the importation of live stock were forbidden it would involve the sudden withdrawal from the consumption of this country of a million and a half of animals. If fat stock were forbidden to be imported, the store stock must also be forbidden, as lean animals would just as easily convey the disease as the fat stock. He did not see how it would be practicable to carry out a system of quarantine for imported animals, as this would cause a dead-lock to the trade, and an accumulation of grazing animals in or near the port of debarkation—a very likely method of propagating the disease. The Government intend to make a very careful inquiry into the whole subject of epizoötic maladies. Lord Sandon replied to a similar question in the House of Commons, and stated that the Government intend to move for a Committee of the House to decide the question of limiting or forbidding the import of live stock. No further outbreak has been reported in Great Britain since the 13th inst.

Irish Cattle.—A very important inquiry was made by Colonel Kingscote respecting the landing of Irish cattle at some new docks in the Bristol Channel, twenty miles from Bristol; to which Lord Sandon gave a very unsatisfactory reply. He said that cattle so soon as landed in any port of England are henceforth considered English cattle, according to regulation, and can be moved inland subject only to the veto of the local authority regulating the removal of cattle through the country. The Privy Council had never attempted to treat Irish cattle like foreign cattle, and they were not disposed to interfere with the action of the local authority. In 1874 ten Government inspectors only were appointed to the principal ports at which Irish cattle are usually landed, for the purpose of reporting the existence of foot and mouth disease. It is not proposed to appoint more inspectors.

Soldiers in Hospital.—Mr. Hardy stated, in reply to Dr. Lush, that the annual average of soldiers under treatment in hospital for all branches of the service, both at home and in the colonies, was 45·38 per 1000 men.

Drainage.—On Friday (this day) the Duke of Richmond will move for a Select Committee to inquire into the operation of existing statutes in regard to the proceedings by Commissioners of Sewers, Drainage, and River Navigation Boards, to consider by what means such bodies may be more conveniently constituted and improved, and their powers enlarged, so as to provide more efficiently for storage of water, the prevention of floods, and for the discharge of other functions appertaining thereto.

The Costermongers and the Metropolitan Board of Works.—It is satisfactory, and worthy of notice, that the Metropolitan Board of Works have notified to the Costermongers' Watch Committee, St. Luke's, that when the time shall have arrived for carrying into effect the proposed improvement scheme in the parish of St. Luke's, under the Artisans' Dwellings Act, provision will be made in the block of buildings to be erected for the goods and barrows of the costermongers and street sellers residing within the area.

THE DENTAL DIPLOMA.

(*From another Correspondent.*)

The crisis in the history of the dental profession, of which your correspondent recently spoke, is indeed an important one—so much so that it is essential that the views of the position should be in nowise misrepresented. His innuendo that the Association of Surgeons practising Dental Surgery desires to impugn the value of the dental licence granted by the College of Surgeons, is incorrect, for in its time it has undoubtedly been the means of doing good service, giving those the means of holding a qualification who otherwise would have held none whatever. It has not, however, been so successful as those anxious to advance the position of the profession could desire, for the larger proportion of those now holding it obtained it by a nominal examination; whilst it is to be regretted that a far too small proportion (barely 40 per cent.) of those pledged by their studentship at the Dental Hospital to take the certificate present themselves for the necessary test. The fault of the possessors of the dental licence seems to be, that they wish to appraise its unquestionable value (to those who, without it, would take no qualification whatever) at too high an estimate, maintaining the untenable hypothesis that it is impossible for a qualified surgeon, with the determination and wish to do so, to qualify himself for the treatment of dental disease, as aurists, ophthalmists, or gynæcologists qualify themselves for the treatment of affections of the ear, eye, or womb—organs which require quite as much special knowledge in their treatment as the teeth. Few would be bold enough to deny that a surgeon could qualify himself for the examination for the dental licentiateship with very little additional study; whilst, on the other hand, it is indisputable that it would take very much additional time and a vast amount of study for the dental licentiate to prepare himself for even the first examination in anatomy and physiology for the Membership of the Royal College of Surgeons, for the only knowledge of anatomy required from him is that of the head and neck, whilst even with this minimum it is stated on the best authority that the simple test required in this subject shows much inefficiency on the part of many candidates. At the present time a great cry is heard throughout the land for registration, this being alike uttered by semi-qualified and wholly unqualified members of the profession; and with regard to this demand it may be assumed, for the sake of argument, that the L.D.S. certificate is equal to the diploma of M.R.C.S.: for if this be the case, surely, on the showing of your correspondent, there is nothing to prevent the holder of the L.D.S. from taking that higher degree which will at once entitle him to the benefits of the much-coveted registration. Your correspondent, although he cannot deny the high aims of those surgeons who constitute the new Association, is evidently not one of its members; and it would seem well to remind him that it would never have been formed had not the Odontological Society persistently refused, in spite of numerous appeals, to demand some qualification from its members, some of whom have recently suggested that if compelled to make the possession of the dental licence a *sine quâ non* for membership, the Society should exclude those surgeons who are practising the speciality (not recognising the fact that some of its most distinguished practitioners are members of the medical profession, whilst dental literature is almost entirely indebted to them), if they do not hold the L.D.S.

In fine, the dental certificate has done service in giving an opportunity to those who, unable to obtain higher diplomas, must otherwise have swelled the ranks of the unqualified; but any attempt to place it above its position, as was truly observed in your journal when the licence was first instituted, can but serve to show the wide abyss which separates the two qualifications of L.D.S. and M.R.C.S. It is to be regretted that some few licentiates are already calling themselves L.R.C.S. in lieu of L.D.S.R.C.S.; whilst, as it has been observed before, it might as well be said that no person could practise midwifery, ophthalmology, or otology without a special licence, as that an educated surgeon cannot, if he really wishes to excel, educate himself in dental surgery. The College of Surgeons will undoubtedly support its members in this question, and it would be well if it would insist upon a certain knowledge of the anatomy and morbid conditions of the teeth from every candidate for its diploma, which knowledge would be of inestimable value to all practitioners, but especially to those entering the naval and military services, whilst it would at the same time be easy to merge the lesser into the higher qualification under the Conjoint Scheme, especially if, as it is stated, though on erroneous premises, the special licence be so nearly equal to the full diploma.

FROM ABROAD.

Poisoning by Sulphuric Acid.

M. Laboulbène, in two communications to the Académie de Médecine (*Bulletin*, December 19 and February 27, and *Gaz. des Hôp.*), gives the history of an interesting case of this, with the subsequent autopsy. A workman in a chemical factory, fifty-nine years of age, drank by mistake, on November 4, a quantity of sulphuric acid at 66°. Milk was given him immediately, which gave rise to vomiting, the acid having remained probably five or six minutes in contact with the gastric mucous membrane before being discharged. He was taken to the Necker Hospital in a state of great suffering. Next day the pains were somewhat diminished, but the attempts at vomiting were frequent, being induced by the swallowing of even small quantities of liquid. The anterior parts of the tongue and mouth were in a normal condition, while the back parts of the tongue, the palate, and pharynx exhibited abundance of whitish deposits and false membranes. Lime-water, milk, and magnesia were freely administered from the time of his admission. Deglutition, however, was very difficult, liquids being got down only very slowly.

The patient continued to suffer greatly, and rapid emaciation was taking place, when on November 18, during his attempts at vomiting, he drew from his mouth with his fingers a black pulpous mass as large as the two hands. This proved to be the mucous membrane of the stomach, and a portion of that of the œsophagus. The histological characters of this are minutely described, and there seems to be no doubt of the true nature of the discharged mass, although this was at first denied. After its expulsion the patient felt much relieved, and was able to swallow liquids more easily; and by the beginning of December he was able to take small quantities of bread, eggs, etc. This improvement continued until early in January, when frequent vomiting again returned, and he became unable after a time to swallow; so that on the 29th of that month he died in a state of excessive emaciation. The autopsy was made fifty hours after death. The mucous membrane of the mouth, pharynx, and upper portion of the œsophagus presented to the naked eye nothing abnormal; but from eleven centimetres below the origin of the œsophagus to the cardiac orifice of the stomach, the œsophageal mucous membrane had entirely disappeared. The interior of the stomach exhibited at places redness from extravasation and some erosions, and the pylorus was hypertrophied, and the orifice so contracted that at most it would admit the passage of a crowquill. The duodenum and the rest of the canal were normal in appearance. On examination with the microscope the mucous membrane of the stomach was found to have entirely disappeared, a cicatricial tissue existing in its place. The fact of a patient having survived the loss of the mucous membrane for so long a period as three months is of great interest in respect to legal medicine. With regard to the physiological view of the case, it is to be supposed that as long as the pylorus continued patent the digestion was carried on to a certain extent in the intestinal canal. When the obstruction became considerable, the contracted stomach rejected everything, the patient died of inanition, completely wasted away, nutritious enemata availing him little.

Opium Inebriety.

The *New York Med. Record* (No. 318) publishes a highly interesting paper read at one of the medical societies by Dr. Mattison on "Opium Inebriety, its Pathology, Etiology, Prognosis, and Treatment." We have only space to notice what he says with regard to treatment, but may advert to the fact which he states, that the affection is greatly on the increase in the United States.

"Opium inebriety demands a congenial soil for its development. The nervous temperament furnishes a fertile field. We are essentially a people of this type, the most so, Dr. Beard asserts, on the globe. Neurotic diseases are rife amongst us, increasing rather than otherwise; and to their growing frequency, and the consequent freedom—amounting at times, I feel bound to say, to recklessness—with which the anodyne properties of this drug are invoked for the mitigation of pain, is to be ascribed in most measure the alarming proportions to which this disease has attained among us."

There is great difference of opinion, in the treatment of this affection, as to whether the withdrawal of the opium should be sudden or gradual; but the result of Dr. Mattison's own experience is in favour of the more gradual procedure. The sudden plan may be practicable in asylums, where, if necessary, physical restraint may be resorted to, but even then it is questionable whether it is the best. In what may be termed the "reductionary" mode of treatment, there is an immediate diminution to the point of tolerance put into force, and thenceforward a more or less minute decrease in the quantity given, according to the degree of suffering produced by its withdrawal. The patient must, in the meantime, be surrounded by circumstances hygienically favourable; and medicines are to be employed, tending to sustain and strengthen the shattered nervous system, and make amends for the abstraction of the adventitious support. By pursuing this plan the shock to the system which would result from the peremptory arrest of the whole supply is avoided. Such patients, too, are often so reduced in their general condition as to require restorative measures for the recuperation of their strength to a point that will better enable them to bear the entire deprivation when the time of trial comes. The confidence of the patient is also better secured by the adoption of a plan of treatment which it is assumed will be comparatively free of suffering. His courage, which is usually but drooping, will be revived, and his co-operation secured, an excellent foundation having been laid for the moral part of the treatment. At first sight, the immediate reduction of one-half or two-thirds seems almost dangerously rapid; but, in fact, opium-inebriates frequently become possessed of the idea that their supply must be increased, so that at last they consume a quantity greatly in excess of what is required, and a very decided increase causes little inconvenience. In the first rank of reparative measures must be placed a diet of richly nutritious and varied food; and cod-liver oil forms an admirable adjunct, as in other neuroses. Among medicinal agents, nerve-tonics are indicated, such as the sulphate of strychnia used hypodermically, arsenic, and tincture of the chloride of iron. Phosphorus, zinc, quinine, and the minor tonics may be employed as adjuvants; and electricity, from its well-known tonic and sedative properties, is well adapted for treatment of this disease. Baths of various kinds, followed by friction, are serviceable; and judicious exercise, especially pedestrian, is an important auxiliary. The value of alcoholic stimulants is a mooted question, and in determining it much will depend upon individual peculiarities. For the obstinate constipation that is present, atropia is the remedy *par excellence*, one-fortieth to one-thirtieth of a grain administered hypodermically at bedtime always securing relief of the bowels. It possesses additional value in restraining the excessive cutaneous action resulting from the withdrawal of the opium, and is, besides, a stimulant of unquestionable power to the sympathetic system, which bears in a large measure the brunt of this disease. Among the sufferings entailed by the withdrawal, want of sleep is prominent. Chloral is the hypnotic that is to be preferred, but it must be given largely—as much as from thirty to sixty grains being required to be administered consecutively at night. Bromide of potassium is also valuable when given freely—from one to three drachms being administered during the day, so as to produce a cumulative effect at bedtime. Monobromide of camphor is of value, as are the lesser soporifics, as hachish, henbane, ether, lupulin, and valerian. The warm bath is sometimes effectual, and sometimes sleep is secured by the inhalation of a very small quantity of chloroform. When everything else fails, a full dose of the accustomed opiate is advisable. The intense epigastric distress, the neuralgia-like aches and pains and the almost insupportable sense of general discomfort are rendered more endurable by the employment of the various forms of warm baths. Unless the resulting diarrhœa is excessive, it does not demand attention; but when required, warm-water enemata with mild mercurials and astringents are indicated. In an affection in which perturbed mental action is so conspicuously prominent, psychical treatment is also of great importance.

Law for the Protection of Young Infants in France.

As the result of long agitation on the subject, chiefly due to members of the medical profession, a law was passed in December, 1874, by which the existing system of putting infants out to nurse is reformed at least prospectively. After the lapse of more than two years, the Government, to whom the duty is assigned in the Act, has just issued the regulations which in future are to guide those who have to do with nursing infants, and to provide for their effectual surveillance. The text of the decree embodying these is published in the *Gazette des Hôp.* for March 6. From this we learn that the surveillance of all infants under two years of age, placed out to nurse, is confided, in the first place, to the préfet, assisted by the departmental committee, local commissions, inspecting physicians, and the inspector of *enfants assistés* of the department. The local commissions are presided over by the mayor of the commune, the number of the members being fixed by the préfet. Each must include two mothers having families, the curé, and a delegate from the Presbyterian Council and Israelite Consistory where these exist. Such a commission is to be appointed in Paris and Lyons for each arrondissement, and in those towns paid visitors may be employed by the commissions, such visitors being appointed also in other places when the occasion arises. The commission divides among its members the duty of periodically visiting children at nurse; and if, on the report of any of these, the life or health of the children is declared to be in danger, the commission may order their removal to another nurse. In their annual reports the commissions will indicate to the préfet the nurses whose good conduct calls for special approval. The physician-inspector must visit each child at least once a month, and oftener if required to do so by the mayor. He is to enter his observations in a book kept by the nurse, and report to the commission the condition of each child. In case of the illness or the pregnancy of the nurse, he reports the case to the mayor, and, if necessary, causes suckling to be discontinued. He is to make an annual report to the departmental inspector, and out of these various local reports the annual general report is to be constructed. With respect to the nurses, they are interdicted from suckling any other child than the nursling except with the sanction of the physician-inspector; and the same authority is required to permit a nurse to take charge of more than two children at a time for the purpose of weaning or tending them. No woman can undertake the office of nurse without having obtained a certificate from the mayor, as well as a medical certificate of her fit condition to undertake the task, and of the absence of infirmities or contagious diseases. She has to keep a book, in which numerous particulars concerning herself and the infants under her care are entered. In fact, if minuteness of regulations and elaborate inspection are to secure for nurslings the protection they have so long wanted in France, these are here provided amply enough, as far as printed rules are concerned. It remains to be seen how they will work. The decree does not state the penalties that attach to their non-observance.

REVIEWS.

An Atlas of Topographical Anatomy after Plane Sections of Frozen Bodies. By Wilhelm Braune, Professor of Anatomy in the University of Leipzig. Translated by Edward Bellamy, F.R.C.S., Senior Assistant-Surgeon, Charing-cross Hospital, etc. J. and A. Churchill. 1877. Pp. 200.

This book, which Mr. Bellamy, in translating from the German, has brought within the reach of the British public, will be found of great use to many different classes of the profession. At first the student, fainting under the prospect of the paradoxical enigmas of the Fellowship examination, will find with joy that one of the most puzzling resorts of the ingenious examiner is puzzling no longer. And then the examiner himself, who is fairly beaten by the ingenuity of his more erudite colleague, may now settle down to the task of correcting papers with something of satisfaction and a certainty of success. But those to whom the work will be of more real value are the practical anatomist, the physician, and the surgeon. To the surgeon, perhaps, the most interesting chapters are those which deal with the relations of the parts at

the root of the neck, and those which show the folds of the peritoneum and the abdominal viscera; and he will pay particular attention to the remarks on the subject of colotomy. But he will not at the same time fail to notice the important views that are given of the thoracic viscera, more especially with regard to the relations of the pleura and pericardium, and the bearing of these relations upon the operation of paracentesis of the latter cavity. The thoracic viscera claim, however, more special notice from the physician, and he will be instructed by the remarks on the effects produced by the presence of fluid in the cavities of the chest in producing dislocations of the viscera, and more particularly by the nature of the change in the position of the heart which is caused by left pleuritic effusion. To the practical anatomist the whole is full of instruction. He will find many points in which his suspicions or observations are verified, and some others which will lead him to greater caution in directions in which he may before have been too dogmatic. As examples of the former, we may cite the confirmation of Sibson's observations on the relative position of the tongues of the aortic and pulmonary valves, and the relation of the spleen to the kidney; and to illustrate the latter, the very different heights to which the sternum may reach in individuals of different ages or build, and the much lower point at which the trachea may bifurcate than that which is usually described in the text-books.

The plates, which are reproduced from the original drawings of Braune by a process of photography, are beautifully clear and well executed. They represent a very complete series of transverse and longitudinal sections of the body, including some which show the gravid uterus both at the beginning and end of pregnancy. The names of the structures form part of the plates; they are printed at some little distance from the sections, and referred inwards by means of a fine line. Reference is thus very easy. If we were disposed to be critical we might complain that the names are occasionally omitted, but such unnamed parts are generally sufficiently obvious to make this difficulty scarcely a real one.

Mr. Bellamy has had to contend with great difficulties, from the nature of the original text, and some few passages will be found, as a result, a little obscure; but as a whole he has succeeded in putting the German into a very palatable and easy English. This must be considered the most valuable of recent anatomical productions.

Smellie's Treatise on the Theory and Practice of Midwifery. Edited, with Annotations, by Alfred H. McClintock, M.D., etc., ex-Master of the Dublin Lying-in Hospital, Honorary Fellow of the Obstetrical Society of London, etc. London: The New Sydenham Society. 1876. Vol. I. Pp. 439.

Before commenting on this book itself, we may be allowed to call attention to the date of its publication. It is announced as the first of the series for 1876, and we get it in the beginning of 1877. A similar delay would be damaging to the reputation of a publishing firm, and it is not liked by the subscribers to a society. To whom we should impute blame we do not know, but we beg respectfully to call the attention of the Council to the fact.

Another point which suggests itself is the relative utility of translating modern works, which embody new knowledge in a form inaccessible to many until translated, and of republishing old books like the one before us. Reprints of old books may be undertaken either out of respect for the author, and admiration for the great results he achieved with slender means, or on account of the intrinsic merit of the book itself. Books of the former class are only useful to those who have time enough to study, and culture enough to be interested in, the history of our art; for the busy practitioner they are of small service. Books of the latter class must always be rare in a progressive science like medicine. And the results of both kinds are incorporated in the works of those who come after them, and go further, because they start where their predecessors left off. It is no detraction from Smellie's greatness to say that, in the century that has passed since he wrote, so many advances have been made that it may be questioned whether his work is likely to assist much the practitioners of our day. This seems to have been felt by the editor, or by those who informed him what was desired from him; for his notes are much more abundant and long than is necessary simply to elucidate the text: many of them are, in fact, short essays on subjects as to which Smellie had but dim light.

It is needless for us to say much about Smellie. A most interesting sketch of his life is prefixed to this volume. One of the characters pointed out by Sir James Paget in his Hunterian Oration is conspicuous in Smellie's book—the accuracy of his facts. When he is telling what he perceived and what he did, his descriptions, although not depicting nature so fully and minutely as has been done by others who followed Smellie, and therefore worked with the advantage of his labours, yet stand true now as ever. The only part of his work which is obsolete is when he ventures into theory. Such of his treatment as is carried out by manipulation, and concerns his special branch, is always thoughtful, although sometimes it seems erroneous; but in general therapeutics he is as hazy and empirical as were most at that time.

One point that strikes us is the frequency and confidence with which Smellie advises the accoucheur to alter the position of the fœtal head: manœuvres now looked on as difficult and hazardous. He tells us that the discovery of this means "gave him great joy." It cannot be more difficult now than then. May not this be taken as an indication of the extent to which midwifery has advanced? This measure being *then* not more uncertain than other modes of interference; but *now*, as compared with the ease and simplicity to which other methods of surmounting difficulty have been brought, perilous. We may also perhaps infer from this the great dexterity which Smellie's hand must have possessed, trained as it was to cope with difficulties without the many aids that are given to us.

As this is only the first volume, it would be premature to express a general opinion as to the editing. We may, however, notice one or two points referred to in the notes. One of them is on the management of the third stage of labour, in which the method of placental expression, often spoken of as Crédé's, is claimed for the Dublin school, where, Dr. McClintock tells us, it has been the custom "from time immemorial." We hope that in this matter future writers will give honour where honour is due. Another is on the treatment of prolapse of the cord. Here Dr. McClintock emphatically endorses Smellie's practice, which has somewhat fallen into disuse: "If the navel-string comes down by the child's head, there is a necessity for turning without loss of time." When decapitation is necessary, Dr. McClintock describes a simple and ready method—that of extemporising an écraseur with strong whipcord, passed round the neck with the aid of a catheter, and the ends then passed through a speculum: rapid sawing motion with this effects the severance.

Many other topics of great interest are touched on in the notes; and as Dr. McClintock, as everyone knows, speaks from large experience, everything he says is valuable. Space, however, forbids us to go on quoting. We can only say that, abundant as his notes are, they are of such a character as to make us wish for more.

GENERAL CORRESPONDENCE.

CARBONATE OF LIME IN DRINKING-WATERS.

Letter from Mr. J. A. Wanklyn.

[To the Editor of the Medical Times and Gazette.]

Sir,—The letter which you publish from Dr. Schwartz gives some interesting information, and promises more. I observe that Dr. Schwartz announces himself to be in a position to give us exactly the information which we require as to the action on the human system of a water containing 100 grains of carbonate of lime in the gallon. Dr. Schwartz states that he has administered this water extensively, both to healthy and diseased persons. What we want to know, then, is: What were the results of his experiments, precisely stated—that is, in what form was the carbonate of lime eliminated, in what excretions did he find it, and was any of it absorbed? Of course we all know what are the actions of an ordinary acidulated gaseous water, such as soda-water, or any other aërated water; but what we want to know is: What is the precise effect of this large quantity of lime? I observe that Dr. Schwartz points out that, "For ordinary drinking-water, Taunus water has never been recommended by doctors." And in another statement under his hand I find it stated that "Taunus water is not at all a medicinal water." This narrows the range of his experience very considerably; but, nevertheless, if he can, in opposition to the state-

ments of Parkes and Braun, and of other authorities to whom I have referred, point out in what way a water containing so great an excess of carbonate of lime is dietetically desirable or permissible, he will have made a valuable contribution to our knowledge, for at present all authorities are opposed to such a view. As to its use in rickets, the practice is based on a fallacy which has been completely destroyed by the most eminent authorities; and I am forced to conclude, from Dr. Schwartz's intimation that he considers that carbonate of lime is a principal substance of the human body, that he writes rather hastily on this subject. I was always of opinion that the lime of the human body is nearly all in the form of phosphate. On all these points, however, if Dr. Schwartz has really made any precise experiments such as he intimates, it will be extremely interesting and valuable to have the scientific statement of his chemical investigation. At present I am very doubtful of the value of a lime-water which its principal defender describes in one document as not being suitable for people in health, and in another as not suitable for people in disease. I am, &c., J. Alfred Wanklyn.

[This controversy has now gone far enough for the public good. The facts are before our readers; let them judge.—Ed. *Med. Times and Gaz.*]

COLLES'S LAW.

Letter from Dr. McCraith.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you give me a small space in your journal to state my experience of Colles's law, as an old practitioner, with regard to the question just raised by Mr. Jonathan Hutchinson? First, I can answer to the general question proposed by this distinguished surgeon, by "I have never seen an exception to Colles's law." But according to my reading of this very curious law—and my experience confirms my view thereof—Colles's law has a much more general and a wider application than Mr. Hutchinson contemplates. In my experience it holds good, not only with regard to syphilis contracted congenitally from either parent (very generally the father), but *also with regard to syphilis contracted by the child, after birth, from an altogether external source.* If this be so, as I am convinced it is, the fact becomes of much greater importance; and one the elucidation of which may open very important views to the medical philosopher, leading to very important results; as most certainly, if understood, it does not stand alone. If anyone could seize the correlated facts, and properly group them, most important deductions must be the result.

My experience is the following, to show that Colles's law applies to cases of foreign syphilisation in the child, as well as to the congenital cases. First these latter: two cases in which the disease was inherited from the father, and in which the nursing mother remained entirely free from any symptom of the disease. I have seen, I have no doubt, a great many others, but I only lay stress upon private patients treated by myself, and in the better ranks of life, remaining for some years under inspection:—

Case 1.—Disease appearing short time after birth, ran a long course, finished by peri-aural abscess, paralysis of portio dura, and, I believe, deafness. Child got well, but family left the country; the mother nursed, but being of a very phthisical family, died of this disease some ten or twelve months after birth of child. This was pure consumption; no head symptoms or any suspicious ones of syphilis even appearing. First child.

Case 2.—Child showing all the symptoms of syphilis; the first upper incisors larger than natural, and showing in a most remarkable manner the cutting edges as if filed by a round file into a concave shape, pointed out lately, I believe, by Mr. Hutchinson as characteristic of syphilis. Nursed altogether by the mother; no sign of infection. First child.

The four cases of foreign origin are the following:—

Case 1.—A French lady had a nurse for her child, but, as is usual in this country, continued to nurse also herself. This child after a short time showed unmistakable symptoms of syphilis. The nurse was found diseased, was dismissed, and the mother nursed the child herself. Had many children previously and afterwards, all healthy. Never had any symptoms herself.

Case 2.—Child of healthy parents, connected with the missionary body here, was vaccinated by a young physician then practising here. Though no instance of disease of this nature being communicated by vaccination was known here (it is the only instance in my experience of forty years), still for greater security he got from Italy some vaccine, supposed to be from the cow direct, but the matter proved impure, and communicated syphilis to the child. The mother nursed the child altogether, had other children before, and several since, all healthy; she herself has never had any symptoms.

Case 3.—This case and the following are extremely interesting, as showing "*that an infected child (infected from a foreign source), though capable of communicating the disease to a strange nurse, is incapable of infecting its own mother.*" This case was published, with Case 4, in the *Medical Times and Gazette*, March 19, 1859, to show the contagiousness of the constitutional disease. The mother nursed her child, and continued to do so after the disease was diagnosed as syphilitic. The child, as there shown, contracted the disease from a nursery-girl. A healthy peasant woman was called in to nurse the child, which she did frequently during the day, the extreme heat of the weather having told on the mother's health, and compelled her to have recourse to the peasant woman's assistance. This peasant woman contracted the disease from the child, communicated it to her husband and three or four children; passed herself through all its stages—eruptions, ulcerated throat, etc.; and finished by having syphilitic disease of the bones, nodes, etc. One of the latter on the os frontis suppurated, and has left a most perfect example of what the old surgeons called "corona veneris." She got well after some years of treatment. The mother has never had the slightest symptom of the disease, and has had other children, all healthy, since then.

Case 4.—A perfectly analogous case. The disease communicated by the same nursery-girl (from the island of Lero) to the baby, in the house of a respectable Greek family. There was a nurse employed in the house, but the mother, as is the custom here, continued to nurse her child also. There is a prejudice here against suppression of the milk, so the mothers continue to nurse, as far as is convenient, or their strength permits. The child infected the stranger-nurse: sore nipples, a copper-coloured scaly eruption on the breast, sore throat, etc. I was not able to follow out her history, as she left for her native place. *The mother remained free from any appearance of the disease.*

I hope that those members of the profession falling in with analogous cases to the above may carefully examine and report their experience to confirm or render negative my experience.

James McCraith, M.D., F.R.C.S.,
Surgeon, British Hospital, Smyrna.

Smyrna, December 29, 1876.

REPORTS OF SOCIETIES.

THE EPIDEMIOLOGICAL SOCIETY.

Wednesday, January 10.

J. Netten Radcliffe, Esq., President, in the Chair.

Dr. Squire read a report from official sources on the very fatal epidemic of measles in Fiji. On January 12, 1875, soon after Fiji was placed under our Colonial Government, the Chief Thacombau returned in H.M.S. *Dido* from Sydney. He or some of his party had measles there. On the voyage home one of his sons and a native servant fell ill with the disease on January 6; they were treated in a house built for them on the ship's deck, and made so favourable a recovery that no obstacle was raised to their landing on the 12th. Two or three days after landing, another of the Chief's sons, who had returned with him, was ill with measles. At this time visitors thronged the house where he was sick, but new cases in the native village had not attracted attention on January 24 and 25, when many of the native chiefs, some from great distances, assembled there. A strong force of the native constabulary attended. On February 12 a despatch from Mr. Layard announced measles to be epidemic among the native people, and that nearly one hundred of the native constables were down with it. It is evident that no alarm had been felt up to February 7, or return labourers would not then have been sent from Levuka to Malicolo, carrying the disease with them. We then hear of the death of a most influential chief who had promoted the great gathering, and of the rapid spread of the disease by all who attended the meeting. On February 25 some quarantine regulations were proclaimed to prevent the spread of

the disease to other islands, to stay its progress in these seemed to be impossible. On March 3 Mr. Layard writes: "The attacks have been so sudden and complete that every soul in a village will be down at once, and no one able to procure food or to prepare it." The disease was carried everywhere by the latter end of March or beginning of April; from that time it gradually decreased. A census of population in three districts, taken before the measles, and afterwards in June, gives in Ovalan 1546 before, 1099 after, deaths 447; Koro, 2543 before, 1855 after, deaths 688; Ba, 7925 before, 5711 after, deaths 2214. From other islands 1637 deaths had been returned from measles. The disease is supposed to have caused more than 20,000 deaths, with an estimated loss of from one-fifth to one-fourth of the population. The favourable progress of the early native cases negatives the idea of any special proclivity. Dr. Cruikshank, who treated 143 of the native constables, reports nine deaths, most of these resulting from evasion of needful precautions. Later in the epidemic, when it is said to be like plague, and that the people, seized with fear, had abandoned their sick—some dying in such close huts that the walls had to be destroyed to let the trade wind purify the air,—only one death occurred among a number of cases treated in separate rooms with fair attention. Fear added to the effects of disease. In one place twenty-six deaths are said to have occurred within forty-eight hours of the seizure. The weather was unfavourable; for though the mean temperature was 80°, with a daily range of only 15°, except on the hills, tropical rains followed the hurricanes, and in March fifty inches fell in twenty-seven days. It rained during 204 hours. The people choose swampy sites for their dwellings; and whether they kept close shut in huts without ventilation, or rushed into the streams and remained in the water during the height of the illness, the consequences were equally fatal. The excessive mortality resulted from terror at the mysterious seizure and the want of commonest aids during illness. There were none to offer drink during the fever, nor food on its subsidence. Thousands were carried off by want of nourishment and care, as well as by dysentery and congestion of the lungs. The worst dangers from over-crowding were incurred in the small houses, and the worst dangers from cold by the sufferers rushing to the water, where they would continue immersed. Measles in these islands, in 20° S. latitude or within the tropics, corresponds very closely to the facts recorded of measles inthe Faroe Islands, in 70° N. latitude, or near the polar circle. The epidemic ceased only when every person had been attacked. All the innate dangers of the disease here revealed differ only in degree, and not in kind, from those which are so commonly guarded against among ourselves by simple nursing. We need invoke no special susceptibility of race or peculiarity of constitution to explain the great mortality. Among people closely related to us a similar fatality from measles has occurred. During the last civil war in the United States, among the new levies, the number attacked with measles exceeded 38,000, and the mortality attributable to this disease in two large hospitals was over 20 per cent. This rate of mortality was doubled among the Garde-Mobile in the month of January, 1871, during the siege of Paris, when of 215 cases of measles eighty-six died, or exactly 40 per cent., the proportional mortality from measles exceeding that from small-pox.

Tuesday, February 13.

J. Netten Radcliffe, Esq., President, in the Chair.

In continuation of a paper on Dengué, Dandy Fever, or Denguis, read on December 13, 1876, Dr. Smart proceeded to describe this disease, than which few have more numerous synonyms, owing chiefly to local or regional variations in the predominance of one or other of its phenomena. Thus groups of synonyms have arisen having relations to the altered state of the skin, or to the painful symptoms, or to the equal display of these, or to a first-sight resemblance to other diseases; and to either of these groups or single names the feature of epidemicity may have been appended or not. The title now generally accepted is that given by the West Indian negro slaves to it, when it first appeared among them in 1827—the Dandy fever—from the strained attitudes of its sufferers, translated Dengué in Spanish, altered into "Denguis" for scientific classification. The invasion of this disease is not usually attended by rigor, although the first stages of heat and sweating have been observed in the West Indies to have had throughout a sense of cold in painful degree. This stage may last from six to thirty-six or to forty-eight hours, during which the whole surface is of a more or less scarlet hue, and there are more or less acute pains in the head, spine, and limbs, creating much alarm. It often terminates abruptly on awaking, in apyrexia, so complete that the sick may take to their ordinary avocations, a general stiffness and soreness of motion alone remaining, which gradually wears away in many cases; and to this condition the term Dandy fever was applied. But more frequently after a period of from one to four days there comes a second accession of fever, characterised by a rubeoloid eruption which ends by desquamation, and by a return of the pains, with which there is a remarkable fall of the pulse, sometimes to fifty beats. The continuance of this stage is uncertain, lasting but three or four days, then disappearing gradually, but sometimes very slowly, through weeks in which there are exacerbations that impart to the disease a relapsing character. The pathological features are those of an exanthem, with muscular and arthrodial pains, without effusions into the joints, and with lesions of innervation, with diminished force of circulation, and gastro-hepatic disturbance, which may be indefinitely prolonged. In children the attack may be ushered in with convulsions, and the resolution may be attended by sensorial depression approaching more or less to "amentia"; which last condition may attend the stage of resolution of the disease in elderly persons also, but its duration is only temporary, and concurrent with the induced conditions of general debility. Nor can the disease, however severe, be said to have any special sequelæ proper to itself, like the typical exanthemata, which it simulates in its eruptions, nor like acute rheumatism, to which it approaches in its painful symptoms. Nosologically, its position appears to be with exanthematous fevers; while from all of these it is differentiated by the absence of uniformity of symptoms and normal course, of destructive organic lesions, and of definite sequelæ, by its greater liability of recurrence, and by its extreme rarity of fatal results relatively to the amount of suffering it inflicts. The infectiousness of "denguis" has been a disputed point from the moment when its epidemic nature first attracted attention. The affirmative opinion seems to have been first entertained in the West Indian epidemic of 1827, when it was traced from island to island by isolated importation. But even then there were those who attributed its diffusion to a widely spread so-called epidemic constitution of the atmosphere, such as was at the same period maintained to be the sole cause of epidemics of yellow fever. Now, there are probably in that region very few acquainted with the disease who doubt its intrinsic infectiousness by importation, nor its propagation and diffusion from solitary cases, for this property of diseases is more concisely defined in insular than in continental positions. And thus it has happened that the discussion has remained an open one to a later date in the East Indies. There, however, the facts connected with the last epidemic, 1871 to 1874, have brought the question within more definite limits. The earliest epidemic display was at Zanzibar in 1870, and then at Aden (holding monsoon commerce with it) in June, 1871, both Zanzibar and Aden having commercial intercourse with India, especially Bombay, and Zanzibar with the Arab coast of the Persian Gulf. It is therefore of interest that it was epidemic at Aden and at Muscat before any notice was taken of its presence in either of the presidencies of India. But after it had become epidemic in Bombay and Calcutta, in the spring of 1872, recollections arose of its having presented cases in Bombay so early as August, and in Calcutta as November, 1871, both of these ports maintaining frequent intercourse by steamers and sailing-vessels (some of them native craft) with Aden; and it has been stated by Dr. Charles—no mean authority—that cases of the disease are seen by him in Calcutta almost every summer. The period between the unrecorded isolated cases and the epidemic outburst having been such as to raise a doubt whether the entire visitation was not of Indian origin, independent of importation. It is clear, however, that there was no epidemic outburst in India previous to the arrival of a vessel from Aden, bearing the disease in epidemic form. This vessel was the *Dalhousie*—a Government steam trooper—whose movements were easily ascertainable. She arrived at Bombay, from Aden, early in December, then having the disease among her Lascar crew; and on that account she was cleared out, cleansed, and painted, but not disinfected. After that she embarked European artillery, with whom she reached Cananore on the Malabar

coast, southward, about January 1, 1872. During the voyage the disease broke out among her European officers, who had been in her from Aden to Bombay without suffering, when the native crew did so; and the troops she brought from Bombay only, showed the epidemic type almost immediately subsequent to their landing at Cananore, and the disease was afterwards seen as an epidemic in that district so far south as Aleypa and Cochin. After the disease had established itself in epidemic type at Bombay and in Calcutta, it spread throughout India to the foot of the Himalayas, and from Kurrachee in the extreme west, to the banks of the Brahmapootra in the extreme east, extending along the railway routes, and being frequently conveyed from station to station amidst infected detachments of troops. It was thus carried into our garrisons in Burmah. It appeared in Singapore, from which it was taken to Amoy in China, spreading into the southern provinces. It also made its appearance in Batavia. In the whole of this wide dissemination there was sufficient evidence of its infectious, if not of its contagious properties. In the western hemisphere there has been a very observable complicity of its epidemics with those of yellow fever on several occasions, both as prodromic and as concomitant. This feature has been noticed in the southern United States and in Bermuda; and it is further remarkable that the only European region it has yet visited is the Spanish peninsula, which alone has undergone epidemics of yellow fever. The widest, however, of these connected diffusions was in South America from 1846 to 1858. It appeared first in Brazil in 1846, which holds much commercial intercourse with the United States, where it had prevailed in Louisiana in 1844, and simultaneously with yellow fever in the summer of 1848 in New Orleans, and in Mobile, in Alabama. It spread in Brazil during its summers up to that of 1849, and in the following year (1850) yellow fever superseded it, recurring through six successive summers. In Peru it commenced in January, 1852, having broken out at Lima amidst a body of 1000 German emigrants who had recently arrived, having touched at Rio Janeiro, where yellow fever was epidemic. From Lima the disease spread far in the coast towns, and ascended to the inter-Cordillera provinces, but ceased at Lima in July. Dr. Archibald Smith has described it as a fever commencing with flushed face, injected eyes, and bruised sensations in the limbs and loins, ceasing about the fourth or fifth day by crises of sweating, sometimes of hæmorrhages with appearance of a roseolous eruption, the transition from pyrexia to apyrexia being often sudden, this eruption then lasting several days, often with spongy bleeding gums. The usual course was one of about eight days, leaving recurrent neuralgic pains for weeks or months, the fatal cases being few. It disappeared from Lima in July, but reappeared in January, 1853, attacking many of its previous sufferers, and generally unattended by the roseolous eruption. At the middle of March, Dr. Smith attended the first case seen of "black vomit with jaundice," such cases being rare that summer. In January, 1854, yellow fever of a very fatal type ravaged Callao and Lima, continuing through the summer, from which the attacks of the milder form of fever in the previous summers afforded no immunity, as true yellow fever does, from future attacks; these diseases ought perhaps to be differentiated as distinct entities constituting one epidemic. The question of the correlation of diseases in epidemic seasons or cycles, of which this seems to be an example, and which is often observable in epidemics of other zymotic diseases, may be worthy of consideration by this Society.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 23.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

CONGENITAL DISLOCATION OF ONE KNEE FORWARDS.

MR. R. J. GODLEE exhibited a child, fifteen months old, suffering from this affection, which had been first seen by himself thirteen months previously. The child was well-nourished and well-made everywhere, except at its left knee-joint. Here the ligaments were extremely loose, and, the extensor muscles being spasmodically contracted, an actual dislocation of the tibia forwards upon the lower end of the femur had occurred, and great difficulty was experienced in producing any flexion at the joint. The left patella seemed smaller than the right. Mr. Godlee had regarded the case as a kind of talipes, and placed the limb at first on a straight posterior splint. Subsequently an apparatus was adjusted, consisting of a sheath to enclose the thigh, and another to enclose the leg, joined by a bar of metal jointed opposite the knee, and so arranged that the limb could not be quite placed in the position of normal extension. A weak accumulator was placed behind the knee to aid the flexors in overcoming the extensors. The mother was directed to apply friction diligently to the limb. The treatment had answered admirably. Gradually, the spasm of the muscles subsided, and the ligaments of the joint became firmer, so that the possibility of hyperextension disappeared. Now, the joint was only a little too movable, and the limb rather weak, yet it was sometimes used as freely as the other leg. Mr. Godlee remarked upon the extreme rarity of this affection, he having only discovered one reference to a case at all similar; that was at page 430 of the first edition of Mr. Hilton's "Rest and Pain." Mr. Barwell had also this year a similar case under his care. As to the condition of the crucial ligaments, they were probably at first much extended, and had since undergone contraction. He thought some form of treatment should be adopted in the earlier stages, and that the condition was one of spasmodic muscular contraction.

HYDATID OF THE LUNG.

Dr. GREENFIELD related a case which was cured by evacuation of the cyst through the bronchi. The patient, a girl aged seventeen, came under his care in March, 1875, suffering from pulmonary symptoms of four years' standing, for which she had been at times under treatment, the symptoms being ascribed to phthisis. When first seen, she was complaining of return of cough, expectoration of offensive fluid, and pain in the right side, and had had slight hæmoptysis. The expectoration had come on suddenly four days previously. The physical signs pointed to a loculated empyema situated towards the lower part of the right lung, which had formed a communication with a bronchus. There were, however, none of the associated symptoms of chronic empyema. Dr. Greenfield proposed to perform paracentesis; but, before arrangements could be made, the patient, three days later, had a sudden attack of cough, followed by impending suffocation, and then brought up a large piece of hydatid membrane, forming an almost complete cyst, of the size of an orange, and then a teaspoonful of blood. She continued to expectorate pieces of membrane for about ten days, and then the physical signs of a large cavity in the region of the angle of the right scapula appeared. There was no subsequent rise of temperature; and the physical signs, with the exception of those indicative of a large cavity, entirely disappeared, the patient making a rapid recovery. Since that time until lately the patient had been in good health, but the signs of a cavity had persisted in a gradually narrowing area, corresponding with the upper part of the lower lobe of the right lung. Recently some indications of fresh enlargement and surrounding inflammation had been observed. Dr. Greenfield remarked that, though the occurrence of hydatid cysts in the lungs was comparatively rare, and, according to the authorities, the evacuation and cure of the cyst by perforation into a bronchus still more so, the number of cases recorded probably did not represent the relative frequency of the affection. The diagnosis between hydatid cysts in the lung itself and in the liver perforating the lung, when the cyst was in the lower lobe of the right lung, was in some cases a matter of difficulty; but he relied upon the general course of the symptoms, the position of the cyst as indicated by the physical signs, and especially on the complete evacuation and absence of bile-staining of the membrane. By an analysis of recorded cases, he showed that hydatid cysts of the lung were not most frequently found in the lower lobe of the right lung, but occurred with equal frequency in the upper lobes and in the left lung. The prognosis, after complete evacuation of the cyst, was generally regarded as favourable, but there was danger of the presence of another cyst, the recurrence of inflammatory changes around the old one, and possibly of the production of aneurism of the pulmonary artery by traction of the contracting cyst-wall or by the loss of resistance due to its presence. The fact that there were some indications of the possible presence of another cyst would lead him to watch the case carefully, and, if necessary, to try the effect of exploratory puncture.

Dr. DUFFIN said that Dr. Bird, of Melbourne, had recorded thirty cases, the majority of which occurred in the right lung, and simulated phthisis at the early stages. The disease, in fact, was so common in Australia, that if, in a supposed case of

phthisis, the apices of the lungs were found to be free from disease, the query was at once suggested as to whether the case was not one of hydatid. As regards the symptoms of hydatid disease of the lung, the dulness over the tumour was found to be tolerably sharply defined, and generally the upper border of the dull space was semilunar-shaped, whilst below there was usually a margin of good lung between the cyst and the diaphragm. Hæmoptysis, usually of pure unmixed blood, to the extent of two, three, or four ounces, in these cases was very common. The treatment usually adopted was early puncture with a trocar and canula, in order to obtain some fluid for testing. Dr. Bird had punctured even when no hydatid was present, and had not produced any injury to the lung. He prevented the cyst from breaking into a bronchial tube, and establishing a communication with it. This treatment was as safe as puncture of the liver.

Dr. Cayley thought there was one reason for believing the hydatid had not sprung from the liver, viz., the fact that the liver was never found to be enlarged. He himself had seen three cases in which hydatids in the liver had escaped by the lungs, and in all those the liver was much enlarged.

Dr. Buzzard had also read the pamphlet of his friend Dr. Bird, of Melbourne. He himself had seen one case in which the hydatid of the liver ulcerated through into the lung and was coughed up, and passed into the stomach, and was vomited. The case was fatal. In reference to the question of early puncture, he advocated the use of a strong long trocar of extreme fineness. The entrance of air by the side of the trocar must be avoided; and when the fluid in the cyst began to flow, the mere expansion of the lung caused the fluid to flow away through the instrument. With the aspirator, the force used was sufficient occasionally to dislocate the cyst.

Dr. Coupland said that Dr. A. W. Hearn, of Paris, in a pamphlet published last year, analysed many cases. He was led to do this by having a case before him in which the patient, who was supposed to be phthisical, died from suffocation by the cysts. He advocated galvano-puncture.

Dr. Greenhow said cases of hydatid of the lung were very rare in this country. In reference to the membrane expectorated, he thought that it did not appear to have come from the liver, because it was not stained. He referred to the case of a girl who, having had hydatid of the liver which had been punctured, and who had recovered, returned several years afterwards to the hospital with supposed phthisis. She, however, spat up hydatid membrane, had hæmoptysis, and again recovered. He remarked that hydatid of the liver was almost always cured if punctured with a slight trocar. The simple pressure of the surrounding parts, when its own fluid was evacuated, seemed to be quite enough to kill the creature. But the girl he had mentioned had cysts in the lung, which were coughed up many years afterwards. If in the future the symptoms of limited dulness, of the sound breathing coming quite down to it, and so on (as had been detailed in Dr. Bird's pamphlet), concurred in any case to make him think he was dealing with hydatid of the lung, he should proceed at once to tap the cyst.

Mr. Maunder said that, as the physicians who had spoken regarded the subject under consideration as a rarity, and as he had come there to be confirmed, or otherwise, in his belief concerning the cause of death of a member of the profession—the late Dr. Day-Goss—he would occupy their time for a moment. The diagnosis had been spoken of as difficult, but after listening to Dr. Greenfield's very exhaustive paper, as well as to the remarks of Dr. Duffin, he felt confident that Dr. Day-Goss had been the subject of hydatids of the right lung. He detailed the symptoms in support of his opinion, but, as Dr. Day-Goss had died 200 miles from London, he had not had the opportunity of making a post-mortem examination.

The President had chanced, six years previously, to cut out a hydatid from the pleural sac. Upon removing a piece of it carefully through the opening that had been made, the rest of it rushed out; the patient made an excellent recovery, and was now well. He inquired if any good explanation of the hæmoptysis had been given. Why, in such cases, did it occur? Was there any statement as to the comparative frequency of hydatids in the right and left lung respectively? This would be interesting in respect of the supposed origin of hydatids in the right lung from the liver.

Dr. Duffin said that the source of the hæmorrhage was to be found in the gradual expansion of the cyst itself, which produced stretching of the lung-tissue. The hæmorrhage was pulmonary rather than bronchial. Dr. Bird did not mention that the hydatid membranes coming from the right lung were more pigmented than those from the left lung.

Dr. Greenfield, in reply, said he had not been able to find a copy of Dr. Bird's pamphlet, although he had searched for it. These cases of hydatids in the lung were common only in Victoria, not in Sydney; whilst, even in Victoria, hydatids were far more frequently found in the liver than in the lung. Although he himself had seen several cases, during the last four years, of hydatids of the liver breaking through the lung, he had not seen in the post-mortem room a case of primary hydatid in the lung. In one case of cyst of the liver the hydatid pressed up the diaphragm and right lung to such an extent that the patient died of want of breathing-space. As in that case the liver barely extended below the ribs, he could not agree with Dr. Cayley that in hydatid of the liver the liver was always to be felt enlarged below the ribs. In another case of hydatid, supposed to be an empyema, the cyst had burrowed down by the side of the kidney, and proved rapidly fatal. Hydatids of the liver did not necessarily depress the liver. When the hydatid was situated at the back of the organ it pushed the liver forward, so that it became prominent. As regarded the colour of the expectoration, when the cyst was expectorated from the liver the membrane was bile-stained. In the absence of a post-mortem examination in the case mentioned by Dr. Greenhow, it was probable the second cyst was originally in the lung itself. In a case under the care of Dr. Peacock, in which there had been previously a hydatid in the abdomen, and which was sent into hospital for supposed phthisis, accompanied by red-streaked sputa, a cyst in the abdomen was discovered and punctured, and the patient recovered. Usually the membrane of a liver-cyst, escaping through the lung, was spat up in a broken-down condition. As regarded the use of the aspirator-needle, or the trocar and canula, Dr. Stone had described the tension upon the wall of hydatid and other cysts to be great, and quite sufficient to force the liquid from the cysts when once they were pierced. In any other case in which the symptoms of hydatid were marked, he would explore at once. He should be glad to hear if any members knew of cases in which aneurism of the pulmonary artery had occurred in the cavity remaining after the evacuation of hydatids of the lung.

Popliteal Aneurism: Ligature of Femoral Artery.

Mr. A. T. Norton read a report of a case of aneurism of the popliteal artery, for which the femoral was tied, the patient recovering, and in which death occurred on the twelfth day from embolism of the basilar artery. The patient, aged forty, had aneurism of the popliteal, for which flexion of the knee-joint and the application of a tourniquet to the femoral were tried as methods of treatment, but without success; the femoral was then ligatured at the apex of Scarpa's triangle with carbolised catgut, one end of the ligature being allowed to remain external to the wound. The wound healed by the first intention, with the exception of a small pin-hole aperture, through which two or three drops of almost clear fluid were pressed each morning; but altogether the discharge was not more than about a drachm, and no induration occurred along the course of the vessels. On the ninth day there was natural pulsation at the ankle and foot. On the twelfth day the patient was doing very well, and had enjoyed his breakfast, when, without warning, he became unconscious, and was found to be very pale. He soon became conscious, spoke, and turned in bed, so that he was not paralysed. However, he again relapsed into pallor and unconsciousness, and died. The whole period of time from comparative health to his death was only a few minutes. From the nature of the symptoms, Mr. Norton gave the opinion that a clot had been thrown into a cerebral vessel—hence the first attack of unconsciousness; that the collateral circulation was at once established—a proof that the clot had not passed beyond the circle of Willis; that, with the return to consciousness, and consequently improved action of the heart, the clot was driven onwards to a position in which no collateral circulation could really take place. At the necropsy, a whitish clot was found occupying the basilar artery to its bifurcation, and the right vertebral artery for about a third of an inch. The right vertebral artery was less than half the size of the left; the brain-substance was healthy, but all the large cerebral vessels showed patches of atheroma. The aorta was thickened and dilated, and had its inner wall roughened with atheroma. The mitral valve was thickly fringed and in part calcified. In the

femoral artery, a clot three-quarters of an inch long was adherent above the ligature, and there was another half an inch long below the ligature. No particle of the ligature remained. The inner coats of the vessel had been ruptured by the ligature, but the outer coat had not sloughed through. The aneurism had diminished in size, and its interior was occupied by a firm clot. The femoral vein was healthy. The clot had evidently travelled upwards through the right vertebral vessel, which was small, and in which it lodged for a little while. Being then driven into the basilar artery, it blocked all its branches and caused instant death. The formation of the clot might be referred to the diseased condition of the mitral valve. The operation itself might be said to have been a complete success, as the patient had entirely recovered from its effects. The treatment throughout the operation was antiseptic, but the spray was not used during the dressings.

In reply to the President, Mr. Norton stated that there was no clot in the femoral vein, and that the clot in the basilar artery bulged the wall of the vessel. In reply to Mr. T. Smith, he said that the inner coats of the femoral artery were completely divided; the external tunic was not divided; and he did not use the Lister spray at the time of the operation. No particle of the ligature was discoverable at the post-mortem examination.

Dr. Barlow inquired whether the plugging was really an embolus or a clot collected upon an atheromatous patch in the vessel.

Dr. Greenfield said the state of plugging and bulging of the vessel was more likely due to thrombosis than to embolism. Was the condition of the left auricular appendix examined? He had seen two cases in which embolic plugs had originally clotted in the left auricular appendix, whence they had been washed into the circulatory stream.

Dr. Duffin mentioned a case of embolism of the basilar artery in which the respirations were exceedingly rapid—viz., over 100 per minute. The man had complete coma, which supervened with extreme rapidity. His pupils were small, and he had lived twenty-four hours from the commencement of the seizure. If this very great rapidity of respirations were usually found in such cases, it might, when present, enable one to localise the embolism or thrombosis.

Dr. Duffin stated that the patient had confirmed syphilis, and probably disease of the basilar artery itself.

Mr. T. Smith thought the carbolised catgut ligature scarcely sufficient for such a case. The tail came away before five days were accomplished, and the coats of the vessel were not completely divided. He thought it was not an entirely safe material for the ligature of a large vessel. It had occurred to him, after ligaturing the femoral artery with catgut, to find, after forty-eight hours, the pulsation return in the parts below. It might be remarked that he had tied a "granny"; but if so, he had tied "grannies" on all arteries. But the truth was, surgeons did not tie "grannies." The knot had slipped. A patient of his had had one aneurism cured by ligature with catgut, and had had another aneurism arise at the site of the operation in the thigh.

Mr. Norton said there could be no doubt that the clot was embolic, and not a thrombosis; for it bulged the vessel, the walls of which were not thickened, except in parts by atheromatous deposit, like all the other vessels. Furthermore, the clot was not attached to the vessel, for its walls could be freely moved over any part of the enclosed clot. He had not examined the appendix auriculæ. The femoral artery was thickened. He did not know if the respirations were increased before death.

NEW INVENTIONS AND IMPROVEMENTS

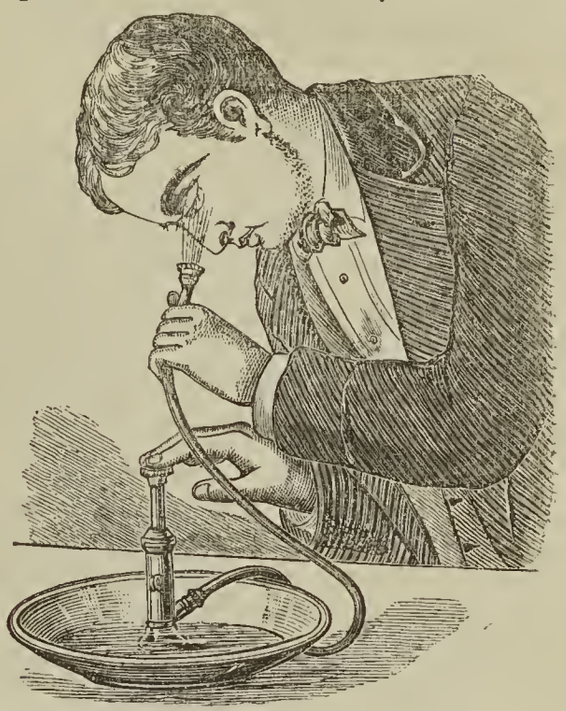
LOBB'S OATMEAL MILK FOOD; PATENT MILK FOOD; CORN-FLOUR MILK FOOD; ARROWROOT MILK FOOD.

The above-mentioned foods are all wholesome and good. The special advantages claimed are that they contain milk, and therefore do not require any further addition. They are portable, and can be kept for considerable periods without alteration. They may be recommended and tried with confidence. Can be had at all chemists and grocers, and at the Langley Milkworks, Vauxhall.

A NEW EYE-DOUCHE.

Mr. Priestley Smith, Ophthalmic Surgeon to the Queen's Hospital, Birmingham, writes to us as follows:—

"Several patients to whom I have recommended the use of an eye-douche having complained to me of the unsatisfactory working of the instruments which they obtained, I applied some months ago to Messrs. Arnold and Sons, of West Smithfield, to provide me with a better. They have made for me a



new eye-douche, acting upon the principle of their 'Simplex Enema' Syringe, as shown in above diagram. It has worked extremely well in my hands at repeated trials, and it seems little likely to get out of order. I beg leave, therefore, to bring it before the notice of the profession, and to recommend it as a well-made and useful instrument."

OBITUARY.

DEPUTY INSPECTOR-GENERAL MACKAY, M.D.

We regret to have to record the death of Deputy Inspector-General Alexander E. Mackay, which took place at his residence, Clifton-hill, St. John's-wood, on the 10th inst. Dr. Mackay, after serving as Assistant-Surgeon, Surgeon, and Staff Surgeon (grades of rank now named those of Surgeon, Staff Surgeon, and Fleet Surgeon), became Deputy Inspector-General, and would have attained the rank of Inspector-Geueral had not his appointment in the Medical Department of the Admiralty prevented him from completing the necessary term of foreign service. His career in the Service began in April, 1844, when, on being gazetted as Assistant-Surgeon, he was, according to the usual routine, appointed to a naval hospital (that at Haslar), and after a year's service there joined one of her Majesty's ships. He served upon the East India and China stations, and in the naval hospital at Hong-Kong. In 1852 he was promoted to the rank of Surgeon, and subsequently served upon the Australian station, and as senior medical officer in the flagships of the Mediterranean and of the South-East Coast of America stations. In 1857 he was awarded the Blane Medal for the excellence of his medical returns; and in 1864, when Dr. Brydon became Director-General of the Medical Department of the Navy, Dr. Mackay was selected to succeed him in the Statistical Department. In this Department he performed for many years the most important duties, having in his hands the preparation of the statistical reports of the health of the navy. He wrote the whole of the letterpress of these big blue-books, and the character of his works has always received the highest praise from the public press and from statisticians. The work entailed on him year by year the critical examination of the journals and other returns of the medical officers of all her Majesty's ships; and the ability, fairness, and wise discrimination shown by him commanded the esteem and respect of all his brother officers; and by the members of the Depart-

ment he was much beloved. Soon after his appointment to the Admiralty he was promoted to the rank of Deputy Inspector-General, and during the remainder of his service was borne on the books of H.M.S. *Fisguard* for this special service. In addition to the constant hard work thus required, he acted for the Director-General of the Naval Medical Department whenever that officer was absent. Dr. Mackay was a most able and conscientious public servant, and, after a short absence from his post, died, at the comparatively early age of fifty-five, of typhoid fever. He was a Fellow of the Royal College of Physicians, London, and a Fellow of the Statistical Society.

DR. ALEXANDER WILLIAMS.

This amiable and accomplished gentleman died of general paralysis, in his forty-ninth year, at Chelsea, on the 6th inst. Educated at University College and the Hunterian School of Medicine, he became the principal laboratory assistant at the Royal Polytechnic Institution, under John Ryan, M.D., LL.D., in whose house he resided, and to whom he was articled. He afterwards held for four years the office of Assistant-Chemist and Lecturer on Natural Philosophy at the Royal Agricultural College. He became Member of the Royal College of Surgeons in 1849, and Fellow of the Royal College of Physicians of Edinburgh in 1859; he also obtained some foreign degrees. In 1854 he entered into practice at Neath, and was a very efficient Local Secretary for the Great Exhibition of 1862. Dr. Williams was Surgeon of the Glamorganshire Reformatory, and Acting Honorary Surgeon in the Neath Volunteer Rifle Corps. He organised the Veterinary Department in conjunction with Professors Simmonds and Brown, assisted by his brother Frank, under Sir Arthur (then Mr.) Helps, and since 1865 to the end of 1876 was Secretary of it. The appointment was abolished on his resignation. In 1872 he most ably represented this country at the Conference at Vienna. Dr. Williams was a frequent contributor to the magazines, and the author of a report on cattle plague, presented to both Houses of Parliament, and also the discoverer of a new method of manufacturing ammonia. His skill in organisation and his political sagacity were admirable, and his knowledge of arts, sciences, and manufactures very unusual for extent and accuracy.

MEDICAL NEWS.

King and Queen's College of Physicians, Ireland.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, March 13, 14, and 15, the following candidates were successful:—

For the First Professional Examination—

Jeffryes, Henry M.

For the Licence to practise Medicine—

Atkinson, Joseph.
Bray, Francis Thomas.
Costello, Hubert Kelly.
Finegan, Arthur Daniel O'Connell.
Hamilton, Edward Palmer.
Heslop, William John.
Maguire, Stanislaus.
Nesbitt, Robert.
O'Connor, Maurice John.
O'Meara, William Henry.

For the Licence to practise Midwifery—

Atkinson, Joseph.
Bray, Francis Thomas.
Costello, Hubert Kelly.
Finegan, Arthur Daniel O'Connell.
Heslop, William John.
Maguire, Stanislaus.
Nesbitt, Robert.
O'Connor, Maurice John.
O'Meara, William Henry.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 15:—

Crouch, Edward Thomas, Devonport.
Duncan, George Cuthbertson, Liverpool.
Lawson, Robert Lockhart, R.N.S., Greenwich.
Thompson, Herbert Warneford, Mornington-crescent.

The following gentlemen also on the same day passed their primary professional examinations:—

Biggs, John M., University College Hospital.
Dismorr, Henry, Guy's Hospital.
Ewen, Henry W., Guy's Hospital.
Harrison, Edmund M., Charing-cross Hospital.
Hope, Robert C., Westminster Hospital.
Lunn, John R., St. Thomas's Hospital.
Ross, Richard A., Guy's Hospital.
Steventon, Walter H., University College Hospital.
Wright, Arthur, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cooper, Herbert, M.R.C.P., M.R.C.S., L.M., L.S.A.—Medical Officer to the Hampstead Dispensary.

Steele, H. F., M.R.C.S., L.S.A.—Junior House-Surgeon to the Carlisle Dispensary, *vice* W. H. F. Sandes, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

Downing-street.—The Queen has been pleased to appoint Surgeon-Major Valesius Skipton Gouldsbury, M.D., C.M.G., to be Administrator of the Government of Her Majesty's Settlement on the Gambia.

Admiralty.—The date of the retirement of Deputy Inspector-General of Hospitals and Fleets, Thomas Nelson, M.D., with permission to assume the rank and title of Inspector-General of Hospitals and Fleets on the Retired List, as notified in the *London Gazette* of the 13th inst., has been altered to the 1st inst.

Royal Naval Artillery Volunteers.—Brighton Corps: Athol Archibald Wood Johnstone, F.R.C.S., to be Honorary Surgeon. Liverpool Brigade: Dr. Hugh Greigh Hughes, to be Hon. Surgeon.

War Office.—Medical Department.—Deputy Surgeon-General James Macmillan Scott Fogo, from half-pay, to be Deputy Surgeon-General, *vice* Henry Lionel Cowen, retired upon half-pay; Surgeon-Major John Coote Ovens retires upon temporary half-pay; Surgeon-Major Lucas George Hooper retires upon temporary half-pay; Surgeon-Major Henry Alexander Gogarty, M.B., retires upon temporary half-pay.

Fifth Royal Lancashire Militia.—Surgeon William Miller Coultate resigns his commission.

India Office.—Her Majesty has been pleased to approve the following admissions to her Majesty's Indian Medical Service:—Bengal: To be Surgeons—James Moorhead, M.D., Charles Henry Beatson, Charles William Owen, Gilbert Saunders Griffiths, and Peter Macpherson Grant. Madras: To be Surgeons—William Alexander Lee and Montague Stokes Eyre. Bombay: To be Surgeons—James Bird Eaton, Osborne Henry Channer. Edward William Young, Hugh McCalman, M.D., and David Robert Ross, M.D.

BIRTHS.

Brodribb.—On March 16, at Hastings, the wife of Charles Aikin Brodribb, M.R.C.S.E., of a daughter.

Fraser.—On March 16, at Knutsford, Cheshire, the wife of Thomas R. Fraser, M.D., of a daughter.

Gribbon.—On February 13, at Fyzabad, Oude, India, the wife of Surgeon-Major G. C. Gribbon, M.B. Dub., L.R.C.S.I., of a daughter.

Kisch.—On March 18, at 46, Portsdown-road, W., the wife of Albert Kisch, M.R.C.S.E., of a son.

McClure.—On March 9, at Verandah House, Worle, Somersetshire, the wife of Thomas McClure, M.D., F.R.C.S.I., of a daughter.

May.—On March 17, at Gresham-villas, Stanstead-road, Forest-hill, the wife of A. S. May, M.R.C.S.E., of a daughter.

Taylor.—On March 16, at Bovey Tracey, South Devon, the wife of A. Norton Taylor, M.R.C.S., of a son.

Trimble.—On February 14, at Ireland Isle, Bermuda, the wife of Staff-Surgeon Jas. Trimble, L.R.C.S.I., R.N., of a daughter.

MARRIAGES.

Allnutt—Neild.—On January 10, at the Cathedral, Sydney, the Rev. George Herbert Allnutt, eldest son of the Rev. T. Allnut, Rector of Stibbard, Norfolk, to Mary Alice, only daughter of J. C. Neild, M.D., of 2, Arthursleigh-terrace, Sydney.

Comerford—Thomson.—On March 8, at Manse of Gartly, John Thomson Comerford, M.D., R.N., to Jane Leslie Thomson, second surviving daughter of the Rev. James Thomson, Minister of Gartly.

Imlach—Macgregor.—On March 17, at St. Luke's Church, Liverpool, Francis Imlach, M.D., son of Henry Imlach, M.D., of 1, Abercromby-square, to Amy, daughter of Alexander Macgregor, of 154, Bedford-street, and formerly of Kensington, London.

Lindsay—Graves.—On March 12, at Kohat, Punjaub, Charles Carmichael Lindsay, of the Royal Artillery, to Helen Lavicount, third daughter of Henry Graves, M.B., of Cookstown, Ireland.

Turtle—Rendell.—On March 20, at North Perrott, near Crewkerne, James H. Turtle, M.D., to Rhoda Mary, eldest daughter of Thomas Rendell, Esq.

Wiltshire—Waterlow.—On March 15, at St. John's, Redhill, Alfred Wiltshire, M.D., of 57, Wimpole-street, Cavendish-square, to Kate, second daughter of the late A. C. Waterlow, Esq., of London.

Wolff—Samuel.—On March 14, at 64, St. John's-wood-road, Alfred Wolf, M.R.C.S.E., of 37, Warwick-road, Maida-hill, to Amy, youngest daughter of Sylvester Samuel, Esq., of New York, U.S.

DEATHS.

Adye, Arthur, M.R.C.S.E., at Bradford-on-Avon, on March 13.

Beatty, Annie, wife of J. G. Beatty, M.D., at 62, Lower Mount-street, Dublin, after a few days' illness, on March 13.

Grant, N., M.D., at 72, Gloucester-terrace, Hyde-park, on March 19, in his 81st year.

Hair, Katherine, wife of James Hair, M.D., daughter of the late James Dalton, of Bures House, Bures St. Mary, at Bures St. Mary, Suffolk, on March 16.

Hawett, Mary, wife of Thomas Hawett, M.R.C.S.E., L.S.A., of Standishgate, Wigan, Lancashire, on March 12, aged 71.

Hope, David, M.R.C.S.E., L.S.A., at Hopetown Villa, Wickham-terrace, Lewisham High-road, on March 21.

Sprigge, Squire, M.R.C.S.E., at Watton, Norfolk, on March 11, aged 57.

PERCIVAL, RICHARD, L.R.C.P.E., L.R.C.S. Glasg., late Assistant Colonial Surgeon, Island of St. Lucia, West Indies, on March 19, at Vineyard Lodge, St. Leonard's-on-Sea, aged 33.

TURNER, EDWARD WILSON, second son of Roger Turner, M.D., formerly of Petworth, at Ashurst, Nightingale-lane, Clapham-common, on March 20, in the 30th year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Resident Medical Officer. Candidates must he registered as legally qualified medical and surgical practitioners, and furnish testimonials as to moral character and professional ahility. Applications, stating age, to he forwarded to Mr. Chas. Woodcock, Secretary, 65, Market-street, Bradford, on or before March 24.

BUCKINGHAMSHIRE GENERAL INFIRMARY, AYLESBURY.—Resident Surgeon and Apothecary. Candidates must he unmarried Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Apothecaries' Company, London, or possessed of some other duly recognised equivalent medical qualification. Applications, with testimonials, to Mr. George Fell, solicitor, Aylesbury, on or before April 3.

HULL AND SCULCOATES DISPENSARY.—Resident House-Surgeon. Candidates must have a medical and surgical qualification. Applications to the Hon. Sec., Mr. G. W. Stourton, on or before March 31.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY.—Physician. Candidates, who must be F. or M.R.C.P. Lond., are requested to attend, with their diplomas and testimonials, at the Dispensary, No. 60, King-street, Regent-street, W., on March 29, at 4 p.m.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Ludlow Union.—Mr. Robert Jones has resigned the Stokesay District; area 4894; population 887; salary £20 per annum.

Ormskirk Union.—Mr. Charles P. Symonds has resigned the First District; area 31,589; population 19,420; salary £60 per annum. Also the Workhouse; salary £60 per annum.

Samford Union.—The Hadley district is vacant; area 6733; population 1420; salary £37 per annum

Wayland Union.—The Walton district is vacant; area 25,489; population 5561; salary £125 per annum.

APPOINTMENTS.

Caistor Union.—Richard Brocklesby, M.R.C.S. Eng., L.R.C.P. Edin., to the Second Great Grimsby District.

Henley Union.—George C. Carter, L.S.A. Lond., L.F.P.& S. Glasg., to Caversham District.

Honiton Union.—Thos. W. Shortridge, L.R.C.P. Edin., L.R.C.S. Edin., to the Workhouse and the First, Third C, Tenth, and Eleventh Districts.

Taunton Union.—Robt. M. Maginniss, B.M. and M.C. Dub., to the Churchstanton District.

Thorne Union.—Henry A. Fenton, M.B. and C.M. Glasg., L.R.C.S. Edin., to the Hatfield District.

West Bromwich Union.—John B. Welsh, B.M. Lond., M.R.C.S. Eng., L.S.A., to the Handsworth District.

THE LATE SIR WILLIAM FERGUSSON, BART.—At the last meeting of the Council of the Royal College of Surgeons of England, it was resolved unanimously—"That the Council hereby express their sympathy with the family of the late Sir William Fergusson, Bart., in their bereavement, and their sorrow for the loss, not only of a personal friend, whom they esteemed very highly, but of one who practised, taught, and improved surgery with rare skill and knowledge, and who constantly promoted the welfare and reputation of surgeons, both by his devotion to his duties in the Council and by his influence in society.—(Signed) Prescott Hewitt, President."

MEDICAL PRACTITIONERS IN ANCIENT ROME.—In a paper read before the Académie des Inscriptions, Dr. Briau relates the results of his investigations as to the official condition of medical practitioners in Rome. Under the kings and the republic, mostly of servile origin, freedmen or the sons of freedmen, they had no administrative existence or any relation to the State. Social medicine, legal medicine, and public hygiene were unknown; and any person might at his own risk and peril practise the art of healing. The law punished with exile anyone of high rank (*honestior*) who administered a fatal remedy; while anyone of low condition (*humilior*) was punished with death. This was an application of the common law. Midwives were treated with more consideration, the *lex Cornelia*, regulating many of their procedures, providing, among other things, that when a pregnant woman died her abdomen should be opened for the extraction of the child. It was not until the dictatorship of Julius Cæsar that the condition of practitioners was improved, one of his decrees honouring with the much-desired right of citizenship those who practised medicine in the capital. From this time the position of the profession became estimable, and was sought for by many men of merit. The movement soon spread to provincial towns, wherein too the right of citizenship proved a great attraction. Almost all the early emperors exhibited a desire of attaching distinctions and prerogatives to the profession, and practitioners intervened directly in the administration. The institution of *archiaters*, or official practitioners, introduced them into the palaces of the sovereigns, the municipal assemblies, and the public schools. Augustus first organised a military medical service.—*Gaz. Hebd.*, February 16.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Barr.—The facts in controversy have now been clearly placed before our readers, and we do not think that any good can be attained at present by pursuing the subject further.

Mr. H. H. Stokes, Barbadoes.—Received with thanks.

Midwife.—We understand that a meeting of the Council of the College of Surgeons will be held on Tuesday next, to consider, amongst other matters, the question as to giving effect to Mr. Russell Gurney's Act, by which women can be admitted to examination for the diploma of Member of the College; and to receive and discuss a report in reference to the diploma of Midwifery of the College.

Associate, King's College.—Tuesday last, the 20th inst., was the anniversary of the birth of Sir William Fergusson. He left two sons and three daughters.

Mr. Williams.—Mr. Spencer Smith did excellent service as Secretary to the Government Commission on the Contagious Diseases Inquiry, of which Mr. Skey was chairman.

Sanitarian.—Write to Dr. Pullin, Sidmouth, Devon, who will no doubt send you a copy of his excellent report, which is too long for publication in this journal, although very interesting.

Another Fellow by Examination.—All the members of the Court and Board of Examiners not on the Council signed the memorial.

Justitia.—Yes; the Bill proposed by Sir James Graham for regulating the profession of physic and surgery, repeatedly amended during the sessions of 1844 and 1845, would have established a Council of Health and Medical Education, to which the Government might refer on questions relative to the cause and prevention of disease. But the violent opposition the Bill met with determined Sir James to abandon all further attempts at medical legislation.

Max F.—The lunatic asylum which is about to be opened at Banstead will afford accommodation for 615 male and 1081 female patients. The buildings have been arranged with a view to future enlargement. The magistrates having decided that this asylum should he occupied hy patients who, though incurable, are not dangerous either to themselves or others, and who would be drafted to the new asylum from the older establishments at Hanwell and Colney Hatch, it has not heen thought necessary to provide accommodation in single rooms to the same extent as would probably be required in an ordinary asylum.

AN EFFICACIOUS ANTI-SCORBUTIC.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having had some experience in the treatment of scurvy when in India, I heg to recommend to your notice the use of lime-juice with nitre—ahout half a drachm to the quart bottle—as a very powerful and active anti-scorbutic.

When my patients (prisoners undergoing sentences of punishment) were put on it, they soon made a very rapid recovery. The medicine was very much liked hy the patients, calling it sherbet—from which, of course, it is not very dissimilar. The scorhutic symptoms were well marked, and were attrihuted to old and innutritious spices used with their diet—as, for instance, the shell of a peppercorn instead of the peppercorn itself. The disease, too, appeared within the tropics at Pannah, near Bombay.

The above treatment will be found valuable in curing the disease whenever and wherever it may occur.

I am, &c.,

Wallingford, March 21. WILLOUGHBY ARDING, M.D.

PHYSICAL GEOGRAPHY IN RELATION TO SANITARY SCIENCE.

Mr. Alfred Haviland, M.R.C.S., read, at a meeting of the Social Science Association, at Adam-street, Adelphi, on Monday, an interesting paper on "Physical Geography in relation to Sanitary Science, and the Valley System in relation to Disease." He observed that in inhabited valleys there was often to be found much rheumatism, which frequently ended in heart disease. The cause of that was that valleys did not get sufficient fresh air, which was so important for vigorous life. The winds hlew over them, not through them; and consequently emanations from the soil hung about, instead of being dispersed. As a rule, the cottages of the poor and the mansions of the rich were found in the trough of valleys, and it was impossible to calculate how many an old family had heen deprived of the most promising of their scions by adhesion, as a home, to an ill-sited family mansion. He then proceeded, by means of maps and models of the strata of the earth, to amplify and prove his ohservations. A discussion followed, in which Dr. B. W. Richardson (the chairman) took part, testifying to the great value to medical men of Mr. Haviland's maps, as they enabled them to learn whether the disease was the effect of meteorological influences. He thought that at least twenty-five or thirty distinct diseases might be traced to that source; and amongst them he would place croup, influenza, erysipelas, scrofula, remittent fever, rheumatism, phthisis, bronchitis, pleurisy, lung diseases, fistula, calculus, and possibly some malformations. That was a serious list, and the subject deserved much consideration.

F.R.C.S. Eng.—It is a mistake on the part of the writer, as candidates *are* examined in surgical anatomy at the *final*, and are required to undergo an examination in medicine unless already holding a recognised medical licence.

COMMUNICATIONS have been received from—

Mr. W. E. Poole, London; Dr. William Squire, London; Dr. Herman, London; Mr. B. R. Wheatley, London; Mr. John Chatto, London; Professor Ogston, Aberdeen; Dr. Barlow, London; Mr. R. J. Godlee, London; Mr. Henry Morris, London; Dr. J. Hughlings-Jackson, London; Mr. T. M. Stone, London; Mr. James Gunning, Fyzabad; Dr. Sturges, London; The Secretary of the Charing-Cross Hospital; The Registrar-General, Ireland; The Secretary of Apothecaries' Hall, London; Mr. James Robinson, London; Dr. John Williams, London; Dr. E. Sparks, Mentone; The Secretary of the Harveian Society, London; Dr. James Barr, Liverpool; Dr. J. W. Moore, Dublin; Mr. F. Williams, Kensington; Mr. Henry J. Ellison, London; Dr. C. Guisandry, Vevey; Dr. Willoughby Ardino, Wallingford; Mr. Rogers, London.

BOOKS AND PAMPHLETS RECEIVED—

Calendar of the Pharmaceutical Society of Ireland, 1877—Richard Fawcett Battye, What is Vital Force?—Fownes' Physical and Inorganic Chemistry—Charles Theodore Williams, M.D., Influence of Climate in Pulmonary Consumption—F. R. Hogg, M.D., Notes on Enteric Fever—H. Alleyne Nicholson, M.D., The Ancient Life—History of the Earth—C. W. Brown, M.D., Analysis of One Hundred and Nine Cases of Rheumatism treated with Salicylic Acid and Salicin—Report of the Fifth International Ophthalmological Congress, held in New York, September, 1876—The Science of Living, by Student—J. H. Wythe, A.M., M.D., The Microscopist, a Manual of Microscopy—William Henry Day, M.D., Headaches, their Nature, Causes, and Treatment—A. Sibley Campbell, M.D., Pneumatic Pressure and the Genu-Pectoral Posture in the Reduction of Uterine Luxations—J. Taft, A Practical Treatise on Operative Dentistry.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Home Chronicler—Dublin Journal of Medical Science—Archivio Clinico Italiano dei Medici Condotti—Students' Journal and Hospital Gazette—Journal d'Hygiène—The Colonies and India—Chicago Medical Journal and Examiner.

APPOINTMENTS FOR THE WEEK.

March 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Prof. Henry Morley, "On the Effects of the French Revolution upon English Literature."

26. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. G. de G. Griffith, "Dislocation backwards of the Head of the Humerus, on the Dorsum Scapulæ." Mr. A. C. Routh, "A Case of Malignant Small-pox." Dr. Drysdale, "Further about Animal Vaccination: Dr. Henry Martin's Experience."

27. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. G. Gaskoin, "On the Morphœa Alba, or Leuce, with Cases." Dr. H. Vandyke Carter, "Note on the Delhi Boil."

28. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery (Council Meeting, 8 p.m.), 8½ p.m. Mr. A. Coleman, "On Occasional Untoward Results of Immediate Torsion of the Teeth." Mr. I. W. Nunn, "On some Reflex Symptoms and Results of Irritation of the Dental Branches of the Fifth Nerve." Mr. S. J. A. Salter, "Specimens of Exfoliation of the Teeth and Jaws after the Eruptive Fevers." Other Communications.

29. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

30. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 17, 1877.

BIRTHS.

Births of Boys, 1317; Girls, 1270; Total, 2587.
Average of 10 corresponding years 1867-76, 2380·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	919	881	1800
Average of the ten years 1867-76	791·0	748·7	1539·7
Average corrected to increased population ...	...	...	1647
Deaths of people aged 80 and upwards ...	...	...	88

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	2	2	...	3	...	1	...	...
North	751729	51	5	6	1	12	...	5	1	5
Central ...	334369	3	9	...	1	3	...	1	...	1
East	639111	19	6	5	1	8	1	1	1	...
South	967692	25	22	2	2	10	...	7	3	4
Total	3254260	100	44	15	5	36	1	15	5	10

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·644 in.
Mean temperature	41·7°
Highest point of thermometer	54·7°
Lowest point of thermometer	24·8°
Mean dew-point temperature	34·0°
General direction of wind	S.W., W., & W.N.W.
Whole amount of rain in the week...	0·07 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 17, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Mar. 17.	Deaths Registered during the week ending Mar. 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2587	1800	54·7	24·8	41·7	5·39	0·07	0·18
Brighton	102264	43·4	71	46	54·4	26·4	40·6	4·78	0·04	0·10
Portsmouth ...	127144	28·3	99	59	...	...	...	...	...	...
Norwich	84023	11·2	65	40	55·0	27·0	40·1	4·50	0·11	0·28
Plymouth	72911	52·3	41	37	58·5	34·0	44·6	7·01	0·15	0·38
Bristol	202950	45·6	147	91	54·3	31·2	43·0	6·11	0·26	0·66
Wolverhampton ...	73389	21·6	68	46	54·5	27·9	38·6	3·67	0·28	0·71
Birmingham ...	377436	44·9	342	180	...	...	...	...	...	...
Leicester	117461	36·7	106	59	55·0	27·5	42·6	5·90	0·05	0·13
Nottingham ...	95025	47·6	68	44	53·9	29·0	41·1	5·06	0·23	0·58
Liverpool	527083	101·2	414	311	48·8	32·0	40·8	4·89	0·62	1·57
Manchester ...	359213	83·7	278	242	52·5	33·2	41·7	5·39	0·80	2·03
Salford	141184	27·3	148	89	51·5	28·7	40·4	4·66	0·68	1·73
Oldham	89796	19·2	78	60	...	...	...	...	...	...
Bradford	179315	24·8	132	96	49·8	32·8	39·4	4·11	0·37	0·94
Leeds	298189	13·8	257	149	52·0	31·0	40·8	4·89	0·29	0·74
Sheffield	282130	14·4	224	141	52·0	29·5	40·5	4·72	0·41	1·04
Hull	140002	38·5	127	72	54·0	27·0	40·4	4·66	0·29	0·74
Sunderland ...	110382	33·4	77	43	55·0	32·0	42·6	5·90	0·10	0·25
Newcastle-on-Tyne	142231	26·5	115	66	...	...	...	...	...	...
Edinburgh	218729	52·2	113	122	48·0	28·0	40·0	4·44	0·27	0·69
Glasgow	555933	92·1	392	352	...	...	...	...	...	...
Dublin	314666	31·3	182	181	58·0	30·9	44·0	6·67	0·14	0·36
Total of 23 Towns in United Kingdm	8144940	38·3	6131	4326	58·5	24·8	41·3	5·17	0·29	0·73

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·64 in. The highest reading was 30·07 in. on Sunday, the 11th, and the lowest 29·34 in. on Friday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ABSTRACT OF

THE CROONIAN LECTURES

ON THE

DIFFERENCE BETWEEN THE SEXES IN REGARD TO THE ASPECT AND TREATMENT OF DISEASE.

By J. BRAXTON HICKS, M.D., F.R.S.,
Physician-Accoucheur and Lecturer on Midwifery and Diseases of Women and Children at Guy's Hospital, etc.

LECTURES PART I. AND II.

BEFORE considering the sexual differences of the diseases attending puberty, it will not, I think, be without advantage to devote a few minutes to the consideration of that great change in the system.

It has generally been accepted that puberty in woman coincides with the development of the ovary and its Graafian follicles, the commencement of the menstrual function, and those changes of the form that lead the child and girl up to womanhood, which I need not detain you in enumerating.

But instances occur not infrequently in which the change of bodily form takes place thoroughly, and yet no menstruation appears; even pregnancy has happened without menstruation having occurred. And again, the full development of the body has been completed, the woman having no ovaries; what, then, is the explanation?

Suppose I place before you this proposition: *That the organs of generation in their healthful state, from the earliest intra-uterine life till the full period of puberty, are in a state of progressive development;* but the growth proceeds at a more active rate about that period. Let us now consider how facts support this proposition. Formerly, it was supposed that ovulation and menstruation began together, and that the latter was a sign of the former. But recent inquiries have shown that ovules are discharged at an age long anterior to the first appearance of the menses, in fact, in early childhood. It would be difficult to say how far the irregular fluxes of blood in children are dependent on this form of ovulation, because we are generally not able to say what other causes of vascular excitement and tension may be present in these hæmorrhages; yet it is much more rare to find a parallel condition in boys.

Again, it has been not infrequently, I may say commonly, said that there is but little distinction between the sexes till puberty,—I mean in a clinical aspect, and even in manner, disposition, etc. Yet I venture to think that those of my hearers who have much attended to children will agree with me in saying that, almost from the cradle, a difference can be seen in manner, habits of mind, and in illness, requiring variations in their treatment. The change is certainly hastened and intensified at the time of puberty; but there is, even to an average observer, a clear difference between the sexes from early infancy, gradually becoming more marked up to puberty. That sexual feelings exist from the earliest infancy is well known, and therefore this function does not depend upon puberty, though intensified by it. Hence, may we not conclude that the progress towards development is not so abrupt as has been generally supposed?

There can be no doubt that the function of menstruation is dependent on the presence of the ovaries; for, when these are both absent, congenitally or by operation, the menses do not present themselves. But it is quite a different thing to say that the absence of the ovaries will cause the woman to lose her attributes as a woman. This is not the case. With a slight change the women retain their attributes, otherwise it would be very difficult to reconcile the supposed effects of ablation with those cases of congenital absence alluded to just now.

Doubtless, although we cannot admit that the development of the body at puberty is entirely dependent on the presence of the ovaries, yet we must admit that they in their turn, full of life and activity, do powerfully react on the nervous centres, with which they stand in relation directly and sympathetically; and thus any disturbance occurring in the process of growth must reflect itself upon the economy.

Our position, therefore, is this. We may assume that we agree so far that—1. The development of woman can be completed without the function of menstruation; 2. That it can be perfected without the presence of uterus and ovaries; 3. That the sexual feeling and instinct existed before puberty.

If this be granted, then we must admit that puberty is in its essence not dependent on these conditions; rather, as I have before suggested, may we not say that "the changes of puberty are all of them dependent on the primordial force which, gradually gathering in power, culminates in the perfection both of form and of the sexual system, primary and secondary"?

The period at which this culmination arrives is not by any means fixed. We have every day evidence that the capability of procreation may occur some years before the completion of the process. By some it has been compared to the unfolding of a blossom; but that is not an accurate description. It should be compared to that position of the life of a plant when it for the first time shows signs of blooming, till it arrives at full power to form and perfect the seed.

There is one most frequent concomitant of puberty to which I must allude before considering its errors; I mean menstruation. I have already stated that menstruation is not an integral, although it must be admitted to be a very important part of the puberal state. Many instances have occurred where full development and capability of procreation have existed without the appearance of the menses. It is often absent for a long time in some without any very serious condition of health. It depends on the ovaries unquestionably; for, where they have been removed, it ceases; or, where they are congenitally absent, it never appears. Hence we must regard the ovaries as an essential link in the causation of menstruation. But in what way does it act? Investigations, both clinical and post-mortem, show at the time of menstruation a state of marked hyperæmia in uterus and ovaries which did not exist during the interval. There are other features in the process, but this is the most marked. Is the origin of the monthly hyperæmia situated in the ovaries, or in the nervous centres in relation to them? I think we cannot but conclude in the ovaries; otherwise, from what we have before seen, we ought to have menstruation when they are removed, so long as their corresponding nervous structures are perfect. Concluding, therefore, that there is some stimulus generated in the ovaries, which, by reflex irritation, affects the uterus, we may further ask, Does it do so through the general system or directly upon the uterus; or is there a general condition of vascular excitement or tension, which, occurring during the exfoliation of the uterine mucous membrane, finds a ready relief or exit in this direction, and thus manifests itself in the flow of menses?

At present we are not in a position to answer the question about vascular tension, but, if we may judge from other clinical facts accompanying the epoch, we have every evidence of general vascular and nervous excitement; for, when this occurs in excess, or in persons of frail vessels, we find the strain too much for their delicate walls; and thus exudations or even hæmorrhages, either vicarious, supplementary, or co-dependent, occur.

If we seek an explanation why this process is so different in the male we shall not have far to go, if we consider the difference between the testis and ovary; for, whereas the products of the testis readily escape by tubes, the ovaries are much more perturbed before the ovum can escape. Dense tissue has to be penetrated, and there is severe local distension of the vessels, coupled with the tonic contraction of the Fallopian tube and dartoid tissue in connexion with it.

From the consideration of menstruation we are drawn on in our thoughts to the causation of *anæmia and amenorrhœa.* I think I shall find most of you agreeing: 1. That with anæmia in the female we very frequently find amenorrhœa; 2. That anæmia, however, is not *necessarily* attended by amenorrhœa; 3. We have already granted that, the ovaries being absent, we find amenorrhœa without any exception. Hence may we not fairly conclude that, where amenorrhœa exists in these anæmic cases, we have a negation or sedation of the ovarian stimulus; or, at any rate, a want of response in the nervous system not sufficient to cause, that is to say, the local hyperæmia? Can we go still farther, and say that, in all cases of amenorrhœa, the ovaries existing, we have such a negation, although not caused by the anæmic state?

Is it not a fair conclusion to draw, also, that anæmia is one of the causes of amenorrhœa; that, the blood-supply being deficient, the maturation of the ovum, if it occur, is not sufficiently vigorous to cause the necessary action or excitement; and, as a rule, not sufficient for the process of ovulation? If this be so, we have an explanation why, generally,

in these states we find sterility; howbeit, when conception does take place, as sometimes it does, most probably there is sufficient force to ovulate, but not to menstruate.

Anæmia about puberty is common to both sexes, though more so in the female. I should be inclined to call it "idiopathic," had that term not been given to a spontaneous form occurring in later life. But its causation is not very difficult to find. The demand on the system for the perfecting of the sex is great, and sometimes so abrupt that it is difficult for the system to meet it; a derivation of nourishment takes place from the nervous system and blood-producing organs, so that they cannot properly perform their functions. How much more severely does this act on the female than the male, whose puberty is more gradual!

In cases of the anæmia of puberty, the cessation of the menses acts in a salutary way, instead of remaining to increase the exhaustion. Hence the unscientific treatment of those who, under this anæmic condition, endeavour by local stimuli to force their presence. Now, poverty of blood or spanæmia, of course, occurs from many other causes, all of an exhausting and depressing kind; and it is notorious how much more powerfully they act at the time of puberty than at any other time. I have used the word *anæmia* in a general sense, as the older term; spanæmia would indicate best the condition referred to above, because its origin is constitutional, and is more liable to be accompanied by, or, as I have suggested above, to produce, amenorrhœa. Although severe blood-loss or true anæmia may, and not infrequently does, produce amenorrhœa at first, still it more quickly passes off, not being caused by a previous vice in the system. Still, from the effects of traumatic anæmia we can learn much; for, if it be very severe, it causes such depression that the symptoms very much correspond with those of spontaneous anæmia. Of course, it may be rejoined that, if it be so, is not the absence of blood the sole cause? is not the deficiency of action of the blood-producers the cause of the amenorrhœa? Granted; in part it undoubtedly is so, but subsequent to the depression which produced it.

Is anæmia of puberty common to both sexes, or is it entirely a female complaint? I have already stated my belief that it is found in both sexes, but much more frequently in the female. I have also endeavoured to show one reason for this; there are many others of an extraneous kind. Boys are brought up much more in open air and invigorating sports; generally girls are kept more in the house, have less free healthful exercise, and, as regards learning, are kept more continually at it. Their whole treatment is more enervating; and, I suppose we shall most of us admit, the essence of this form of anæmia arises from a depressed vital force, or, taking all things into consideration, deficient action of the ganglionic centres.

But this is not peculiar to women. Perhaps the difference of opinion in this matter arises from the different discrimination of the causation. Sir W. Jenner, in his address before the Clinical Society, pointed out how often we were apt to look upon the disease which followed as the cause of the preceding cachexia, whereas it was the cachectic condition which permitted the occurrence of disease. And thus, a lad, overgrown, pale and anæmic, languid, dull, and fainting on slight overwork, goes on without medical assistance, and gradually shows signs of phthisis; and we are apt to consider the phthisis the cause of the cachectic state, whereas it resulted from it. Nothing can show this better than the recovery of these chest cases taken in time; we hear soon of the subsidence of the unhealthy appearance, and the general improvement of the local symptoms. Supposing this occurred in a girl in whom the menses had appeared, the attention of her friends would be called to the accompanying amenorrhœa, and advice taken about it.

In adult life it is much more rare to see anæmia in either sex. It is uncommon in women, especially the married, apart from blood-loss. I have generally found those of them who have spontaneous anæmia to have had anæmia at puberty; and it is almost always easy to trace some distinctly depressing influence in these cases. In those extreme cases which have been called "idiopathic" or "pernicious" anæmia, both sexes share the disease; but the causation of these is probably the same as is found in the anæmia of puberty. Extreme blood-loss, although for the time recovered from, produces sometimes death, in the same manner as does the idiopathic form.

And thus we naturally are brought to the consideration of *chlorosis*. What is it? Is it a separate disease? Is it an anæmic person with a green or sallow complexion, the result of cholæmia; or is it quite a separate disease, with some other colouring matter in the blood? Authors so much differ, that it would be a bold thing on my part to venture to decide. Perhaps we would arrive nearer at its elucidation if we were to argue thus. The chlorotic woman is anæmic; she is almost always amenorrhœal. These conditions are the effects of depression of the action of the ganglionic system. And thus, if this condition last long, it is not to be wondered at if the various vital organs should fail in their duty, and, like the ovary, be unable to accomplish their task. And thus in the general system are retained materials that should have been evolved. For instance, the liver secretes little bile; the bowels are inactive, the accumulations causing annoyances and irritations; and thus is set up, in addition, a number of reflex symptoms and neuroses, which the weakened state of the patient renders her ill able to bear. Would it not be a wonder that, weakened and depressed in body, she should possess an active brain; or, if active under impulse, she would be able to sustain its exertion without exhaustion? And is it to be considered surprising that, these states existing, the will would possess its natural regulating control; but that, more or less released from its restraint, the emotional system would preponderate in force, ready as it always is to do so in woman upon the least opportunity? Add to this yet one or more of the thousand stimuli which intensify the emotions, and let there be an hereditary fault in this direction, and we can perceive how readily an opportunity is given for the development of the hysterical paroxysm, and why these states should be often associated. With regard to the statement of Trousseau, that he had seen chlorotic cases with menorrhagia, it is quite in accordance with what I have before stated of anæmia with amenorrhœa, namely, that blood-loss produces the same secondary results as a defect in the manufacture of blood; and thus a condition of similar kind occurs, with this exception: that the vice in the system is not original, but induced.

But does chlorosis exist in the male? Theoretically, upon consideration of the above argument, we see no objection to the supposition; though, practically, we seldom recognise its presence. Is this because we do not look for it? As the symptoms would be necessarily slighter in the male, they may be readily passed over. Still, I seem to remember many cases that have presented themselves, bearing a great similarity to this state, which I am inclined to think is hardly a distinct disease, but a condition superadded to anæmia. It must be borne in mind that the blood of the female is not so robust as that of the male, having less red corpuscles. This renders her somewhat more susceptible to anæmia and chloranæmia.

One cannot pass by this subject without alluding to Virchow's researches on chlorosis, in which he has apparently shown the frequent association of this disease with congenital contraction of the aorta. It is difficult to say how far one is the cause or the other. It is not difficult to understand how long depression, low arterial tension, and feeble heart would allow the aorta to remain somewhat below the normal size.

A well-marked contrast between the male and female is known to all. It stands in close relationship with the subjects just considered, namely, with anæmia and amenorrhœa—I mean the simple ulcer of the stomach. This complaint, although it occurs at all ages, yet is more frequent in the female than in the male; between twice and three times altogether, but at certain epochs much more. Thus, Willich gives, out of 108 fatal and open ulcers, from the ages of ten to twenty, two in the male to thirteen in the female; from twenty to thirty, nine males to twenty-one females; from thirty to forty they are about equal; while from forty to fifty the females exceed in proportion of eight males to fifteen females; and from fifty to sixty there are two males to eight females—making it more than three times as frequent in the female up to the age of thirty.

On inquiry into the influence which favours this dangerous condition, we find, amongst many, that suppression of the menses, anæmia, and chlorosis is a very frequent one. But certainly this is not the only cause. For instance, after burns on the skin it is not very infrequently seen. I shall not attempt to follow the different views which have been expressed as to the pathogenesis of this disease; but I would venture to suggest that at least a help in the solution will be found in a careful consideration of the several differences in health and disease between the two sexes, and then comparing this with the variable states of health associated with this complaint.

When we speak of "hysteria," what is it that we are

talking about? Are those cases of "hysteria," where we find, about the period of puberty and a little after, particularly in girls, actions approaching insanity, false accusations, tricks to deceive and damage, swallowing pins, raising blisters deceitfully, and a number of other similar freaks? Are not these forms of mental perversion mild forms of insanity, associated, of course, often with emotional excitability and deficiency of control; and then miscalled "hysteria"?

Are those forms of pseudo-paralysis to be rightly called "hysterical paralysis," which, in a considerable number, are doubtless associated with mental peculiarity or low conditions of the mental powers, and an over-sensitive emotional nature? Is it not rather a paralysis of the will to move, in girls and women, whose force of will never was great; but, when something has occurred to make it painful to walk, or languor has been indulged, and the will never fairly exerted, till after a time the power to will fails? I have seen such cases delicately tutored by my friend and colleague and your Censor, Dr. Wilks, till gradually the power has returned. I have seen him taking their arm, and, with true maternal care, teaching them to walk as they were once taught in infancy. Many of these wish to attract sympathy, and for this reason do not or will not will, and gradually the will is lost.

The whole subject of true functional paralysis is at present so little understood that we shall be wise if we merely note the associations with which it is blended. The condition would not exist without some general vital depression preceding; a state also sure sooner or later to permit the preponderance of the emotional system, hyperæsthesia, etc.

As an instance of functional paralysis, I may quote a case of a young married woman of the least hysterical character possible. She had had for a month or so complete paraplegia. At the time of my visit this still existed, with most complete anæsthesia; she had no power over the sphincter ani, and the urine dribbled away. I could run pins in her leg without her being aware. Her history was this. She had suckled her first child for a year, had fallen pregnant during the nursing, and was already three months advanced; consequently she was very anæmic and weak. In three days she was quite well.

Then, are we to include in "hysteria" patients suffering from pains in various parts, and of which much complaint, and perhaps exaggeration, is made? Why should we denominate these as "hysterical"? And because no lesion can be found to explain it, and it disappears suddenly, why are we to call it "fanciful" and "hysterical"? If by this term we mean to express disturbance of the nervous structures, then the word is a misnomer, because it occurs in the whole race under conditions which, although they *may* develope the emotional paroxysms, *by no means necessarily* do so, and are often not dependent on a uterus. Till we have learnt to discard the term "hysteria," as applied to the various reflex pains and to simple hyperæsthesia, we shall fail to seek for and find the cause of the disturbance whereof the patient complains. For I desire emphatically to lay it down as a cardinal rule, that, when pain is complained of, there is a definite cause for it, centric, local, or reflex. It may have an exaggerated value in the patient's mind; and, if it persist long, it may become so objective that the patient may observe it even to the exclusion of other pains or influences; yet it is our duty as medical practitioners to seek that cause.

If a patient suffering from anæmia or chlorosis have facial neuralgia, it is not called hysterical, because it is a well-recognised and frequent malady; and even were she emotionally sensitive, we should not account it hysterical. If this patient at the same time have a pain in some part of the body not usually complained of, and there be a difficulty in finding a definite lesion, it is put down then as an "hysterical" one; and generally the patient would be called "hysterical." Let us cast off these cloaks of ignorance and indolence. It behoves us to find out the cause; and, as sometimes the cause of the reflex pain is in a locality different from ordinary, it will require much research to detect it. Still we ought to bear in mind the cardinal rule in physics—"no effect without a cause."

There are doubtless some difficulties attending these examinations; because, when a pain taking its origin in a slight cause has existed a long time, besides the prominence it attains in the mind of the patient, it causes also an extension of sensitiveness to the general nervous system, and thus in its turn gives rise to various neuralgias. Besides this, also, there is a change set up in the centres themselves, which remain sensitive after the cure of the original cause; and, even if this sensitiveness be cured, it is relit upon the slightest cause much more quickly than it was at first.

Nothing shows this better than the effect of irritation of any one of the pelvic organs in a woman. If either the bladder, rectum, or uterus be the subject of abrasions or ulcerations, the back over the sacrum is more or less complained of; and, if the hand touch the surface, it is more sensitive at a certain part than others, showing that there is some change in the state of the nerves of the skin. But the other organs complain of pain and tenesmus, so that it is often difficult in a long-standing case to discover the starting-point; and then, having the erring part put into a sound state, the pain still remains, though it gradually subsides under anodyne and tonic treatment. Thus many cases are over-treated, although the original state required treatment, this being kept up beyond the real cure because the patient was still feeling pain.

Now, we will suppose a patient of naturally sensitive emotional temperament to have an affection of this kind for a year or two. We well know that, especially if the uterus be involved primarily, the stomach will sympathise by reflex irritation of the sympathetic nerves; and dyspepsia in its varieties will arrive, and even vomiting. And thus we must conclude that the nerves of the stomach are, in their way, as tender and irritated as those of the skin over the sacrum. An exaggerated instance of this is seen often in pregnancy; and then the greater portions of the ganglionic system being already in a state of irritation, it is not difficult to understand that other organs in their turn become troubled, and headache, hypochondriasis, palpitations, etc., follow in their wake. The whole body in consequence suffers; for, the stomach and digestive organs failing duty, there must ensue debility; and thus the emotions assert superiority, and paroxysms of hysteria are not remote.

The distress of such a condition is often increased, in cases of uterine abrasions and hypertrophy, by the hæmorrhages frequently attending them; and thus anæmia intensifies the liability to neurosis and its sequents.

Of course, I do not deny that the state of the nervous centres themselves, both cerebro-spinal and sympathetic, may give rise to the same phenomena as when derived from eccentric irritation. Mental depression, impoverishment, anxiety, etc., or actual disease of the centres, may doubtless set up such troubles as we have been considering; but I think, in the large majority of cases, there is a reflex cause to be found after careful observation.

In our research after it we must bear in mind that it may seem to us, who are in health, slight; and that pain, depression, exhaustion, etc., will magnify its power of annoyance. The study of these matters has been carried on by the male sex, most of them in good health, who personally can but slightly appreciate the susceptibility of the female economy. These phenomena have been viewed rather from the masculine than feminine aspect; and some have gone so far as to deny these well-known facts. Yet one might appeal to those who have suffered severe and chronic ailments, whether the train of symptoms just narrated have not a reality for all.

Supposing, then, a train of symptoms similar to those instanced from uterine or rectal irritation to arise from abrasion or irritation of the stomach, ultimately reducing the patient to a highly sensitive state, with dysæsthesia of many kinds, discomforts, and exaggerated complaints, so that finally the whole balance of the reason and emotions becomes disturbed; can we in fairness call the whole of such a state "hysteria"? But it surely cannot be called a disease peculiar to woman. With less emotional disturbance and more rational force the man suffers, and then we call it dyspepsia in its milder forms; but, supposing the man had been previously depressed by overwork, anxieties, watchings—added to, perhaps, by tea-drinking to excess—then, if he were over-anxious about himself, over-valued the importance of his trouble, he would be called a hypochondriac.

But there is a reality in the pain; there is a reality in the causation; a man in this state will, on excitement, soon show the susceptibilities of his emotional system.

Yet one more instance. It is a very common thing for women to complain of pain in the groins; and some put it down to ovarian irritation or ovarialgia. If it continue a long time the patient is worried about it, and in her mind it attains a prominence it does not deserve as regards danger. But it is much increased at monthly epochs, when it may be very severe for a few hours or days. After a time the general system is disturbed, there are neurotic pains and aches; more emotional

disturbance, and the stomach begins to complain, and even vomiting to occur. If this go on for one or two years, gradually increasing in severity, then we find globus hystericus, hysterical paroxysms, and an instability of the balance between the reason and emotions; and, if the patient be originally of firm will, she may preserve a moderate appearance of quiet. But otherwise there will be the usual phenomena of the hysterical state.

But is this only irritation of the ovary? In the vast majority there is some definitive trouble. Look at the function of the ovary—how many Graafian follicles are maturing in various stages; see how dense a tissue each has to penetrate. Consider the congestion, beginning some days before the bursting, and then the actual extrusion of the ovum with a drop of blood, or sometimes more, into the peritoneum, even if taken up well by the Fallopian tube; supposing the tunica albuginea to be unusually dense, or the Fallopian tube unable by adhesions from grasping the ovum, then the latter falls into the peritoneal cavity. And does it require much imagination to conceive that pain, excitement, and reflex phenomena should be present to develope by reiteration the hysterical phenomena?

But ought we not to call this in all its stages hysteria? In some cases, these latter symptoms would never be developed, and thus we can only say that hysteria may arise out of this as out of other irritations. Again, suppose that previously the whole nervous and general system were depressed by the many troubles of life, then we should find that the case would proceed with greater rapidity.

May I not say, with your acquiescence, that any source of irritation in any organ or part of the body existing and continuing, other parts in nervous relationship with it are influenced, till a condition of hyperæsthesia, dysæsthesia, and overaction ensues, tending in various ways to reduce the patient; so that, sooner or later, there is a greater prominence given to the emotional system, which may or may not be subject to the control of the will?

ORIGINAL COMMUNICATIONS.

NOTES AND REMARKS

ON A COMPLICATED CASE OF EMPYEMA.(a)

By G. COOPER FRANKLIN, F.R.C.S.,
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On March 14, 1876, I was called to see Emma T., a girl, aged seventeen. Her condition and symptoms at that time were as follows:—Most urgent dyspnœa; face with a marked dusky hue and anxious expression. Lying on left side, with her legs somewhat drawn on abdomen. Pulse running, and not to be counted; respirations 60 to 70. Chest examined with considerable difficulty. The heart was readily seen and felt beating about the right mammary region; pulsation was evident to the right of the right nipple; its action was so turbulent, and the distress of the patient so marked, that its exact relation to the thoracic parietes could not be defined. Right side abnormally resonant, with universally coarse respiratory murmur. Left side, no movement; enormously bulged; intercostal spaces perfectly obliterated; dulness absolute throughout, also extending just to the right of the sternum (its lower two-thirds). Respiratory sounds heard close to the spine in the dorsal region. Large cutaneous veins were observed on the anterior chest, more so on the left side. Tongue furred; complained of thirst. Abdomen somewhat swollen and tympanitic; bowels confined.

With the kind assistance of my colleague, Dr. Oliphant, I immediately tapped the left chest where the bulging was most evident (this was afterwards found to be between the sixth and seventh ribs), a little posterior to the axillary line. I used a trocar at first, and then made a free opening with an ordinary sharp-pointed, straight bistoury. From fifty to sixty ounces of healthy pus escaped, to the infinite relief of the patient; and then an elastic catheter was placed as a drainage-tube in the wound. I subsequently obtained the following vague history of her illness:—

E. T., aged seventeen, employed in a warehouse, had always been a stout, healthy girl until this illness. She had been taken ill the first week in February, some six weeks ago, returning home from work with a cough and pain in her side; tried to work the next day, but had to leave again; and at ten o'clock that evening she had a severe rigor, lasting some twenty minutes, which shook the bed and the "room too." She suffered from diarrhœa for a week or ten days subsequently, and complained of a load at the stomach; the prominent symptom, however, became an increasing difficulty in breathing. During the next five weeks she became very thin, "had to fight for her breath" now and then, had some diarrhœa, with sometimes violent abdominal pain. The day before I saw her (Monday, March 13) her mother thought she would have died in struggling for her breath.

March 14.—Evening: Respirations 40; pulse 140; temperature 101°.

15th.—Respirations 35 to 40; pulse 130. Abdomen more swollen. Tongue furred and dry; teeth and gums covered with sordes; had some distressing "green" sickness to-day; wound discharging but slightly.

16th.—Slight improvement as to her breathing. Respirations 30; pulse 130. She lay comfortably on her back. Tongue still dry and furred. Abdomen more tympanitic and tender. She was now and then very restless; said she was going to die. The urgent symptoms had now become abdominal, as it were, rather than thoracic, and in the course of this day she developed the unmistakable signs of peritonitis.

17th.—The catheter removed at the most urgent request of the patient. Peritonitis marked.

20th.—General improvement. Respirations 28; pulse 125; temperature 99°.

28th.—The wound has been closed some days. Yesterday a large glandular abscess had formed in the left parotid region, and was punctured. The swelling began four days ago. It burst into the external meatus, and to-day is discharging freely both from wound and ear.

April 3.—Parotid abscess has closed. General condition improved slightly. Respiration is heard over a small area on the left side, and there is some distinct metallic tinkling to be heard about the middle third anteriorly.

7th.—Some abdominal pain and diarrhœa the last two days. Physical signs much the same. The heart is still from two to three inches more to the right than it should be; and, although there is more respiration, there is a very considerable area of dulness.

13th.—The left chest tapped a second time, between the seventh and eighth ribs, just below the angle of the scapula. From thirty to thirty-five ounces of healthy pus were evacuated, and a drainage-tube was put in.

28th.—Marked contraction of side; decided increase of respiration. General condition has improved. Cough very troublesome indeed the last two or three days, and the discharge from the side was noticed to have altered in character—had become more like serum. The drainage-tube was removed to-day.

May 23.—Has made gradual but well-marked improvement.

June 14 (three months from the first paracentesis).—Making flesh rapidly; left side much contracted; general condition good.

Remarks.—There are two or three points of great interest in this case—1. The severity of the symptoms when she was tapped; 2. The peritonitis, and apparently spontaneous parotid abscess; 3. The recuperative power of the patient. This patient was exceedingly ill when she was tapped. I have had occasion to puncture the chest in cases in which the dyspnœa has been more marked than it was here even; but never in a case in which the constitutional disturbance was so marked. She had swelling and great tenderness of the abdomen, so that it was with the greatest difficulty that she was raised in bed. The physical signs were very hurriedly observed. The displacement of the heart, in itself, which was so readily seen, was a sufficient sign, together with the dyspnœa, to justify one in inserting a trocar. One other sign is to be noted—viz., the marked enlargement of the cutaneous veins on the anterior thoracic parietes; they were very large, more especially on the left side. This physical sign belongs rather, so to speak, to those cases in which the thoracic cavity is occupied to a greater or less extent, and has its large veins pressed upon or even occluded, by a tumour (aneurismal or otherwise), and not to those cases in which one or other of the pelural sacs contains a large amount of fluid. Here, at all events, the cutaneous veins were very large. Soon after the tapping they became much less conspicuous. The catheter was removed three days after the first operation, very much against

(a) Read before the Midland Branch of the British Medical Association, at the annual meeting, held at Nottingham, June, 1876.

my wish. The girl was then so ill (the friends almost thought it was a "dying wish"), that I felt compelled to do so. I was quite at a loss to account for the peritonitis. "The swelling and tenderness of the bowels" had been noticed two or three days before I saw her, and she had had diarrhœa two or three weeks previously. She had no spots on the abdomen. At the same time it occurred to me that I was dealing possibly with a case of typhoid *plus* empyema. About a week after she had recovered from the peritonitis the wound healed, and simultaneously a large parotid abscess was developed. This arose spontaneously, or apparently so. There was no salivary calculus to be discovered anywhere about the gland, that might have set up the irritation and subsequent suppuration. Recovering from this completely, physical signs pointed to a re-collection of fluid in the left pleura, and this time a drainage-tube was put in. I have noticed, as many others have, on several occasions, that on the withdrawal of fluid from a pleura that the patient has, at the moment that the lung is relieved of the pressure, been seized with a curious cough. It is a joyful sign: you know the lung is expanding. The cough is unmistakable—a "hollow," "windy," "throat" cough. I have heard it described by all these terms. Now, this patient had no such cough after the first operation, nor, indeed, until ten or twelve days after her chest had been opened a second time. She then developed somewhat suddenly this curious cough, and along with it the lung expanded, and the fluid—what little there was that now came away—was no longer pus, but rather an "opaque serum." The cough lasted some three or four days, and then I had but little hesitation in removing the drainage-tube. From that time she steadily recovered, with her heart *in situ*, and a markedly contracted left side. It is not a little remarkable that a patient—a hard-worked warehouse girl—should pull through such an illness. The pus probably was in her chest some six weeks, dating from the time she had the rigor, before it was let out. Her pulse for three months was 120 to 130 or 140; the temperature (not taken so often as it would have been had she been in hospital), kept at about 99° to 100°, except when she had the peritonitis and the parotid abscess, when it rose to 102° to 104°. In considering the subject of the non-expansion of the lung immediately on withdrawal of the fluid, one is inclined to connect with that fact another, viz., the attacks of dyspnœa—violent dyspnœa—of which sho seems to have had either two or three before she was tapped. Dr. G. H. Evans, in his admirable paper on "Paracentesis Thoracis," in the *St. Thomas's Hospital Reports*, (vol. ii. New Series), makes the following remarks:—"Out of the forty-two cases that I have collected from the post-mortem records of two hospitals, in which fluid was found in the pleura, and one or both lungs entirely or partially collapsed, in five more or less extensive patches of pulmonary apoplexy were observed; and in two of these latter, and in one of the cases of collapsed lower lobe, clots were found in the branches of the pulmonary artery leading to the affected portion; in the other cases the condition of the pulmonary artery was not mentioned. In the case of which I have given the notes above, I think that probably the masses of pulmonary apoplexy might date from three attacks of aggravated dyspnœa mentioned in the history of the case, on each of which occasions a branch of the pulmonary artery was suddenly occluded by clot." Dr. Evans proceeds to observe how strong an argument this is for the early removal of pleuritic effusions, whatever be the nature of the effused fluid—viz., this tendency to clotting in the pulmonary artery or its branches when you have a lung pressed on by fluid, and, maybe, bound down by adhesions also. In the case before us the patient had had two or three violent paroxysms of dyspnœa with distressing pain. Her mother told me it was "awful to look at her." Some time after she was tapped the second time the lung expanded. Supposing it had simply been pressed upon by fluid, it should have expanded immediately on its withdrawal; but supposing its breathing area to have been diminished by two or three patches of apoplexy, then the delay in the expansion of the lung is explained by time being required for the absorption of the clots in the branches of the pulmonary artery. On withdrawal of the fluid the pulmonary circulation would tend to become more and more unimpeded, and gradually the obstructive clots would disappear. It will have been noticed that a simple straight bistoury was used; and no better result could possibly have taken place supposing an aspirator had been employed instead. The admission of air into the pleural sac, in this case at all events, was positively harmless.

Note.—I have recently examined this patient's chest (December, 1876). The deformity is materially decreased. She follows her former occupation without any inconvenience whatever.

A CASE OF

POISONING BY CYANIDE OF POTASSIUM,

WITH NECROPSY.

By A. H. NEWTH, M.D.

Poisoning by cyanide of potassium is sufficiently rare, and the appearances after death are so uncertain, that all accounts of such are of importance; therefore the following case, the details of which are tolerably complete, will, I think, prove interesting and instructive.

Whilst accidentally passing a house on the morning of December 16, I was requested to step in and see a police-constable who was said to be very ill. I found the man lying full length in bed on his back; the arms, which were straight down by his side, twitching convulsively; hands partially clenched, thumbs flexed across palm; body bathed in a clammy sweat; face pallid, expressionless; eyes fixed, partially closed, pupils widely dilated, tears in the corners of eyelids; breathing stertorous, loud mucus-rattle, foam round mouth; pulse imperceptible, and heart's action indistinct. About an ounce of brandy was poured down his throat, but his jaws became rigid, the spasmodic motions and breathing gradually ceased, and he died a few minutes after I saw him. On inquiry I found he had taken nothing but a cup of tea, and had some toothache tincture applied to gums, and a little anodyne liniment put in his ear. These drugs he had obtained himself, the former from the local chemist, and the latter from a fellow-constable. He had been suffering very much from "neuralgia" or pain in the head, lately, and got these the night before. I secured the bottles, which were standing on the drawers, but they seemed to contain nothing likely to do much harm. It seems he had passed a restless night, and in the morning had asked his wife to apply these remedies. She also brought him up a cup of tea at his request. She then went downstairs, but, hearing a strange noise, returned hastily and found him speechless; he then vomited and became insensible. Violent convulsions set in, of a tetanic nature, it is said, so that it required several men to hold him. He died about half an hour after taking the cup of tea. At once surmising it was a case of poisoning, I gave notice to the coroner, who authorised me to perform a post-mortem examination, which I did forty-eight hours after death.

The body was that of a well-nourished, muscular man. There were green marks of commencing decomposition in the iliac fossæ; post-mortem hypostasia on back of body and limbs; rigidity well marked. There were a few scars on each hand, evidently from the bite of some animal. A happy smile rested on the face; the eyes were bright, though flat and wrinkled; mouth firmly closed and full of mucus. Subcutaneous fat abundant (an inch thick on abdomen); also much fat in mesentery and around kidneys. On opening the body a faint though decided smell of hydrocyanic acid was perceptible, which, however, soon passed off. Lungs were fully expanded, slightly congested, of a purplish colour in small patches (much post-mortem congestion); bronchioles and vesicles full of air; at the apex of right lung there was a small patch of old inflammatory disease (apparently tubercular). Pericardium normal. Heart large, firm, of a healthy colour; muscular fibres relaxed; ventricles nearly empty; auricles full of fluid blood, of a dark but not particularly bluish colour. There was slight atheromatous deposit on the mitral valves, but not sufficient to impede the circulation, and the valves closed well and stood the hydrostatic test; aorta and aortic valves very healthy. The liver was large, of normal shape, not much congested, but somewhat pale, and in some parts superficially showed signs of fatty infiltration. Spleen large, much congested, and softened. Kidneys irregular in shape, of a somewhat dark bluish colour, and in several places there was fatty degeneration; the right was somewhat displaced towards the median line. Double ligatures being placed on each end of the stomach, it was carefully removed. It was contracted to about three-fourths its natural size, of a dark colour externally, the veins being gorged with bluish-black blood. It contained about six ounces of dark alkaline fluid, smelling strongly of prussic acid, and had the appearance of tea mixed with thick mucus; there was not the slightest chymous odour. The walls

of the stomach were deeply injected of a dark red colour, streaked by the bluish-black veins; the rugæ stood out distinctly, and the walls were covered with a layer of thick mucus. Near the pyloric orifice, and on the lesser curvature anteriorly, were two bright scarlet patches the size of a penny-piece each; there was no softening. The contents of the stomach, mixed with some liquor potassæ and animal charcoal, were filtered, but did not give any reaction with iron; but after acidulating and distilling the liquor (carefully poured off from the solid parts) at a gentle heat, the distillate gave decided evidence of abundance of prussic acid. Three separate tests were applied —1, the nitrate of silver; 2, the Prussian blue; and 3, the sulphocyanide;—all with most marked results. A drop of nitrate of silver also, on the bottom of a watch-glass placed over the bottle containing the stomach contents, gave a white precipitate, insoluble in ammonia, but soluble in nitric acid. The intestines were completely empty of fæces, healthy in appearance, and distended with flatus; the rectum was very much dilated; bladder contracted and nearly empty. The scalp was very thick, but showed no signs of recent or remote injury; cranial bones dense, somewhat thick, unsymmetrical; on the right side a depression about three-quarters of an inch wide extended from the coronal suture outwards and slightly forwards, apparently produced by bulging of the frontal and parietal bones. Pacchionian glands prominent, and depressions in the skull over them deep. The dura mater was normal, though rather dark; but on the right side, about over the middle of the fissure of Rolando, there was a bright red patch the size of a crown-piece; this inflammation involved also the pia mater and arachnoid. These latter membranes elsewhere, on the upper surface, were opaque from gelatinous effusion, but on the base of brain appeared normal. The sulci were not very deep; grey matter was thicker and darker than usual—in fact, it was almost of a slate colour, and the divisions into layers were indistinct. Brain-substance very firm; puncta sanguinea numerous; ventricles contained little fluid; basal ganglia normal. A microscopical section was made by Mr. H. O. R. Sankey's process (obtainable in twenty-four hours). The brain-cells were apparently healthy and regular at the base, while those of the vertex were remarkably large, with numerous processes; but they did not seem abundant, and many of them appeared to have undergone fatty degeneration—that is, while the nucleus and the nucleolus, with the nerve branches, were deeply stained with aniline black, some portions of the protoplasm remained of a deep yellow colour. The cells of the neuroglia were increased, especially in the external layer. The bloodvessels of the pia mater were altered, the cells of the intima being increased, the coats generally thickened; and in some instances the canals were obstructed by thrombi. The police made inquiries on my mentioning that I suspected poisoning, and found that he had purchased an ounce of cyanide of potassium to "clean his numbers" the night before his death. This could not be found for some time, but at last, on my describing what it was like, the pieces were picked up about the room and under the bed. The charwoman thought they were put there for disinfecting the room. The remains weighed 390 grains.

The history of the man is as follows:—He was about forty years of age; had been a soldier fourteen years, and served in India nine years and a half. He was bought out nine years ago, and then entered the force. Whilst in India he had sunstroke, and also suffered from "yellow fever," so that his life was despaired of. His wife also says that he had had delirium tremens, and frequently suffered from "ague"—that is, feverish symptoms, sweating, and shivering; these he had till quite recently. He had been married five years, with no family, but his wife has had two miscarriages. He had always since his marriage complained of pain in the right side of his head. Had never had convulsions, but when excited, either by drink or trouble, always became very agitated, even violent; then had muscular twitchings and trembled much. He often had inability to control his muscles, especially of the hands, so that he could not write. Suffered much from "nightmare," and when he woke up his face "seemed swollen"; he was confused, not knowing where he was. On recovering consciousness he complained of his head, saying it was "sore all over." About two years ago he ran away from his wife, consequent, his wife says, on some annoyance from his parents, but probably because of a quarrel between them. He was found in the workhouse. He never seemed to have any distinct recollection of this occurrence. An inquest was held, and the jury returned a verdict that "Deceased committed suicide while of unsound mind."

Several questions of interest present themselves in respect to this case:—

1. *Was the death from poisoning?* Of that there could be no doubt. The smell of the poison even after forty-eight hours was proof of its presence, which the chemical analysis abundantly verified. Had no poison been found, however, and the symptoms of poisoning been neglected, the appearances in the brain might have seemed to justify the idea that he had died a natural death from meningitis. This shows how imperatively important it is that in every case of sudden death the most careful inquiries should be made.

2. *Was the poisoning accidental, suicidal, or homicidal?* The evidence in respect to his taking the poison was very unsatisfactory. Had the chemist not mentioned that he had sold the man some cyanide, it is probable that the fact that he had some might have been unknown. Some of the jury seemed inclined to think that the cyanide had been taken to relieve the pain of the neuralgia. This is hardly likely, for, as I reminded the jury, cyanide of potassium is not used as a medicine in England, and certainly not to relieve neuralgia. He had obtained it under false pretences, as this substance is not used by policemen to clean their numbers; had not mentioned the purchase to anyone; and had taken it so soon after, that it could hardly have been accidental. The paper with the poison-label was carefully destroyed. He seems to have led an unhappy life with his wife, and was addicted to drink, but he has not been heard to express a wish to get rid of himself.

3. *Was he sane or insane at the time?* This is a difficult question always, but I think in the present case everything favoured the idea of insanity. His history was that of a man who suffered from chronic meningitis, with occasional outbursts of partial delirium on excitation; the "aguish" symptoms, the irritability of temper, the restless nights with "nightmare," the acute pain in the head, the fact of his having had *insolatio*, and, finally, the morbid appearances, all point in the same direction.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

WOUND OF TOE—TETANUS—TREATED CHIEFLY BY CURARE—RECOVERY.

(Under the care of Mr. ARTHUR E. DURHAM.)

[Reported by Mr. EWEN, Dresser of the case.]

A. H. S., a boy, aged fourteen years, was admitted into Guy's Hospital, under Mr. Durham, August 28, 1876.

History was as follows:—On August 3 a shutter fell upon the boy's right foot, splitting the great toe-nail, which was dressed, and gave him no further trouble. On August 23 the following symptoms set in:—A feeling of great lassitude, with considerable difficulty in swallowing, the muscles of the neck and jaws being painful and stiff. Rapidly other sets of muscles became affected—those of the abdomen and back especially were subject to frequent painful spasm; and there was, over and above this, continuous pain down the back. The boy was sleepless. Up to August 28 he had been attended by a chemist for mumps.

Condition when admitted, August 28.—The wound of the great toe is healed completely; the nail has been removed. He has neither pain nor tenderness at the spot. He is quiet, and in no great pain except during the spasms, which occur at intervals from ten to fifteen minutes. Skin warm and dry; temperature 100°. Bowels have been confined the last few days. There is well-marked trismus; fluids can be swallowed but very slowly. The muscles of the face, especially the corrugators of the brows, are contracted, giving rise to a typical tetanic grin. The muscles of the neck, back, and abdomen are quite rigid; the recti abdominis stand out like bands, and the lineæ transversæ are very marked. Opisthotonos is readily induced if patient is touched suddenly, or with a cold hand. He has pain on pressure over the abdomen, and a constant aching at the epigastrium. The breathing is easy and normal, the diaphragm not seeming to be affected. A quarter of a grain of hydrochlorate of morphia was adminis-

tered subcutaneously, and patient soon sank into a quiet sleep. In the afternoon he was ordered ext. physostig. gr. j., aq. chlorof. ʒj.; two drachms to be taken every four hours; brandy six ounces, milk, eggs. In the evening the Calabar bean was replaced by one drachm of succus conii, statim, and the administration of one-sixth of a grain of eserine subcutaneously every three hours. He had the first of these injections at 7.30, and slept well till 10.30, when he had the second.

August 29.—Slept generally after each injection. The introduction of the syringe caused slight spasm. Bowels moved in the afternoon with great pain, the evacuations being hard and scybalous. Spasms now occur every twenty minutes or half-hour. At 6.30 p.m. the eserine was discontinued, and curare given instead; one two-hundredth part of a grain administered; no visible effect produced. Curare given again at 9.30 p.m. and at midnight.

30th.—2 a.m.: Has slept since the last injection. The temperature continues normal, but the pulse is not so good, being irregular, compressible, and weak. Curare injections continued about every three hours; patient slept between whiles. In the evening he said the pain was less, and that he felt better. During the last few hours the risus sardonicus has disappeared when asleep, but recurred immediately on waking.

31st.—11 a.m.: No pain at present, but the muscles of the abdomen and back are still quite rigid. The spasms occur less frequently, and are not so well marked. Curare injections continued every three hours. At 6.15 p.m. spasms recurred with great violence. Introduction of the syringe induced violent opisthotonos. Besides the injection of curare he had one drachm of succus conii given to him. Then slept again. The injections were repeated at 10 and 12 p.m.

September 1.—Curare administered at 2 a.m., again at 4 a.m., again at 8.25 a.m. and 10.25 a.m. During the last period patient has been quiet, with exception of two spasms. Pulse and temperature are normal. 2.30 p.m.: He has had six or seven severe spasms since the last injection. Pulse irregular and fluttering, but temperature keeps normal. He slept from 3 p.m. till 10 p.m., and was not disturbed; but at 10 p.m. had another hypodermic injection of curare.

2nd.—He has no pain now; the muscles are not so rigid; he has intervals of two to three hours between the spasms. At six in the evening once more the spasms recurred with great violence every fifteen minutes. He was in great pain, especially in the back.

3rd.—Curare continued, and at 3 a.m. also had one drachm of succus conii. Up to noon the spasms only occurred four times, and were less violent. 12.45 p.m.: Dose of curare increased to one-hundredth part of a grain, and there was opisthotonos, though not so bad as before.

4th.—11 a.m.: Pulse weak and irregular; temperature 100°. Muscular rigidity more marked, and the spasms are now every half-hour. There is slight spasm of the larynx, but the dyspnœa is not great. 1.30 p.m.: Quieter since the last injection, but is worse in other ways. The temperature is now 102·5°, and the pulse very weak and irregular. At 4.30 p.m. again, in addition to the trismus and opisthotonos, there is some spasm of the larynx. Temperature 101°.

5th.—Temperature, morning 98°. Two severe spasms at 11 a.m. At 6.30 p.m., temperature 102°; pulse very weak; pain and spasm increased. At 8 p.m., free from pain; looked cheerful; temperature normal.

6th.—Decided improvement; spasm worse in evening, but temperature normal; injections continued every two or three hours.

7th.—Spasms in the afternoon more frequent, but slighter in amount.

8th.—Curare being finished, had one injection of one-third of a grain of morphia; 10.30 a.m., three two-hundredths of a grain of curare injected; spasm much better. Says he is hungry; was able to eat fish and rice-pudding to his dinner. 3.35, injection repeated.

9th.—Improving in every way. All the muscles with exception of recti abdominis are much relaxed. Diet: Fish, jelly, four ounces of brandy.

10th.—Progressing favourably; pain and spasm quite gone. The jaws can now be moved without any difficulty.

11th.—Improvement continues. Injections stopped.

12th.—In no pain whatever. Has been sitting up in bed for a few hours.

14th.—Tetanic grin quite gone.

18th.—Has been up for a few hours. Stiff and uncertain in his gait.

October 2.—Discharged cured with exception of very slight stiffness in recti abdominis and a little peculiarity in gait.

Note.—Mr. Durham pointed out, in commenting upon this case, the disabilities thrown on practical medicine by the recent Vivisection Act. It is well known that curare is very uncertain, and Mr. Durham was anxious to have tested his drug quickly and decisively for the benefit of this patient. The vexatious clause respecting "vertebrates" prevented Mr. Durham, in the absence of a licence, from testing his drug on a frog, and the curare could only be administered in tentative doses to the patient.

MOORFIELDS OPHTHALMIC HOSPITAL.

CASES OF OPHTHALMIA, WITH MEMBRANOUS DISCHARGE.

(Under the care of Mr. JONATHAN HUTCHINSON.)
[Reported by E. Nettleship, F.R.C.S.]

The following cases of ophthalmia, with membranous discharge, occurred in Mr. Hutchinson's Moorfields practice, within a very few weeks of each other, during the last summer. They are all the cases of this kind which Mr. Hutchinson has met with lately, and it is thought that a brief record of them may be of some interest. It will be noted that they all occurred nearly at the same time, and in hot weather; that all the patients were young children; that the other characters of the ophthalmia—its severity and duration—varied considerably, although in all (excepting Case 2) the discharge was equally membranous; that in one instance, where contagion appears to have taken place from a membranous case, the produced disease was severe and purulent, but not membranous; that in none was there any material infiltration of the conjunctiva. The question of the influence of weather, especially of temperature and moisture, on the prevalence and character of the various forms of acute ophthalmia is probably deserving of more attention than it has received. If we could obtain notes of a large number of cases in which peculiar characters showed themselves (such as this of membranous discharge, without any evident relation to diphtheria, scarlet fever, or measles), it would be of great interest to ascertain whether or not they occurred under any common external conditions; or whether their coming in groups, as above exemplified,(a) was merely a coincidence, or one of those instances in which the chance identification of one unusual case leads to the discovery of others, from the fact of attention being for a time specially directed to the subject. The greater prevalence of severe ophthalmia among large bodies of persons in hot weather has been often observed by military surgeons, and Mr. Hutchinson believes also by the medical officers to some of the pauper schools. The effect of moist heat has also often been asserted. These gentlemen, especially when they are resident, have unequalled opportunities for observing the causes of the rise and fall in numbers, and the changes in character, of ophthalmia. Careful observations of the temperature, moisture of air, direction and force of wind, and height of barometer, in relation to the occurrence of new cases and of relapses in old cases of granular ophthalmia, would possibly show that some of the periodic outbreaks of ophthalmia which still occur in these institutions are not so entirely chargeable to neglect of precautions against contagion as is commonly supposed. Or, on the other hand, such observations might very probably show no causal relation whatever between the ophthalmia and the various climatic conditions, and might establish the contagion doctrine of such outbreaks still more firmly.

Case 1.—A girl, aged nine, was under care in June and July for severe ophthalmia, with profuse discharge, much of which presented a well-marked membranous character, and was adherent to the palpebral conjunctiva. On one occasion a thin, but very definite, layer of membrane was found on the ocular conjunctiva beneath the upper lid, but it did not come so far forwards as the edge of the cornea. There was considerable dusky swelling of the eyelids, and the case was a serious one for some time. It was not so amenable to treatment as are most cases of gonorrhœal ophthalmia, or of infantile purulent ophthalmia. The treatment consisted in the daily application of nitrate of silver solution, and the frequent use of an astringent or disinfectant lotion. Only the right eye was attacked, and although the case lasted several weeks, the left

(a) See also some cases occurring in hot weather, reported in *Medical Times and Gazette*, September 18, 1875.

never became inoculated. No cause could be ascertained. The child was not known to have had access to any cases of scarlet fever or measles; no others had had ophthalmia; the patient herself was examined for vaginal discharge with a negative result. She was a pale, flabby child.

Case 2.—A younger sister (aged four) of the above patient was brought with severe ophthalmia, almost, if not quite, purulent about three weeks after her admission. In the swelling and dusky congestion of the lid, and the profuse discharge, the case resembled Case 1, but the discharge was never observed to be membranous. This case was even more troublesome than the former, and, notwithstanding careful and frequent treatment with nitrate of silver and very free use of a weak lotion of chloride of zinc, one eye was practically lost by extensive perforating ulceration of the cornea. The nitrate of silver always had a most marked effect in diminishing the discharge; but the child was not always brought daily, and the disease invariably made head again when this part of the treatment was omitted for a short time. When, after many weeks of more or less regular treatment, she was nearly well, she was taken away into the country. In a fortnight she was brought back with the ophthalmia almost as bad as ever. It was again cured, and she has now remained well without much treatment for several weeks. She, like her sister, was very pale and feeble, with thick, very red lips, and delicate skin. In both the patients there was a tendency to pustular inflammation along the borders of the eyelids, and this part remained red and angry after the other symptoms had nearly disappeared. The lids in the younger one became somewhat granular, but their state prior to the attack was not known.

Case 3.—On July 20 a child aged about three years was brought with ophthalmia, and the discharge was found to be very definitely membranous, a thin continuous sheet covering the whole inner surface of both lids, but not of sufficient toughness to remain as an unbroken shield to the cornea when the lids were separated. It was peeled off. A week later it had formed again, and was again peeled off, and a ten-grain solution of nitrate of silver applied; and after this date the case soon recovered.

Case 4 was in another child which was under care for a few days following July 20. The discharge formed a well-marked pellicle. It was a mild case, and was nearly well at the second visit, three or four days after admission.

Case 5.—On July 27 a new-born infant was admitted with purulent ophthalmia. It was a rather mild case, but the discharge was quite distinctly pellicular. The notes of progress in this case are wanting.

Medical Honours.—Mr. C. W. M. Moullin, M.B. and M.A. Oxon., was elected on the 22nd inst. to the Medical Fellowship of Pembroke College. In Trinity Term, 1870, this gentleman was placed in the second class by the moderators *in literis Græcis et Latinis*, and in the first class by the final examiners in the School of Natural Science, in Trinity Term, 1872. Dr. Moullin also gained the Radcliffe Travelling Fellowship in 1875, and is now pursuing his studies at St. Bartholomew's Hospital.

Solid Nitrate of Silver.—Dr. Schuster, of Aachen, recommends (*Berl. Klin. Wochenschrift*, March 5, 1877) a mixture of one part chloride of silver, and ten parts nitrate of silver, melted together, and cast in the ordinary way, as a particularly good form of solid caustic. A stick thus prepared will force its way into parts offering considerable resistance without breaking. It can be cut to an extremely fine point, and can hence be applied to a very small surface without affecting surrounding parts. The moulds in which the sticks are cast must be carefully cleansed after using.

The Proposed Convalescent Hospital at Brighton.—The proposition of the Committee of the London Hospital, Whitechapel-road, to establish a Convalescent Home at the eastern end of the borough was last week again discussed by the Brighton Town Council. The Hospital Committee, in answer to a request to abandon the project, have replied that, as no infectious or contagious cases whatever would be treated there, no detriment in that respect would result. It was stated, however, that the Committee had subsequently consented to suspend further action until a conference, at which, it is understood, an offer will be made by the town to recoup the Hospital any present outlay incurred, if the project is relinquished.

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Medical Times and Gazette.

SATURDAY, MARCH 31, 1877.

MEDICAL WOMEN.

Since we last noticed the subject of the medical education of women, such large and important advances have been gained in the matter that it may now be said that all extraneous obstacles to the entrance of women into the medical profession have been overcome. Mr. Russell Gurney's Act of last session, which permitted any licensing body to admit to examination for its degrees or diplomas any persons, independent of sex, was accepted some time ago, as we informed our readers, by the King and Queen's College of Physicians in Ireland; and very lately the example set by that body has been followed by the University of London. At a recent meeting the Senate of that University decided, by a majority, we believe, of fourteen to eight, to admit women to examination for its medical degrees; and this decision had the support and votes, we have heard, of the two most eminent medical members of that body, these gentlemen holding the opinion that the University ought not to refuse to give effect to the resolution arrived at by the Legislature, that women should no longer be legally debarred from entering the profession. This decision of the Senate of the University of course throws open its matriculation examination to women, as that must be passed before any of the degrees of the University can be obtained; and, having yielded so far, the University cannot well stop there. It is not to be supposed that it can for any length of time support the position of admitting women to only its medical degrees, though it may perhaps have to obtain another and larger enabling Act before they can be admitted to examination for its other degrees.

There still remained, however, the fatal obstacle that female medical students could not obtain anywhere in Great Britain or Ireland the necessary hospital practice; and this difficulty also has at last been overcome. Following the suggestion we offered to them some time ago, the

promoters and supporters of the medical-woman movement have given up their vain attempts to gain admission to the hospitals to which schools for male students are attached, and have sought and acquired the use of a general hospital, which, while having the complement of beds requisite to gain recognition as a school by the licensing bodies, yet has no school. After some preliminary negotiation a formal proposition was a while ago made by the Right Hon. J. Stansfeld, M.P., as the Treasurer to the London School of Medicine for Women, to the Committee of the Royal Free Hospital in Gray's-inn-road, to throw open the wards of that institution to female students. The proposal was submitted to the medical staff, and the support of, at any rate, the majority of the physicians and surgeons having been obtained, was during the present month brought before the General Committee—if that is the right style and title of the governing body—of the Hospital. They felt, it is said, that they were the only body in London who could grant to female students the desired opportunities for hospital study without having to meet the difficulties of duplicate, or the evil of mixed classes, and that therefore it was their duty to assist the march of mind in this direction, by agreeing to make their Hospital the clinical department of the London School of Medicine for Women. No doubt duty will in this instance be well rewarded by a gain of considerable material support and aid to the Hospital funds,—and so it ought to be; but we have no objections whatever to make to the decision arrived at, to throw open the Hospital to female medical students.

We hold, as we have not infrequently said, that, as women are bent on taking up medicine as a specially suitable and desirable vocation, notwithstanding all the experience, advice, and warning to the contrary,—and as Parliament has in its wisdom decided that, so far as the laws are concerned, women shall have their wish in this respect,—it is neither wise, politic, nor expedient to place or leave in their path any unusual difficulties. They have, we may suppose, given up demanding to study medicine, surgery, and anatomy in the dissecting-rooms and the wards in company with male students; and we have now nothing more to say against their working out the experiment they are bent upon, except that we fear and believe that they are making a pitiable mistake.

The position is now this. The Legislaturo has enacted that any medical licensing body may admit candidates for its degrees, diplomas, or licences without having regard to sex. Some of the licensing bodies have already availed themselves of that enabling Act, and have declared that they are ready to admit female students to their examinations; and the London School of Medicine for Women has at last found a Hospital, with the requisite number of beds, which will, on and after October next, furnish female students with the necessary hospital practice and clinical instruction. The School is saved; and its students have now only to work honestly and well to obtain British qualifications, and admission to the Medical Register as fully qualified practitioners of medicine.

We can admire and sympathise with the energy and perseverance that have conquered this position for the would-be medical women. But we cannot honestly congratulate the women on their victory, for we still believe that it must lead to disappointment and disaster. Many women may very probably succeed in entering the ranks of the profession, and here and there no doubt one or two may obtain such success as will repay them, and justify their choice of the medical profession as a life-career. But for the great majority we can but fear that only disappointment and failure await them, either before or, still worse, after their mere student-days; and it is surely a melancholy thing to watch an experiment that we believe must in a very large proportion, if not in a vast majority of instances, end in wasted means, wasted years, wasted energy, and blighted hopes. The women, however, will not be content without trying such an experiment, and it seems to be decreed that they shall have their wish.

THE POWER OF TEACHING.

One who excels in any subject is not of necessity able to teach it well. This proposition holds good in all branches of study—certainly in our own. It will therefore be useful to consider in what this power of teaching consists.

The difference between the man who knows and the man who can teach, or (applying it to ourselves, and therefore putting it in a concrete form) a hospital physician who is admirable in research, but not in teaching, and a successful "grinder," is the same as that between the logically-thinking political philosopher, and the party leader in the House, or a popular agitator outside it; or between a scholarly theologian and a popular preacher. The first class resemble one another in this—that their work is done for those who are themselves educated; they do not seek or care for the judgment of those who have no knowledge of the subject of their labour. The second class are also alike, in that it is their function to impress what they want to teach upon the minds of those who know or care little about it. The one addresses the cultivated few; the other, the ignorant many. The first needs simply knowledge of his subject and the power of intelligible expression. The second requires different qualities, which we shall try to point out.

Supposing that in a crowd a person gets up and makes an important statement, on a subject of which the people hearing are entirely ignorant: they cannot judge of his accuracy, and therefore the attention with which he is listened to will depend entirely on the way in which he speaks. If he be a man of commanding presence, and loud confident tones, he will arrest attention at once. If, further, his statements are dogmatic, they will impress those whom qualified statements would only puzzle. If they are not uttered merely in succession, but are strung together upon some kind of framework, the outlines of this will support in the memory the particular items of what else would be forgotten. If, besides, they are interspersed with apposite and familiar illustrations, these will interest and retain those who otherwise would move away.

Now, in the person supposed to do this, we have a very successful teacher; for the greatness of a teacher's success is in proportion to the dulness of those whom he can induce to learn. The appreciation of him by the crowd is due not in the least to their knowledge, and very little to his. What he states may be altogether incorrect,—it will none the less be remembered for the time.

If we look for the reason of his success, we find that it depends partly on how he puts it, partly on how he says it; in other words, on the way in which he addresses the intellect, and on the way in which he addresses the feelings. By arrangement and by dogmatism—*i.e.*, by the exclusion of uncertainties—he simplifies his subject. By the orderly unfolding of its parts according to a plan, and by illustration, he makes it interesting. In this way he offers an intellectual meal appetising and easy of assimilation. But the way in which the thing is said is not less important. Every tone, gesture, look, and attitude conveys its message. A commanding presence and confident tones, combined with dogmatic statements, give the feeling, more strongly than words, that the speaker is sure of what he is talking about, and is determined to make others know it too. And his change of tone, as he illustrates his subject, tells that he sympathises with the difficulties of his audience, and wishes to remove them. It is in this way that the personality—*i.e.*, the state of feeling of the speaker—acts upon the personality of the hearers. The intellectual statement is associated with emotion,

vague, indeed, but powerful. The teacher not only asserts the fact, but the audience feel that he *wishes* and *wills* it to be remembered. The lower the intelligence of those who hear, the more important is this emotional accompaniment; for, as has often been said, most persons are moved more by feeling than by reason; and this is especially true in the uncultivated —those who most need help from some one else. It is this domination of a strong and ardent nature over a weak and apathetic one that is at the root of many so-called mesmeric phenomena.

These seem to us the chief notes of a great teacher. There may be others which our imperfect analysis has left out; but those we have mentioned must be obvious to anyone who thinks over this subject. Everyone, of course, cannot command them all in the same degree; but anyone who wishes to be a great teacher must possess some, and can do so if he will vigorously try. The teacher must be firmly persuaded in his own mind of what he is going to teach; if he hesitates and fluctuates, he will confuse students. He must teach methodically: a rambling dissertation is much harder to remember than one the parts of which are marked out from one another, even if by no better signposts than letters or numbers. And chief of all, he must have interest in his work and sympathy with the learner. And although the teacher may not possess the signs of physical strength so useful for the mob orator, yet interest and sympathy will give him a zeal which will be evident in his tones and in his looks, and by which he will carry his class with him. This enthusiasm is tho most important, for it is at once the teacher's motive power, his best instrument, and that which makes his toil a pleasure.

THE MECHANICAL TREATMENT OF RHEUMATIC FEVER.

An article by Dr. Franz Riegel, of Cologne (*Archiv für Klin. Medicin.*, Heft. v., s. 563-90), in which, *inter alia*, a *résumé* is given of all the chief therapeutic methods which have been proposed of late years for the cure of acute rheumatism (and their name is legion), is interesting for its advocacy of a method from which internal remedies are entirely excluded—namely, the fixation of the rheumatic joints by means of splints. This method was first recommended by Seutin and Gottschalk in 1845, and more recently Concati and Tamburini (*Rivista Clin. di Bologna*, 1872), and in Germany Heubner (*Archiv der Heilkunde*, 1871) and Oehme (*Archiv der Heilkunde*, 1873) have spoken strongly in its favour, as giving the best results of any treatment in acute rheumatism. Heubner's verdict was to the effect (1) that the pains were less severe than under any other system, (2) that the fever abated earlier, and (3) that the sweats were undoubtedly less annoying than under other kinds of treatment. Dr. Riegel's experience is founded on forty-one cases of acute rheumatism with multiple joint affection which he treated consecutively in the Municipal Hospital at Cologne. It should be specially remarked that the splints were only applied, as a rule, to those joints which were most swollen and most painful; the other joints were either simply wrapped in cotton-wool, or had some narcotic liniment applied to them. No medicine was given internally. The apparatus used consisted of pasteboard splints thickly lined with cotton-wool, and attached in the ordinary way by means of straps or bandages. Each joint had two pasteboard splints applied to it; those for the knee, for example, being thirty-six centimetres long, and about sixteen centimetres broad, with a piece cut out in the middle of both, so as to adapt them better to the form of the joint, the knee being kept in an extended position. Before application the pasteboard was always wetted, to make it fit better. Dr. Riegel lays the greatest stress on the lining of the splints with wadding, for the latter must always be used in *very thick layers*, so as to render the pressure as even as possible over the whole joint. As it was found very difficult to apply splints to the hip and shoulder joints, they were only thickly covered with wadding, and fixed as far as possible with bandages. The results of this treatment were, briefly, as follows:—1. The application of the splints immediately relieved even pains which were previously most agonising; and, as a rule, in all cases immediate relief was felt, and continued as long as the joint was bandaged. 2. It was found that the bandage must be allowed to remain on the joint, provided it is properly adapted, for several days after all pain has completely ceased; and, if possible, it should stay on until the patient's general state, as well as his temperature, have become normal. It is better to let it stay on too long than too short a time. Quite exceptionally Dr. Riegel has allowed it to remain fourteen days; on the average it remained six to seven days. 3. The effect of this treatment on the temperature was less favourable than on the pain; in scarcely any case in which the thermometer was used throughout the whole course of the disease (as it was in some cases every two hours, day and night) was a marked fall of the temperature observed as an immediate consequence of the application of the splints; but, as a rule, unless there were complications or sudden relapses, the temperature gradually fell from the moment the apparatus was applied, and continued to do so until it became completely normal. 4. The fixation of the joints appeared to have no influence in preventing or modifying cardiac complications. In several cases the latter supervened while the joints were fixed, and after all pain had ceased. 5. The diminution of perspiration was not specially remarkable, though it seemed occasionally that the treatment exerted some slight influence over it.

It is scarcely fair to criticise a plan of treatment like the above without having had an opportunity of personally observing its various merits and demerits, but it seems *à priori* rather a cumbrous one for hospital uses, considering that it scarcely accomplishes much more than to relieve the patient's pains. We should like to know whether the application of the splints is not rather a painful operation, even though the after-effects are so comforting. We are not sure that some patients would not resent much handling of their joints in a very outspoken manner, especially in private practice. Where opium, however, is contra-indicated, and pain is severe, the fixation system may well receive a trial.

THE WEEK.

TOPICS OF THE DAY.

A paper containing matter of more than common-place interest was last week read before the Statistical Society by Captain P. G. Craigie, Secretary of the Local Taxation Committee, the subject being "The Cost of English Local Government." Captain Craigie first inquired as to the means at our disposal for getting information of the country's aggregate local expenditure, with hints how that knowledge might be bettered, alike in quantity and quality; and next proceeded to bring under review the distribution of the cost of local government, and the varied authorities responsible for its administration; and finally invited the opinion of the Society as to the best means by which the existing heavy cost of local government might be reduced by a simplification of local administrative bodies, a better distribution of their functions, and by a sounder system of local finance. It was matter for grave complaint that the data at present available fell far short of what we had a right to look for. This was in a great measure owing to the want of regularity and uniformity in the intervals covered by the accounts of the various authorities. Moreover, in consequence of the system of "precept rates" and contributions paid by one local authority to another, there

are no means of tracing those payments in cases in which the reckonings are by different financial years. More than £5,000,000, or about 23 per cent., of the rates raised are levied under precept, and pass through the accounts of two, or even three, separate local authorities. Hence the advantage of uniformity as to the financial year, and as to the mode of keeping the accounts. Captain Craigie sharply criticised the perverse ingenuity of complication in the local machinery employed, as exemplified in the four authorities to be found side by side everywhere—viz., the Poor-law, County or Municipal, Sanitary, and Highway authorities. In addition to this general want of system there were also exceptional areas, boards, and authorities, not called into existence for general purposes and in all places alike, but created to meet special local wants. All this chaos should be brought into order by a simplification of the local machinery, devolving on district and county authorities, as circumstances call for the change, the several local functions.

Further evidence has been taken by the Select Committee appointed to inquire into the state of the Lunacy Laws. Mr. Perceval, Secretary to the Lunacy Commissioners, stated that he was unable to point to a case on record of a person having been improperly sent to an asylum. He did not even think the case of Mrs. Petschler was an exception. He thought it was very improbable a person could be confined in an asylum out of spite, and believed that there were more persons in workhouses who ought to be in asylums, than persons who ought to be liberated from asylums. Dr. Lockhart Robertson, one of the Lord Chancellor's Visitors, stated that he thought it would be advisable for the Lunacy Commissioners to have two or three asylums of their own for the use of their patients; also to allow doctors to keep two or three patients in their private houses. He did not think it necessary for a doctor to have given a special study to lunacy to receive patients in his house, but if he were a good physician he thought it would be sufficient. Further, he did not consider that more abuses would arise in consequence of patients residing in private houses than occurred at present in private asylums. The reports of the Visitors to the Lord Chancellor were private, and were destroyed directly after the death of a patient. The Visitors were unable to enforce their recommendations upon the keepers of asylums; consequently a patient might be kept in an asylum in spite of the recommendations of the Visitors. In conclusion, Dr. Robertson expressed himself of opinion that the condition of lunatics was improving, but he was not yet satisfied with it. He considered that more than one-third of the lunatics now in private asylums might safely be out of them.

At the usual meeting of the Metropolitan Board of Works, held on the 23rd inst., amongst other business the Building Act Committee submitted the draft of a Bill to amend the Metropolis Management Act, 1855, the Metropolitan Building Act, 1855, and the Acts amending the same respectively, with reference to houses and buildings. It was explained that one of the objects of the Bill was to prevent the formation of roads for carriage traffic of a less width than forty feet. Another, and more important point, was to prevent houses from being constructed on rubbish. Some builders were in the habit of digging out gravel, and filling up the foundations with rubbish of the most objectionable description, and then erecting houses upon it. By-laws under the Bill would be framed, under which houses could not be erected on foundations not approved by the district surveyor. Instances had occurred of houses falling down, it was supposed from the use of improper materials. Clauses would be inserted in the Bill, giving the Board power to regulate the use of materials. It was agreed that the Bill should be referred to the Works Committee to seek an interview with the Home Secretary to introduce the Bill as a public one.

At the meeting of the St. George's (Hanover-square) Union Board of Guardians, held last week, a letter was read from the Home Office, forwarding a copy of Dr. Ballard's second report on the Carlisle-place Orphanage, sent to them by the Local Government Board. The report was read, and was as follows:—"I have visited the Carlisle-place Convent to-day (February 22), and reports as follows:—1. My suggestions, both as to the diet of the infants and as to the abstention from receiving fresh cases into the establishment, were carried into effect. 2. The Superioress states that the alteration of food that I suggested did not agree with the infants, and that it had been found necessary to recur to the diet of milk with an occasional addition of lime-water. Of the four infants in the nursery at the time of my first visit, the two youngest are dead, the other two are living. These infants are reported to be partially fed with rolls and biscuits, and it is said to agree with them. They are very puny infants, but with great care may, perhaps, be reared. Notwithstanding that the window of the nursery has been just open, my senses were again impressed with the unwholesome condition of the atmosphere of the apartment." Dr. Ballard added that the admission-book had not been kept in an orderly manner, but from that circumstance he accounted for some of the discrepancies found to exist in the lists originally given to him by the authorities of the Orphanage, and to the Guardians by the Superintendent Registrar. We may now fairly hope to have heard the last of this matter. The St. George's Guardians were quite right to ventilate the subject in the first place,—and much good has, no doubt, resulted from their action,—but further interference would assume the appearance of persecution; and this, for several reasons, should be carefully avoided.

It is stated that a very desirable improvement will shortly be made in the vicinity of the new Law Courts, by the formation of a new street connecting Fetter-lane with Chancery-lane. The Commissioners of Sewers have purchased the block of buildings on the south side of Fetter-lane, formerly the old workhouse of St. Dunstan's, and lately occupied by Messrs. Rayner and Hodges, printers; and also other property in the rear, belonging to the Ecclesiastical Commissioners. Part of the old burying-ground of St. Dunstan's will be required for this improvement, and the dilapidated tenements in Lee's buildings, Church-passage, Rolls-buildings, etc., are at last to be cleared. These latter buildings have long been an eyesore to the neighbourhood, and as they are quite unfit for human dwellings their removal for the new street will afford universal satisfaction.

At the meeting of the Managers of the Metropolitan Asylums Board held last Saturday, it was reported that it had been arranged to transfer to the Fulham Convalescent Hospital, as soon as possible, all the patients in Limehouse Hospital, with the view of closing the latter establishment.

Last week the public inspection of the new Middlesex County Lunatic Asylum on Banstead Downs, Surrey, took place in the presence of a large number of gentlemen interested in the institution. This Asylum will be the third established for the county of Middlesex, exclusive of the institutions built by the Metropolitan Asylum Board. It is intended for chronic and quiet lunatics, and the idea upon which it was founded is thus in accordance with the report of the Charity Organisation Society's Committee on the separation of harmless lunatics from violent patients. The position of the new Asylum is a very commanding one, and the building and grounds cover an area of 100 acres, the cost of the land and of construction amounting to between £200,000 and £300,000. The building is four storeys high, and is constructed on the pavilion principle. The wards and dormitories at present afford accommodation for 615 male and 1081 female patients, but with the extensions contemplated some 2000 in all will

subsequently be housed here. About 800 patients are ready to come in at once, and these will be drafted in at the rate of about 100 each week, commencing next week. It was explained that in choosing the site it had been necessary to find land which would dispose of the sewage of the Asylum, and this land would do so admirably. There are three miles and a half of drain-pipes, and the farm will be irrigated with the sewage. Dr. Shaw, formerly the skilful superintendent and organiser of Leavesden Asylum, is the Medical Superintendent. Dr. Lawson, formerly with Dr. Crichton Browne at Wakefield, assists him.

A Bill has been printed which has been introduced by Mr. Holt, Mr. Hardcastle, and Mr. C. H. Wilson, to make more effectual provision for the prevention of cruelty to animals. It proposes to enact "that it shall not be lawful to perform any experiment causing, or being in itself of a nature to cause, pain or disease in any vertebrate animal, except for the purpose of alleviating or curing any disease from which such animal is suffering; and any person, except as aforesaid, performing or taking part in any such experiment, or permitting such experiment to be performed upon any premises over which he has control, shall be deemed guilty of an offence against this Act." Infirmaries for animals or physiological laboratories are to be registered and subject to inspection; and the Bill provides that premises may be entered by warrant of a justice of the peace, if there is reasonable ground to believe that an offence against the Act has been, or is about to be, committed. The Bill also proposes the repeal of the Vivisection Act of last session.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

The first, and most important, business at the meeting of the Royal College of Physicians, on Monday last, was the election of a President, the appointment being an annual one, though the retiring President may always be re-elected; and on this occasion the unanimous choice of the College placed Dr. Risdon Bennett again in the office he had well filled during the past year. Before resigning office the President had, as has now for some years been the custom, addressed to the Fellows a short review of the history of the College during the previous twelve months; and to this he added, after the manner of the President of the Royal Medical and Chirurgical Society, a brief record of the life and works of each of the six Fellows of the College whose names had been removed from the Roll by death during his Presidency. On the proposal of Sir Thomas Watson, the College, in thanking the President, requested that he would allow the address to be printed. Dr. Bennett was able to congratulato the Fellows on the very prosperous state of the College. Its financial position is very satisfactory; twelve new Fellows had been elected during the year, twenty new Members, and 101 Licentiates; and the Roll of the College, including all its orders, is now, we believe, 1855 strong. The address touched, of course, on many topics, and, among others, on the familiar one of the English Conjoint Board Scheme. Of this subject, however, we believe, the President did not speak with any enthusiasm or much hopefulness, but rather as one who wondered that a Schemo that had been so often scotched, had not been killed, but is still able to "drag its slow length along." A communication, not containing any new or very important information, was received from the Colonial Office on the subject of leprosy, and was referred to the Leprosy Committee. A report was also received from that Committee, chiefly on the value of the segregation of lepers, as shown by the statistics of the leper hospitals in Norway; but as the system of segregation in those hospitals is purely voluntary, the Committee does not, we believe, attach any great value to the result. The report was ordered to be sent to the Colonial and the India Offices, and he Committee was reappointed for a year. A report was received also from the Roll Committee, stating that an agreement has been drawn out between the Collego and Dr. Munk, the learned editor of the former edition of the Roll. Dr. Munk is to prepare and edit the new edition, in three volumes, bringing the Roll of the Fellows down to the year 1824, and sell the copyright to the College for the sum of 500 guineas,—a small enough honorarium, seeing that although the new volume is already nearly complete, it will be about two years before the work is out. The College will print and publish the edition at a total cost of about 1000 guineas, and the Fellows will have the right of obtaining it at cost price. The following new by-law was enacted for the first time:—"Any candidate for the College licence who shall have obtained a degree in medicine or surgery at either a British, colonial, or foreign university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on such subjects as the Censors' Board shall in each case consider unnecessary." The by-law was not accepted, we believe, without opposition, on various grounds; and it is not improbable that that opposition will be renewed when the by-law comes before the College for the second time.

ROYAL COLLEGE OF SURGEONS, ENGLAND.

At the extraordinary meeting of the Council of the Royal College of Surgeons held on the 22nd inst., the memorial of the Fellows against the proposed changes in the rules and regulations relating to the education and examination of candidates for the diploma of Fellow of the College was taken into consideration, and it was resolved that Section 6 of the new scheme should be annulled. This section referred, it will be remembered, to "candidates Members of the College of not less than ten years' standing"; and the memorial of the Fellows regarded this section only. But unless a further alteration should be made, the new regulations for "candidates Members of the College of less than ten years' standing" will remain; and by these all the additional requirements, preliminary and professional, beyond those for the Membership are given up, the candidate being called upon only to produco satisfactory evidence of having attained the age of twenty-five years, and of having been engaged not less than six years in the study (or study and practice) of his profession. This may or may not be wise; but it is to be observed that as all additions to the curriculum are thus given up, the plan is really an adoption of the free-trade-in-education principle so far as the Fellowship is concerned. The examination takes a wider range of subjects, and is deeper and higher than that for the Membership, but the education for it may have been obtained where and how the candidate likes. We believe, however, that this part of the plan will be again brought before the Council.

At the same meeting, also, the alterations proposed by tho Syndicate of the University of Cambridge in the Amended Scheme for a Conjoint Examining Board for England were considered; and it was decided to accept the proposed changes in Section 6, so as to provide that "two representatives" instead of "one representative of medicine and one representative of surgery," shall be appointed by each of the universities in England; and to modify Clause 2, Section 8, by omitting the words "not less than," the effect being that the Committee of Reference will have, in nominating examiners, to nominate always double, instead of "not less than twice," the number to be appointed. But the Council unanimously rejected the proposed new section, which was to provido that the Scheme should cease to exist at the end of ten years, though it might then be renewed. We have already, at page 264 of our current volume, expressed our opinion of the extreme unwisdom of ushering the Scheme into the world with necessary death writ large on its features, and we should have been greatly surprised if the College of Surgeons had accepted such

an alteration in it. The Council of the College expressed a hope that the University of Cambridge would consent to reconsider their proposals; and as it is rumoured to be more than probable that the proposed new section will be rejected also by the other universities, by the College of Physicians, and by the Society of Apothecaries, we should think that that part of the Cambridge proposal will be withdrawn.

On Tuesday, the 27th inst., a meeting of the Council of the College was held, at which Dr. G. Murray Humphry, F.R.C.S., of Cambridge, was elected a member of the Court of Examiners, in place of Mr. H. Spencer Smith, whose term of office had expired. And afterwards the Council considered whether Mr. Russell Gurney's permissive Act of last session should be made use of, and female candidates be admitted to the examinations for the Membership and Fellowship; but, looking at the position of the Conjoint Board Scheme, and the possibility of its speedy establishment, it was considered not desirable that the College should avail itself of the Act at present. The Council also decided, we believe, against taking any steps, under existing circumstances, with regard to the midwifery licence of the College.

THE ST. GILES'S DISTRICT AND THE ARTISANS' DWELLINGS ACTS.

ANOTHER inquiry has just been held by Mr. D. Cubitt Nicholls under the Artisans' Dwellings Acts, at the office of the Board of Works of the St. Giles's District, the subject being the Great Wild-street scheme of the Metropolitan Board. It is proposed to remove a block of houses in St. Giles's on the right of Drury-lane, close to Long-acre and Great Queen-street, which form a triangle of about one acre and a third, having Great Wild-street and Drury-lane for two of its sides, and Princes-street for its base. Upon the thicker part of the wedge of land now dealt with, new workmen's dwellings, six storeys high, will be erected, if the scheme is confirmed by the Home Secretary. The official representative of Dr. Lovett, the Medical Officer, upon whose suggestion the scheme is framed, describes the area as "a plot of ground which has been for long notorious for its unhealthiness and heavy death-rate, it being the constant abode of zymotic diseases in their most contagious form." The police authorities at Bow-street informed Dr. Lovett that the character of the dwellers in the locality was very bad; that the wooden covers to the dustbins were removed for fuel, and the water-cocks broken off and sold. He included a larger area (one containing 3897 inhabitants) in his representation than that now dealt with, but although the Metropolitan Board had left half out of their scheme, the District Board of Works did not on that account oppose; they expressed by their counsel their gratitude for an instalment, and their desire for further improvement. Some objections of no weight were heard, and Dr. Lovett was examined at some length in support of his reasons for condemning the area in question. Sir J. Bazalgette explained the proposed improvements, and said that although in the new buildings the lower rooms would suffer a little from a want of sun, the worst would be much better than the best of those now standing. Mr. Goddard, valuer to the Board, said the district as it stood was a source of plague to the neighbourhood, and, in cross-examination, deposed that the ground landlord of the greater part of the property was Colonel Stuart, a descendant of the Pretender. At the termination of the inquiry, Mr. Nicholls announced his intention of reporting to the Home Secretary.

THE METROPOLITAN WATER-SUPPLY FOR FEBRUARY LAST.

IT is satisfactory to learn from the official report on the water-supply of the metropolis for the month of February last that the water taken from the Thames and Lea during that period, and delivered by the Chelsea, West Middlesex, Southwark and Vauxhall, Grand Junction, Lambeth, New River, and East London Companies, has undergone great improvement since January, and that it was all efficiently filtered, except that supplied by the Southwark Company, which was slightly turbid and contained moving organisms. The water supplied from artesian wells to the inner circle by the Kent Company, and to the outer circle by the Colne Valley Water Company and the Tottenham Local Board of Health, was wholesome, bright, and palatable, and of most excellent quality for dietetic purposes. The water in the River Thames at Hampton, Molesey, and Sunbury, where the in-takes of several of the companies are situated, was turbid and coloured during the whole of the month of February; and the Water Examiner points out that the population of the country through which the Thames and Lea flow is reported to be rapidly increasing in density, thereby tending to establish centres of pollution for the metropolitan water-supply drawn from these sources. The directors of the East London Company have decided upon making a considerable extension of their works, with a view to give an increased supply to Buckhurst-hill and the adjoining districts. These works have already been commenced, and consist of a covered reservoir, new engine, and larger mains, which will be completed by the time the hot weather sets in. The water delivered by the Kent Company and by the Tottenham Local Board was hard, and therefore unsuitable for washing; but that supplied by the Colne Valley Company was softened by Clarke's process before delivery, whereby its hardness was reduced to less than one-fifth of the original amount, and the total solid matters from 38 to 12 parts in 100,000 parts of water. In this way the water was rendered suitable for washing.

SMALL-POX IN LONDON.

THE deaths from small-pox in London again declined last week, having been 76 only, while in the three previous weeks they had numbered 84, 96, and 100. Of the 76, 33 were certified as unvaccinated, 19 as vaccinated, and 24 were not stated as to vaccination. Nearly half the deaths from small-pox—namely, 34 of the 76—occurred in private dwellings; the remaining 42 in small-pox hospitals. The fatal cases showed a marked decline both in West and South London. The disease continues most fatal in East London, especially in Bow, where 7 of the 11 fatal cases occurred in private houses; six of the seven were of children "not stated" as to vaccination, the medical certificates in four cases being furnished by the same practitioner. The Metropolitan Asylum District Hospitals contained 959 small-pox patients on Saturday last, including 150 convalescents at Fulham and Limehouse, against numbers increasing steadily from 898 to 952 at the end of the four previous weeks. The new Metropolitan Asylum District Hospital at Deptford was brought into use during the week, and contained 58 small-pox patients on Saturday night.

Bronchitis and pneumonia have during the last four weeks, since the night temperature fell below the freezing point, been the prevailing fatal diseases. The deaths referred to diseases of the respiratory organs, which in the four previous weeks had increased from 303 to 498, further rose last week to 575, and exceeded the corrected average by 164.

THE SANITARY CONDITION OF THE NEW FOREIGN OFFICE.

THE report of the Special Committee that lately examined into the sanitary condition of the War Office, stated, among other things, "the ventilation of the rooms, however, is most defective; there is no possibility in the majority of the rooms of obtaining any movement of the air. In the most lofty rooms the windows are so far below the level of the ceilings that a chamber of air, foul and stationary, remains, without the possibility at present of clearing it; there is hardly a room with any cross ventilation in it." We fear, however, that the *employés* in that office cannot look with much hope for any better state of things in the new office that is, some day, to be

built for them, for our contemporary, the *Sanitary Record*, says that the report of their Commissioner on the new Foreign Offices showed that the paragraphs quoted above "not inaptly describe the condition of the majority of the rooms occupied by the staff at the offices in Whitehall." The new Foreign Office was very recently erected at an immense cost, and that it should have been built with such a wanton disregard of the simplest requirements of sanitary science is most discouraging and disgraceful. The questions arise, Who is to blame? and What guarantee have the nation that other new Government offices will not be built with like wasteful and injurious defects? It is surely not too much to hope that these questions will be asked in the House of Commons.

TREATMENT OF CATARRHAL JAUNDICE.

Dr. Krull, of Güstrow, Mecklenburg (*Berlin. Klin. Wochenschrift*, No. 12, 1877), recommends enemata of cold water as an excellent remedy in the above disease. One to two litres of water at a temperature of 59° Fahr., which may be gradually increased to 72° Fahr., are to be slowly injected into the rectum by means of an irrigator once a day. The patient is to retain the water as long as possible. The first effect of this treatment is the rapid disappearance of oppression in the epigastrium, as well as of nausea and headache; the appetite also quickly returns. In half of the cases thus treated (eleven in all) the fæces were tinged with bile after the second injection; and in the cases of longest duration, in one of which the disease had existed for more than a year, their normal colour returned not later than the fourth day. The largest number of injections used in any one case was seven. Most of the patients had previously been treated unsuccessfully by the ordinary methods. Dr. Krull explains his results on the supposition that the cold water not only increases the peristaltic action of the bowel, but also excites sufficient contraction of the bile-ducts to enable them to overcome the obstacle due to catarrhal swelling or inspissated mucus at the entrance to the duodenum.

A NEW CONJOINT EXAMINATION SCHEME FOR IRELAND (LIMITED).

A proposal, emanating some weeks ago from the Royal College of Surgeons, Ireland, has been acted on by the King and Queen's College of Physicians, who have appointed some of the Fellows to serve on a Joint Committee of the two Colleges, to consider the feasibility of establishing a combined examination for a double qualification in medicine and surgery. The Committee met for the first time last week, but of course no report has as yet been brought up to the Colleges. The process of elimination, as regards the Conjoint Scheme for Ireland, has now reached its utmost limit—two only of the five Irish licensing bodies taking part in the present movement, from which the University of Dublin is excluded, although it was one of the consulting bodies in the last scheme.

MEDICAL PARLIAMENTARY AFFAIRS.

The Conjoint Scheme.—An allusion having been made to the delay in carrying out what is now called "the Conjoint Scheme," Lord Sandon informed the House of Commons that a conference of all the medical licensing bodies in the kingdom had been held in London, with a view to form one Examining Board for England, under Clause 19 of the Medical Act. Certain conditions had been agreed to by the representatives of the universities and colleges concerned, but they await the consideration and consent of the bodies themselves. It is hoped that this consent will shortly be obtained. The proposal to create a united Examining Board for Ireland has hitherto failed, and it is not in contemplation to form a general Board for Scotland. Lord Sandon declined to express any opinion on the part of the Government as to the necessity for undertaking the reform of the whole system of licensing for medical degrees.

University of Edinburgh.—The Parliamentary grant which would be proposed in aid of local subscriptions for erecting new and enlarged class-rooms for medical students at this University was not intended by her Majesty's Government, the Lord Advocate assured Mr. McLaren, to provide for the teaching of female medical students separately from males. The addition was planned, and had been carried out, by the authorities of the University itself, on the strength of local subscriptions obtained long before any application was made to the Government for extraneous aid. He could not say whether it was expedient to provide accommodation for female medical students, as also whether the Commission now sitting in Edinburgh should be requested to consider that question.

Cattle Plague.—It is proposed to move, shortly after Easter, for a Select Committee to inquire into the subject of the importation of cattle.

Vaccination.—Mr. Sclater-Booth stated that the lymph at present sent out by the National Vaccine Establishment is not of artificial production by inoculation of the cow with the virus of small-pox. The lymph distributed is either from Jenner's source, or is derived from the natural disease in the cow called cow-pox. The securities for the perfect condition of the lymph distributed by the Establishment are—first, the careful choice of vaccinators to collect the lymph; secondly, inspection of stations from which the lymph is derived; and thirdly, the independent microscopical examination, without which no lymph is ever sent out.

Drainage and Water-Supply.—The Duke of Richmond, referring to the measure passed last year for preventing the Pollution of Rivers, said that several clauses of that Bill had been struck out, it being thought better to deal with them at a future time. He now proposed to incorporate them in a measure for regulating the navigation, and for checking, as far as possible, the overflow of rivers at the time of excessive rainfall. It seemed natural, he said, that at the same time as the prevention of floods was under consideration, attention should be called to the storage of water for drinking purposes. The Rivers Pollution Commission had recommended that in any scheme for the supply of pure water to a town the wants of all neighbouring villages and hamlets should be provided for as far as practicable, and that the owners of land should be permitted to include the cost of village water-supply among the expenditure on land improvement upon their estates. A motion for the appointment of a Select Committee was agreed to.

THE STARVATION CASE AT BISHOPWEARMOUTH, SUNDERLAND, AND MR. H. H. TAYLOR.

The following testimonial has been forwarded to the Local Government Board by the medical profession practising at Sunderland:—

"Sunderland, March 15, 1877.

"We, the undersigned, medical and surgical practitioners, do hereby cordially bear our testimony to the excellent professional character of Mr. Henry Hylton Taylor during a long life of industry and usefulness in his profession. We have never known him to have been found wanting in sympathy and humane care for the sick and suffering, and we are of opinion that the severe censure recently passed on him by Lord Coleridge at the Durham Assizes was wholly undeserved; and moreover, we believe that when the facts of the case shall be impartially considered, Mr. Taylor will be acquitted of all blame.

"James Smith, surgeon, etc.; John Horan, L.R.C.P. Edin., and surgeon; George Brady, M.D., F.L.S.; Edwin Allen Maling, M.R.C.S., etc.; George Belford, M.R.C.S., etc.; James Wilson, M.R.C.S., etc.; Henry O. Bowman, M.D.; Robert Ayre Smith, M.D., etc.; George Bollin, L.R.C.P. Edin., and surgeon; George Edward Belford, M.D.; James Waterston, L.R.C.S.; Matthew Francis, M.R.C.S., etc.; Edward Pilkington, M.R.C.S., etc.; James Barrow, M.R.C.S., etc.; Frank Lang, M.R.C.S.; Charles Natrass, M.D.; John Potts, M.R.C.S., etc.; Geo. B. Morgan, L.R.C.S. Ireland; Samuel Willans, surgeon; John Davis, M.R.C.S., etc.; Luke Blummer, M.D.; James Murphy, M.B.; John Parker; Percy Blunt, surgeon; Frederick Rawsom, M.D.; William O. Lambert, M.D., L.R.C.P. Lond.; Robert Geo. Gammage, M.R.C.S.; George Atkinson, L.S.A.; Charles N. Foote, M.D.; George Berwick, M.D.; John Evans, M.B., M.R.C.S. Eng.; William Henry Dixon, M.D.; Charles H. Hines, M.R.C.S.; Charles Nursey, L.R.C.P. Edin."

In addition thereto, a testimonial has been forwarded to the

Sunderland Board of Guardians, signed by upwards of 100 poor persons resident in the immediate neighbourhood of the starvation case, in favour of Mr. Taylor.

The clergy of the locality where Mr. Taylor has lived for some thirty odd years have also signed a testimonial in his favour.

[As the Judge who tried this case, the Lord Chief Justice Coleridge, expressed an intention of writing to the Local Government Board, we shall reserve all remarks on it till we have learnt the nature of his communication, and the decision of the Board on it.—Ed. *Med. Times and Gaz.*]

FROM ABROAD.

Mortality Returns of the Paris Hospitals.

In his Report on the Prevalent Diseases in the Paris Hospitals for the last quarter of 1876 (*Union Médicale*, January 27 to February 10), Dr. E. Besnier observes that the mean temperature of the quarter (8·8° C.) was 1·4° C. superior to the mean temperature of that quarter for the four preceding years, and 1·8° superior to the mean temperature of the quarter during seventy-four years. In December the mean temperature was 7° C.—a figure only surpassed five times in these seventy-four years. During the quarter the affections of the respiratory organs were not less frequent nor less severe than usual. Diphtheria was more frequent and destructive than it had been at the same epoch of former years; and typhoid fever diminished in frequency and severity. The *general mortality of the quarter* scarcely exceeded that of the four former years, notwithstanding the existence of the epidemic of typhoid. That, however, of the *year* 1876 notably increased as compared with that of the years 1872-75.

1. *Affections of the Respiratory Organs.*—Notwithstanding the favourable character of the atmospheric conditions, the deaths from these are in excess of the mean of preceding years. The slighter affections of these organs were certainly fewer than usual; but those of severity enough to bring patients to the hospitals have not been thus favourably influenced.

2. *Diphtheria.*—This disease, both in frequency and severity, is incessantly on the increase in the Paris hospitals, having risen for the last quarter of the year 1869 from 81 cases with 53 deaths (or 65·43 per cent.), to 220 cases with 169 deaths (or 76·81 per cent.) in 1876. M. Bergeron, of the St. Eugénie Hospital, deplores the delays in providing for the long-called-for isolation of diphtheritic patients, for want of which so many children contract the disease in the wards themselves.

3. *Variola.*—During 1876 this continued to increase slowly and gradually, subject to exacerbations and remissions, according to the season, but still on the whole increasing. This, by careful study of former epidemics, Dr. Besnier has ascertained to be a law of the progress of epidemics of small-pox. He says—"Variola, in fact, does not become developed in the course of years without submitting to certain laws, which it is not possible as yet to definitively formularise, but of which one may form an idea that is very probably exact, by observing that an epidemic of variola, properly so-called, only passes through the complete series of its phases in a more or less long succession of years. So that, after having attained the extreme lower limit of its course, it resumes an ascending progress, which becomes slowly but certainly continuous from year to year, interrupted though it be by the normal remissions which correspond to the summer season, and by the regular winter exacerbations, which each year exceed those of the preceding years. In 1872 I demonstrated the rapid decrease of variola and the excessive attenuation of its contagious power; and in 1873 I was enabled to determine exactly the most extraordinary diminution this malady has ever undergone, since in that year in the whole of Paris only 17 deaths from small-pox took place, 1 only of which occurred in a hospital—the mean annual number of deaths from variola for Paris, calculated from 1810, being 400. With 1874, however, commenced a new multiannual epidemic, which, from its commencement, I was enabled to declare was not a mere exacerbation, but a new epidemic, by establishing from precise data the return of *contagious power*, which for a short period had become extinct—a power, the variations of which dominate the history of epidemic diseases." In 1872 there were in the Paris hospitals during this quarter 12 cases with no deaths; in 1873, 2 cases with no deaths; in 1874, 27 cases with 6 deaths; in 1875, 76 cases with 24 deaths; and in 1876, 141 cases with 26 deaths.

4. *Typhoid Fever.*—The variations in the number and fatality of cases of typhoid according to season, and even during epidemics, are exhibited in a table, showing the deaths distributed in months for the years 1867-76. A knowledge of the fact of the law (though not of its nature) which governs these seasonal changes enables a prediction being accurately made as to when a decline or an exacerbation of an epidemic will take place. As regards the present epidemic that prevails in Paris, after undergoing an exceptionally severe exacerbation in July, as usual, it attained its maximum in November, having in the interim diminished in violence in September and October. Thus, there were 84 deaths in July, 305 in August, 265 in September, and 551 in November. From this period the epidemic, notwithstanding its intensity, was submitted to the seasonal law of decrease, and in December the deaths suddenly descended to 253. This is the ordinary course of the disease in Paris—the disease declines rapidly at first in winter, and then more slowly, the lowest point not being reached until the spring. The tabular view of the years 1867-76 (omitting 1870-71 on account of the war) exhibits the operation of this seasonal law under the different amounts of prevalence of the disease, which is always more or less permanent in Paris. In 1876 there were 3158 cases admitted to the hospitals, of which 759 proved fatal. In the eight years embraced by the table there were 13,181 admissions, with 2839 deaths, or 21 per cent. Upon these figures, M. Besnier observes that in the hospitals no cases are termed typhoid fever which do not absolutely deserve that name, and that care must be taken not to infer from this hospital mortality, derived from the gravest cases, that such percentage applies to Paris in general, which may be approximately stated at from 12 to 16 per cent. During the last six months of 1876, which correspond exactly to the duration of the epidemic properly so called, the *total of the deaths* in the hospital and civil population of Paris amounted to 1645—an amount of mortality nearly three times greater than the mean mortality of the disease for this six months, which oscillates between 500 and 600. The number of cases furnishing the 1645 deaths may be pretty accurately assumed to be between 8000 and 9000, or 1 in 200 inhabitants. The exceptional frequency and gravity of this epidemic in the hospitals in 1876 is exhibited by a table which shows that while in 1876 there were admitted 3158 cases, with a mortality of 866, or 27·73 per cent., the mean admissions during the seven preceding years were 1432, with 310 deaths, or 21·64 per cent.

Comparing the exceptional severity of the epidemic in Paris with what occurred at the same period of 1876 in other parts of France and of Europe, Dr. Besnier finds that different countries, different regions of the same country, and different towns in the same region, have exhibited a manifest inequality with respect to the intensity of typhoid. In a great number of countries or towns it was below the mean of the corresponding period of the year, while in some it exceeded this; but nowhere did it attain the relative degree of intensity which it reached in Paris.

Influence of Sex.—Most writers on this disease have observed that the influence of sex is not very evident in epidemics of typhoid, any predominance among men being due to the peculiarity of the circumstances in which they are placed. In the present epidemic the proportions have been 51·66 per cent. for male, and 48·34 for female deaths, which were the same also for the years 1872-74. But if, instead of considering the number of *deaths*, we turn to that of the *cases* of the disease, we find this equality of the sexes is only apparent. Thus, among 5766 cases observed in the hospitals in the years 1866-69, there were 3900 (66·65) men, and but 1876 (33·35) women; and of 742 children treated during the same period, 395 (53·23) were boys, and 347 (46·77) girls. In the present epidemic the females have furnished more cases than usual, without, however, disturbing the proportion. Thus, there were 1378 (59·52) men treated, against 937 (40·48) women, and 228 (53·41) boys, against 197 (46·59) girls. The *mortality* from typhoid in Paris during the four years 1866-69 was 20·05 for men, and 24·14 for women; that for boys 14·43, and for girls 18·73. The present epidemic, of exceptional gravity, has furnished a mortality of 24·38 for men, 27·85 for women,

10·95 for boys, and 20·30 for girls. Thus, when speaking of the influence of *sex* on the development and termination of typhoid, we should express ourselves as follows:—"Typhoid fever attacks a notably larger *number* of men than women, of boys than girls; but the relative *mortality* being greater in women than in men, in girls than in boys, the actual tribute paid by the two sexes to the disease becomes, in reality, nearly equal."

Influence of Occupations.—From the table furnished by Dr. Besnier it results that among the 2315 hospital patients the first rank in point of numbers is occupied by *domestic servants*, who furnish 426 cases—128 male and 298 female. Before attributing any direct influence to their occupation, we have to take into account the age of these patients, their non-Parisian origin, and the haste with which their employers send them off to the hospitals, and, above all, the great increase in their numbers, especially of female servants. In 1872 the numbers returned (and certainly below the reality) were 112,021, of whom only 28,331 were males, and 83,690 females—*i.e.*, nearly 75 per cent. In 1831 there were only 50,117 servants, the females being then about double in number to the males. Next come *day labourers*—245 in number, consisting of 126 men and 119 women—the most unfortunate class, composed of the refuse of other occupations. Another category which is also very numerous and very unfortunate is *needlewomen*, 212 in number; and then comes an irregular, very multiform group, containing abundance of *déclassés*, and which, put down as at 146, is designated in the return as *teachers*, *writers* (or pen-workers), and *artists*. All other groups are less than 100 in number, and need not occupy us; but one singular item in the return consists of 16 *pharmaceutical students*.

Contagion and Transmissibility.—How slight the contagious property is may be seen by the absence of the disease in medical students, and only eleven cases having occurred among nurses. Of course medical students are liable to the disease like the rest of the population, but their constant intercourse with these patients shows that their suffering from it is quite exceptional. M. Archambault also states that at the Hôpital des Enfants no instance of personal transmission was observed, although cases of typhoid often occupied more than a third of the beds, while truly contagious diseases multiply there with deplorable facility. That it may be occasionally transmitted is possible, but certainly not in the way that small-pox and measles are; and much has yet to be done to explain the propagation of the disease. "These are questions it is wrong to attempt to completely solve at the present time, and concerning which there is no cause to introduce any revolution in the general ideas of the profession. Everyone knows that the disease *may* become contagious, and that the dejections of a patient suffering from the disease are a *probable* cause of the transmission of the disease to persons in health; but they also know for certain that the *real*, habitual, common origin of the disease in the great number of cases is far less immediate and more obscure, and in numerous instances absolutely unexplained and inexplicable."

Influence of Locality.—This part of Dr. Besnier's returns is very elaborately worked out; as he furnishes the amounts of mortality as observed in the twenty arrondissements and in the eighty *quartiers* of these arrondissements, and as influenced by altitude, situation, and density of population. "This detailed investigation of the present epidemic of typhoid in its relations to the soil, population, etc., is a difficult and complex study, but it is indispensable. This patient and minute analysis, conducted on precise and authentic numerical data, is as necessary for the progress of the science and prophylaxis of epidemic diseases, as minute anatomical study and improved clinical analysis are necessary for the progress of pathology and therapeutics. It is with the view of furnishing investigators, and all those who are interested in these useful questions, with the precise data, that have hitherto been wanting, that I have devoted myself to the task, laborious as it is for one engaged in private and hospital practice, of building up an extensive statistical statement, by following the progress of the epidemic from day to day." Of course we are unable to follow Dr. Besnier in his elaborate statement. We may merely state that he observes that mere density of population will not entirely explain the relative prevalence of typhoid, although the number and density of population are not without influence, as the *quartiers* the most spared are those in which population is least agglomerated. But *quartiers* which have suffered most have often been but moderately peopled, and in nowise densely so. Thus, the Gros-Caillou has suffered most in this epidemic, but it is only the thirty-third *quartier* in absolute population, and the fifty-third in density. The Sorbonne, which is the ninth in the scale of density, is only the forty-fifth for the prevalence of typhoid; and Sainte-Anne, which is the third in density, is only the fifty-seventh in mortality. What is proved, both as regards the arrondissements and the *quartiers*, is that a low and central situation favours the development of the disease, while a peripheric and elevated position seems to limit considerably the action of the disease. The general result is also arrived at, that the mean altitude of the *quartiers* most scourged by the epidemic is considerably lower than the mean altitude of those which were most spared.

With respect to the effect of *drinking-water*, Dr. Besnier thinks that it is not of the importance which it is believed to be in this country; but while he observes that the water of the Seine is much purified, and is supplied to only a tenth of the inhabitants of Paris, he admits that the sources of the other nine-tenths are too complex to allow of any conclusions being drawn as to their effects.

[At the present time an elaborate discussion on the origin of typhoid fever is taking place at the Académie de Médecine, in which Dr. Gučneau de Mussy and Prof. Jaccoud strongly defend its exclusively fæcal origin.]

The Foreign Doctor Question in France.

A case that has been recently brought before the Société de Chirurgie by Prof. Le Fort, shows that the French practitioners have ample reason for complaining of the present state of the law as regards foreign doctors, although it does not follow that the "root and branch" reform proposed by M. Le Fort is the proper one. The case which he presented before the Society was one of cancer of the breast, which had been so aggravated by the proceedings of a cancer-curer that he thought it desirable to ask the opinion of his colleagues whether it was still practicable to perform an operation. The cancer-curer was a Count de Brucke, now residing at Paris, and declaring himself to be a Doctor of the Universities of Paris and London, and who also officiates in that capital as the Chargé d'Affaires of the Republic of San Marino. Of course Prof. Le Fort was not sparing in severe remarks upon the procedure of this person who "cured cancers without operation," and the Society unanimously passed a resolution that copies of the paper should be forwarded to all likely to be interested in the question, as a proof of what may occur in the present state of the law—for this man is not a quack in the legal sense of the word, but is authorised by a ministerial decree under the late Emperor to practise medicine in any part of France; and that notwithstanding the protest of M. Denonvilliers, at that time Medical Inspector of the University. The Count addressed a letter to the Society in defence of his procedures, which was referred to a Committee to report upon. The Committee reported that they had found his statement as to being a Doctor of Paris and London was a false one; and they could only regret that he had so abused the great favour that had been accorded to him.

REVIEWS.

Beiträge zur vergleichenden und experimentellen Geburtskunde. Von Dr. Ferd. Ad. Kehrer, Prof. &c. Viertes Heft. 1. Versuche über Entzündung und Fieber erregende Wirkungen der Lochien.

Contributions to Comparative and Experimental Midwifery. By Dr. Ferd. Ad. Kehrer, Professor of Midwifery at the Ludwig University of Giessen, etc. Fourth Part. 1. Experiments on the Action of the Lochia in exciting Inflammation and Fever. Giessen, 1875. Pp. 38.

Dr. Kehrer starts from the generally accepted view, that fetid, decomposing lochia are capable, if reabsorbed, of producing dangerous effects. The question then presents itself to him, Are normal lochia harmless in this respect? To find an answer, he has devised and carried out the experiments detailed in this monograph.

The experiments are of two classes—one group made upon rabbits, the other upon the patients themselves. The first set were made with lochia from five different patients; there are thus five series of experiments, one corresponding to each patient. In each series the proceeding was the same. Immediately after labour some of the fluid remaining in the vagina

was sucked out with a syringe, and injected under the skin of a rabbit. The next day fluid was withdrawn as before, and another rabbit made the subject of injection; and so on each day, till the discharge became too scanty, or necessary local treatment stopped the investigation (for Dr. Kehrer, a vivisectionist, did not allow his zeal for science to interfere with his duty as a physician). All the rabbits thus treated were kept under like conditions, their temperature and condition noted daily, and when they died an autopsy was made. Of the five patients whose lochia were used thus, in two the discharge was natural, and there were no morbid symptoms: in one there was a little feverishness, but no alteration of the lochia appreciable by the unaided senses: in the other two the lochia were fetid; there was tenderness about the uterus, and pyrexia, but all recovered. The second set of experiments consisted of twelve series, each series (as in the former group) corresponding to an individual patient, whose lochia were daily removed in the same way, but were inoculated into the patient's own thigh in the same manner as in vaccination, and the local and general results were noted. In five of these cases the lochia were fetid, and in eight there was more or less pyrexia, with tenderness of the uterus or in its neighbourhood; but none died. The total number of experiments in the first set was twenty-four; in the second 115.

The results were as follows:—The blood escaping from the genitals soon after birth, produced, first a slight swelling at the point of injection, and then a hard nodule in the skin, which disappeared after a series of days. The lochia themselves, in all cases, even when the course of the lying-in was normal, caused inflammation and suppuration of the subcutaneous tissues at the point of injection and its neighbourhood. This effect began to follow in some on the first day, in other normal cases on the second or third day. The abscess at the point of injection increased generally with the progress of the lying-in, but not to any fixed extent or size. The later lochia of healthy lying-in women produced abscesses not at all differing in size from those excited by putrid lochia in the earlier days. The prejudicial effect of the abscesses thus caused on the general health of the animal likewise increased with the progress of the lying-in.

A slight rise in temperature, lasting a few hours, followed the injection of the blood withdrawn immediately after parturition. After the injection of lochia, the temperature immediately rose, reaching a maximum in six or seven hours; then fell; and again rose during the following days in proportion to the local inflammation excited. The first rise Dr. Kehrer traces to the resorption of the injected substance, and, in a less degree, to the nerve irritation accompanying the injection; the second rise to the presence of products of inflammation in the blood and tissues. Except in the cases in which the lochia were putrid, there was no parallelism between the temperature of the patients and that of the injected animals.

The inoculation experiments in the main gave like results to the subcutaneous injections. They showed that the sanguineous genital secretion of the first and second days of lying-in, when inoculated, produced only slight inflammation, or none at all. Next, that the lochia after the third day at latest, in all cases, excited inflammation at the point of inoculation. But whereas the subcutaneous injections seemed to prove that the lochia during the later stages of a normal lying-in excited as active an inflammation as the putrid lochia of earlier days: in the inoculation experiments, the normal lochia, even at the later days, only excited a slight degree of inflammation. Dr. Kehrer explains this discrepancy by ascribing it to the smaller quantity of material used in the latter experiments: generally six centimetres were subcutaneously injected, while for inoculation only as much as would cover a vaccine point was needed. The lochia (whether they were fetid or to the unaided senses normal) of cases attended with pyrexia constantly produced inflammation of a higher degree.

These facts Dr. Kehrer looks upon as having an important bearing on the etiology and prophylaxis of puerperal processes. The rise in the patient's temperature either preceded or accompanied the first appearance of the inflammation-producing effect of the lochia. During the later days, on the contrary, the lochia were often found to possess noxious qualities when inoculated, while the patient's general condition was normal. Dr. Kehrer explains this by supposing that in the first condition, although the small quantity of fluid inoculated may not contain enough infective material to produce important results, yet that from the abundance of it lying in the vagina enough may be absorbed through breaches of surface to set up constitutional disturbance. In the later days, wounds will have been filled up with granulation-tissue, and therefore the vagina may be bathed with secretion capable of most virulent effects, and yet no absorption take place.

Dr. Kehrer's conclusions as to etiology are as follows:—That in normal and in disturbed lying-in an inflammation-excitant is formed, which leads to the occurrence of inflammation of genital wounds of lying-in women, and conceivably to the whole host of accidental-wound maladies; thus supporting the opinion that the puerperal diseases are essentially similar to the wound-affections of surgeons. That all genital wounds do not inflame, and that all lying-in women do not become feverish, Dr. Kehrer ascribes to the two facts, that the early normal lochia are not rich in the inflammation-excitant, and that the process of closure of the lymph and bloodvessels, and formation of granulation tissue, quickly goes on. When the early lochia are rich in pyrogenic stuff there is inflammatory swelling of the genital wounds. What is called "milk fever" Dr. Kehrer would describe by the compound but expressive term, "resorption-wound-lochia-fever." Its absence may sometimes be the expression of the slight irritability of the individual woman. Fissures of the vagina and vulva seem to Dr. Kehrer more dangerous than the placental wound, because the lochia in contact with them are in a further-advanced state of decomposition than is the case higher up. He agrees with Halbertsma in ascribing to this circumstance the greater frequency of puerperal fever among primiparæ.

Dr. Kehrer next asks, In what way do the lochia acquire pyrogenic and phlogogenic properties? He thinks, either by the introduction from without, by dirty hands, sponges, instruments, linen, etc., of a minute quantity of a fermentative body capable of setting up septic changes in the lochia with which it is brought into contact; or from some primarily unusual quality in the genital secretions—(*a*) from an unusually rich admixture of necrotic tissue elements, or products of local inflammation (not only puerperal, but possibly also chronic—*e.g.*, gonorrhœa); or (*b*) from some general disturbance, such as catching cold, digestive disorder, etc. In individual cases it is very hard to say whether it should be put down to this or that cause. What this septic poison is we do not know; it cannot be isolated, and we can only describe it by its effects. What are the differences, if any, between the inflammation-exciting lochia and other putrid animal fluids is a point that needs yet further investigation.

The indications for prophylaxis and cure which Dr. Kehrer draws are the following. The fingers, and every object which comes into contact with the lochia, should be submitted to a thorough cleansing and disinfection. On this point Dr. Kehrer refers to some experiments which he made in 1872, and which showed that washing with water is not enough to cleanse fingers, etc., that have been in contact with putrid matters: soap and water will do it better, but not quite thoroughly; this end was only attained by washing with a disinfectant. Metal instruments should be disinfected by heat; others immersed in a strong carbolic acid solution; linen should be boiled for one or two hours. Every precaution should be taken to prevent the lochia from coming into contact with the child's navel, for to this Dr. Kehrer ascribes many cases of umbilical abscess, phlebitis, erysipelas, etc. The washing and dressing of the child should either be done by a separate nurse, or should precede that of the mother; and if the latter be the subject of any puerperal malady, the child should occupy a separate cot. Further, if it be, as the author supposes, that so many puerperal ailments result from the absorption of the lochia through wound-surfaces, any examination that, by stretching the genital passage, may reopen wounds which have begun to granulate, must be undertaken with the greatest caution, and be more especially avoided in the cases where the lochia are putrid. If there be reason to suspect retention of remains of membranes or placenta, the physician will do more wisely to content himself with antiseptic or styptic injections until the putrid character of the lochia has passed away, rather than, by exploration of the uterus, to run the risk of tearing open wounds of which the blood- and lymph-vessels have become closed, and the patient thereby protected from absorption. When the period arrives at which danger from absorption is past, Dr. Kehrer is at present unable to say; but he supposes when the lochia consist simply of mucus not at all pigmented. The following are the practical precepts which Dr. Kehrer lays down:—That resorption of the lochia should be prevented by frequent

cleansing of the genital passage by antiseptic injections. These should be used early enough; after prolonged labour, in which the lochia may be expected to contain necrotic tissue elements, their use should be begun immediately. The injection tube should be handled very carefully, so that breaches in the tissues may not be opened. All wounds should be closed by suture as quickly as possible. To favour the production of granulations and the separation of sloughs, the author recommends the application of a terebinthinate ointment, the stimulant effect of which he has found of great value.

Dr. Kehrer's experiments seem to have been well contrived and carefully carried out. The facts which he has demonstrated are, as far as we know, new, and certainly valuable. The knowledge that lochia, perfectly normal so far as our senses can tell us, often, if not always, contain a constituent capable of exciting local inflammation and general pyrexia, is an important addition to the data at our command for ascertaining the natural history of puerperal diseases.

Still, we cannot hold, nor do we think the author would, that the whole question of puerperal fever is settled by this monograph, so excellent as far as it goes. For this we want not only more extensive observations (for from seventeen cases it is not safe to dogmatise), but a comparison of the results of experiment with those of accurate clinical and post-mortem observation.

Notwithstanding this qualification, let us add that it is contributions of this kind which are wanted to raise medicine to the position of an exact science. Obstetric medicine, while as rich as any other department of our art, and richer than many, in stores of clinical work, yet lags behind in research of an exact pathological and experimental kind. Dr. Kehrer brings a good contribution towards supplying this deficiency, and we therefore gladly praise and welcome it.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

(*From a Correspondent.*)

Paris.

Considerable attention is now being paid by some of the Parisian surgeons to the employment of the actual cautery, and its uses are being multiplied in various directions. I was recently a witness of an operation performed at the Hôtel-Dieu, in which a gas cautery was used in a very novel and beautiful manner, and one could not but feel that great possibilities were shadowed forth in the future for this method of treatment. The operator was M. Cuscoe, one of the most accomplished surgeons in Paris, who is so well known, to those who have frequented the Parisian school, for his profound and far-reaching professional attainments, combined with an urbanity of manner remarkable even in this city. By means of the instrument presently to be described, he excised a fibrous tumour, the size of a large orange, from the buttock of a man without any aid from the knife or other surgical means. The cautery with which the operation was performed was invented a few months ago by Dr. Paquelin, and by its means many of the operations which have been hitherto performed with the knife can be done without any cutting in the strict sense of the word, the division of the tissues being made by burning—as has for some time indeed been the case in operations upon the tongue and certain other parts; but the difference between the instrument under discussion and the previous instruments is, that with the latter the method has been altogether too rough to allow of any careful direction on the part of the operator over the course of the heated material, whereas the apparatus of M. Paquelin allows of the most careful dissection of the tissues, just as with a scalpel. The skin and different layers of fascia can be separately divided, lobulated tumours can be accurately enucleated, and, in short, in many operations the knife can be entirely replaced by the cautery. It is unnecessary to point out how valuable such an instrument may become in operations where much bleeding is to be expected from the use of the knife, for with proper care such operations may be made almost bloodless, hæmorrhage from the smaller vessels being stopped at once by a touch from the instrument, if it has not been already prevented by the passage of the heated metal through the tissues, and only the larger arteries requiring ligature or torsion. For operations such as the major amputations the cautery would be scarcely applicable, as the greater length of time which would be required to traverse large masses of soft structures by its means would be scarcely compensated by the slight diminution of hæmorrhage; but for tumours, and especially those extending deeply and involving a large number of vessels, the instrument may be made of great service. It could also entirely replace the rough actual cautery in ordinary use, for it can be employed in every case where the hot iron would be of service; and the invention of M. Paquelin possesses many advantages over the latter. Thus, it can be prepared in a few seconds, without the necessity for any fire; it can be maintained at a red or white heat for any length of time required with the greatest possible ease; and if it be necessary to introduce it into any internal cavity or orifice, it need not be heated to redness until it is actually in the required position. Its advantages over the electric cautery in many respects are obvious: the size and portability of the apparatus, which fits into a box about eight inches by five; its greater simplicity; the greater extent of the surface heated, which, instead of being a wire, may be made of any shape and practically of any size required; and the extreme rapidity with which the heat can be raised, one or two seconds sufficing to change the metal from a black to a bright-red heat. The gas cautery could not, however, replace the electric in écraseur operations, for where it is essential to have a heated wire the cautery of M. Paquelin becomes inapplicable.

The essential principle of the instrument in question consists in this: A stream of air is passed over petroleum by means of an ordinary Richardson's double air-ball arrangement leading into a bottle containing the mineral oil. The resulting mixture of air saturated with the vapour of petroleum is conducted along an indiarubber tube to the cautery, which is made hollow. The tip of the cautery is of platinum and is wedge-shaped, the thin edge with which the division of the tissues is done being about as sharp as a blunt paper-knife. The tip must first be heated for a short time—from twenty to thirty seconds suffices—in the flame of a spirit-lamp, which is provided with the apparatus. The metal having reached a certain temperature, it ignites the highly inflammable vapour, which in its turns reacts on the metal, and a couple of seconds or so are quite sufficient to raise it to a red heat. This temperature can then be kept up for hours, if necessary, without the least difficulty, an occasional squeeze of the air-ball, which is worked by an assistant, being all that is necessary to maintain the metal at redness. The cautery, which is provided with a convenient non-conducting handle, is then used as an ordinary scalpel. In the operation I saw performed by M. Cuscoe, the division of the skin and fascia was as clean and rapid as it could have been with the knife, the dissection was done with the most perfect ease, not a vessel had to be tied, and but very little blood was lost; the parts had scarcely any of the appearance of having been burnt, but looked almost as they would have done had the operation been performed in the ordinary way; the apparatus worked perfectly, there was not the least trouble in maintaining it at the required temperature; and from the almost complete absence of blood the operator could see what he was doing more easily than is usually the case. It should be mentioned that it is essential that the heat should not be elevated above dull redness; this suffices for all "cutting" purposes, and it is more effective against hæmorrhage than a bright red heat.

M. Cuscoe has introduced an exceedingly neat and successful method of treating entropion by the aid of the cautery. He makes a line of cauterisation on the outer side of each eyelid, near the lashes; the cauterisation being carried just through the skin, the contraction which takes place during healing is in nearly all cases sufficient to drag the line of lashes outwards to the required extent, and there is scarcely any perceptible scar left. The cauterisation acts also as a strong revulsive, which is of service in curing the keratitis resulting from the irritation produced by the inverted lashes. Several cases recently in the Hôtel-Dieu have been successfully treated in this manner, scarcely any perceptible scar being left on the lids.

M. Collin, the head of the firm of Charrière, the well-known surgical instrument makers, has constructed a pair of scissors which can be used in the same way as the above-mentioned instrument, and which, by varying the means at the surgeon's disposal, must necessarily increase the utility of the cautery. The principle is identical in both cases—one blade only of the

scissors is heated, this being made of platinum; the other is of blunt steel.

Even though the cautery may not be very extensively adopted for performing operations in place of the knife, yet it is a great advantage to have an instrument which is at once very portable, simple in its construction, easily prepared at a moment's notice, and in which the heat can be kept up for hours at a time, steadily and without trouble. Its employment would do away with the necessity for having a portable stove with irons heating, which one sometimes sees in an operating-theatre; and it would be invaluable for cases of secondary hæmorrhage, where everything must be done quickly, and where it is often quite impossible to obtain the ordinary form of actual cautery.

GENERAL CORRESPONDENCE.

"MALTED FOOD EXTRACT."

Letter from Dr. Druitt.

[To the Editor of the Medical Times and Gazette.]

Sir,—There has appeared lately in the *Daily Telegraph* an advertisement of a substance called "Liebig's Malted Food Extract," with a testimonial signed amongst others by myself, described as "President of the Board of Health"! I am reminded that ten years ago I signed a testimonial in favour of a project for manufacturing and selling "Liebig's Food for Infants." This food consisted of fresh milk, with malt, etc., and the project failed from the difficulty of sending it out fresh every day.

This testimonial is being advertised in the *Daily Telegraph* and elsewhere in reference to an entirely different preparation called "Malted Food Extract," of which I know nothing, and I complain that the testimonial is used for a purpose entirely different from that for which it was given.

I am, &c., R. Druitt.

CHANGES IN THE BLOODVESSELS IN BRIGHT'S DISEASE.

Letter from Dr. George Johnson.

[To the Editor of the Medical Times and Gazette.]

Sir,—In a leading article on the above subject in your last number, I am represented as stating that "all arteries having muscular walls at all, always had the muscles arranged in two layers." Allow me to say that this is not my statement, but a misunderstanding on the part of the writer. I have always stated that the two layers of fibres—an inner longitudinal, and an outer circular—*are peculiar, so far as I know, to the hypertrophied renal arteries.* I am, &c.,

Savile-row, March 27. George Johnson.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, March 7.

Charles West, M.D., F.R.C.P., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—Albert de Winter Baker, M.R.C.S. (Dawlish); Marshall P. Dean, M.D. (Toronto); Thomas S. Gell, M.D.; W. Wright Hardwicke, L.R.C.P. Ed. (Rotherham); Lewis James May, M.R.C.S.; Montague H. C. Palmer, M.R.C.S. (Newbury); and Arthur L. Smith, M.D. (Ottawa).

Dr. Maberly showed two placentæ with membranes attached, in which the bloodvessels, instead of uniting on the surface of the organ, ran for some distance along the membranes, and then united to form the umbilical cord.

Revolving Needle.

Dr. Aveling exhibited a curved needle, which, by a mechanical contrivance, can be made to revolve, giving the operator the power of introducing its point in one direction and bringing it out in another exactly opposite. He had invented it for cases of vesico-vaginal fistula, and more especially where the wound to be closed was situated high up or transversely. The needle has a notch near its extremity, in which a loop of the suture to be passed is placed. It is made by Messrs. Meyer and Meltzer.

The Forceps in Modern Midwifery.

Dr. Edis read a paper on this subject. His object was more to provoke discussion upon the subject, and elicit the opinion of the Fellows, than of defining under what circumstances the forceps might or might not be employed. During the year 1874, the Registrar-General's returns showed that there were nearly 6000 deaths from accidents of childbirth alone; many of which Dr. Edis believed were due to patients being allowed to remain too long in labour without timely assistance being rendered. Statistics bearing upon the question were given; but no definite conclusions could be drawn from them, as the high and low forceps operations were not distinguished in these calculations. The point attempted to be elucidated was "the highest rate of frequency of application of the forceps coincident with the lowest rate of mortality to mother and child." The experience at the Rotunda Hospital, Dublin, during the last two years, threw some light upon this question. It was chiefly in reference to cases of tedious and difficult labour, more especially in primiparæ, when the os uteri was not fully dilated, that the advisability of an early resort to the forceps was suggested.

Dr. Ashburton Thompson thought that the numerical method could not be applied to settle this question, nor could the result of personal practice. Different practices offered different percentages of forceps-delivery. Occupation would give rise to such differences; the causes of difficult labour are not uniform; forceps had recently been used much more frequently than in former times. He thought that difficult labours had not increased in proportion.

Dr. Cleveland said that in private practice he had obtained excellent results from the use of the forceps, and believed that in judicious hands its employment was capable of further development. If one attempt at delivery by its means failed, a second might prove successful. However valuable statistics on a large scale in a lying-in hospital may be, still in private practice we shall be mainly guided in the use of the instrument by individual experience.

Dr. Aveling believed the determination of the question how often and when the forceps should be used must for the present be decided by personal experience, and not by statistics or the relation of individual cases. A scientific rule of practice might some day be obtained, when ready methods had been found of measuring the expulsive force of the uterus and abdominal muscles, the dimensions of the fœtal head and pelvis, and the resistance of the soft structures.

Dr. Playfair said that it was astonishing that the conservative instrument, the forceps, should have been looked upon with dread; while the perforator, until comparatively recent years, had been used with appalling frequency. He had deliberately advised the use of the forceps in lingering labour, and had done so after mature reflection. He had recommended a frequent use of the forceps when the head was delayed low down in the pelvis by simple *inertia uteri*, and when only a slight *vis a fronte* was required to supplement the deficient *vis a tergo*. The high forceps operation, when the head was at the brim, was in an entirely different category. The advantages of frequent resort to the forceps were the saving of suffering to the mother, the shortening of labour, better recovery of patients, and the saving of infant life. Are there dangers associated with the frequent use of the forceps which counterbalance these advantages? It has been stated that ruptured perineum is more common now than formerly, and that it is due to the more frequent use of this instrument. But, supposing such were the case, it would not counterbalance the saving of a single human life. On the other hand, the number of cases of severe vaginal fistula has diminished. He concluded by expressing his opinion that, in spite of the objections made to forceps, delivery by its means, when the head was low in the pelvic cavity, was a more conservative practice than the use of it as a last resource.

Dr. Galabin said he thought the statistics of Dr. Kidd, based on the number of deaths after protracted labour, were unreliable, since there could be no exact criterion when labour should be considered protracted, especially when the observers were not the same. A comparison with the earlier records of the Rotunda Hospital gave a different result. The mortality in Dr. Johnston's Mastership—namely, 21·6 per 1000—was more than half as large again as that from the foundation of the

Hospital in 1745 to 1853, which was only 12·1 per 1000. In eighty-eight cases within three years in which the forceps were applied before full dilatation of the os, simply on account of premature rupture of the membranes, there were four deaths —a mortality of no less than 46·6 per 1000. It was, therefore, at least, not yet proved that such a use of forceps was free from risk. In the Guy's Hospital Charity, out of 23,591 deliveries in twelve years, the forceps cases were only 5·2 per 1000, the maternal deaths only 4·4 per 1000, of which only 0·8 per 1000 occurred after protracted labour. The children still-born were 4·06 per cent., those still-born with a vertex presentation 2·7 per cent., of which only about one-seventh were decomposed or premature. He had always supposed that most of these children were sacrificed on account of the rule that forceps should not be applied without sending for the Assistant Obstetric Physician, but a comparison with the neighbouring Charity of St. Thomas's made this conclusion doubtful. Forceps were there used about ten times as often, but the ratio of still-births was almost exactly the same, the slight difference being in favour of Guy's.

Dr. Fitzpatrick thought discussion on the use of the forceps much called for, and it would be looked to with avidity by the profession generally. The forceps had been weighted with restrictions and conditions so as to materially diminish its value. Our object is in many cases opposed to nature's. Nature's object is to repress feeble additions to the human stock: ours, on the contrary, is to save life and relieve suffering; and for this object the forceps is an indispensable help.

Dr. Parr remarked that, however skilful in the use of forceps a gentleman might be who related 400 and 700 consecutive cases without the loss of a single child, he certainly was very fortunate. Dr. Parr, in less than 400 cases, had four children still-born from (two) mothers suffering from syphilis; not one of these labours exceeded three hours in duration. In a fifth case the child was born dead, suffocated by a stout cord drawn tightly round the neck. No care could exclude such cases.

Dr. Daly said that in 800 cases he had used the forceps in eighty, in fifty of which the head was in the pelvis or in the perineum, and in thirty above or in the brim. Of the 800 cases four died. Of the eighty forceps cases two died; one was dying when called in of accidental hæmorrhage, the other of puerperal fever. Another of the forceps cases had pelvic cellulitis. There were ten still-births, two being forceps cases. Laceration of the perineum occurred more frequently in first cases, when the forceps was not used. Craniotomy was not resorted to in any case; while duriug an experience of five years, while a pupil, in a country district in Ireland, the forceps was not used once, but craniotomy was performed five times, and in every case with a fatal result to the mother.

Dr. Poole thought that help might be given by other than instrumental means—viz., by well-directed external pressure. He had lately used the forceps much less than formerly.

Dr. Roper could not see the desirability of frequent use of forceps in lingering natural labour. He had never applied forceps without ascertaining, first, that the natural powers were insufficient to accomplish labour with safety to mother and child. The obstruction caused by a rigid os uteri and perineum slowly and naturally gives way, and there is one condition which contraindicates the use of the forceps —namely, the retrogression of the head or the cessation of pain. In laborious labour it is only when uterine power is expended that rhythmic action of the uterus ceases and becomes one of persistent unremitting contraction, and then immediate delivery is indicated. The assertion that children are frequently born dead from delay in lingering labour, who might be saved by timely use of the forceps, is not borne out by statistics. In Dr. Hamilton's 300 successive cases without loss of a single child, the calculation excludes all children known to have been dead before forceps were applied. The number of these was eight, so that really his fœtal mortality is one in thirty-seven. Dr. Roper thought that the application of the forceps when the os uteri was only one inch and five-eighths in diameter was opposed to all propriety. His experience in the Royal Maternity gave, in 4377 cases, forceps used once in about 109 cases, still-births one in about seventy-seven, maternal deaths one in about 463.

Dr. Rogers thought that the use of the forceps was not required so often as it had been stated. Labour was a natural process, and terminated favourably without interference in the large majority of cases.

Dr. Wallace thought that some expression of opinion by the Society as to the length of time one should wait after impaction or arrest before applying the forceps would be of great value. He waited two hours—rarely longer; and in 800 cases attended in the last two years he had applied forceps twenty-six times. Amongst the forceps-deliveries there was one maternal death, and one still-born child.

Dr. Graily Hewitt believed it to be impossible to lay down a hard-and-fast rule for the employment of the forceps. For its employment education and a certain mechanical aptitude were necessary; and mechanical aptitude was absent in some instances. Hence a timidity and hesitation to employ the instruments on the part of some. Others, finding the operation simple and easy, would naturally employ this method of delivery more frequently. His view as to the expediency of the employment of the forceps was practically the same as Dr. Playfair's—that is to say, considering the cases of the *low* operation. The *high* operation was undoubtedly difficult and more dangerous. This distinction of forceps-cases into high and low operation was Dr. McClintock's; and the distinction was a most important one to make. He thought that the greater frequency of perineal laceration was partly due to too rapid extraction. The perineum must be allowed time to expand—nature's method should be imitated. The importance of exercising traction in a forward direction was sufficiently emphasised in the ordinary text-books.

CLINICAL SOCIETY OF LONDON.

Friday, March 9.

George W. Callender, F.R.S., President, in the Chair.

The President brought under the attention of members that papers to be read should be forwarded to the Secretary a week before the meeting at which they were to be brought forward.

Dr. Burney Yeo then read a paper on Exophthalmic Goître, which has elsewhere appeared in full, and of which no abstract has been supplied.

Dr. Greenhow, Dr. Williams, and Mr. Casson took part in the subsequent discussion.

Cavity in the Lung, sufficiently large to give rise to Tinkling Sounds, undergoing Contraction.

Dr. Theodore Williams exhibited the patient, a middle-aged foundryman, in whom the disease began ten years ago with profuse hæmoptysis, followed by the usual phthisical symptoms. Three years ago a tinkling cavity was detected in the upper portion of the right lung. Since that date he had gained flesh, the cough had diminished, and he had been able to return to his occupation; and on readmission into the Brompton Hospital, in December, 1876, marked shrinking of the whole of the right chest was noticed. The cavity was found to have contracted, but not to have disappeared, distant cavernous sounds being still audible. The physical signs indicated considerable displacement of the neighbouring organs: the left lung was drawn across the median line, and the liver and heart were displaced towards the contracting cavity. The general health showed a corresponding improvement, a considerable amount of weight having been gained. Dr. Williams remarked that the contraction of an amphoric cavity was a very rare occurrence, and that this was a good instance of the various changes in the wall of the thorax, amounting here almost to a deformity, and the displacements of the various organs that were necessary to fill up so large a void.

Dr. Yeo thought the fact that there was a contracting cavity was merely accidental. In the case of a clerk, a patient who had gone to his employment on the outside of an omnibus in all weathers for many years, a cavity had greatly contracted.

Three Cases of Gas in the Peritoneal Cavity without Perforation of the Bowel.

Mr. R. Godlee read notes of these cases. He said the condition was not noticed in the ordinary text-books, and was rarely pointed out to students at the bedside. The first patient was a man, who, as a soldier, had served in India, and suffered from dysentery. He had also had syphilis; had two carious ribs and phthisis, and advanced albuminoid changes with ascites. The abdomen was distended; the enlarged liver reached nearly to the umbilicus, but the area over it had mostly a tympanitic resonance, except when the finger was thrust through the tympanitic region; then the liver was felt and a

dull percussion-note elicited. At the necropsy, no gut was found superficial to the liver. There were ulcers in the colon, but no perforation; the portal vein was pressed upon by enlarged glands. The second case was that of a stout woman suffering from obstruction to the bowels from tumour. The obstruction had been complete for three weeks. The abdomen was greatly distended, and there was constant vomiting. Colotomy was performed by Mr. Heath. A large mass of fat was cut through; then a protrusion of peritoneum distended with gas appeared in the wound. It was punctured, as the bowel could not be found, and gas escaped. The bowel was then discovered and opened. The patient died next day. At the necropsy, no perforation of the bowel could be anywhere discovered. There was very early general peritonitis, and a little rather older, with some lymph round the cæcum, corresponding to an ulcer as large as a threepenny-piece, filled with slough, in the mucous membrane. The bowel at the seat of stricture was entire. The third case was that of a person aged seventy-two, upon whom Mr. Heath had performed colotomy nearly five weeks ago. The obstruction had lasted three weeks before the operation, and there had been much distension. Gas in the peritoneal cavity was suspected, because there was scarcely any liver-dulness, and the percussion-note over the whole abdomen was about equal. The first thing that presented in the wound was a knuckle of peritoneum distended with gas and a little clear fluid. But the bowel was searched for, found, and opened in the usual way. The patient was now alive, and it was, therefore, quite safe to conclude that there had been no perforation in this case. Mr. Godlee thought osmosis might account for this condition, and he brought forward the cases with the intention of pointing out an accident which might happen to anyone in the course of colotomy. He wished also to hear whether the condition he had described was rare or common.

Dr. Cayley mentioned the case of an elderly patient whose peritoneal cavity was greatly distended when colotomy came to be performed. On this peritoneum being opened there was a free escape of gas from the cavity, though there was no perforation of the intestine. The patient died soon afterwards.

Mr. Heath insisted strongly on the general distension of the abdominal cavity in these cases. In the elderly patient cords of intestine were at first to be seen through the walls of the abdomen, but these had disappeared at the time of operation. Here the operation was on the right side. In another the operation was on the left. Here, as the sun shone directly on the wound, he could see the distended peritoneum before it was opened.

Mr. Maunder said that those who are not infrequently called upon to perform colotomy will be grateful to Mr. Godlee for the hint which the relation of his cases had afforded. Doubtless his explanation of the presence of gas in the peritoneal cavity is the correct one. The same explanation is probably applicable to cases of abscess seated near the intestinal tube (whether about the rectum or appreciated through the anterior abdominal wall) which sometimes contain gas, and this rendering them tympanitic is a possible source of error in diagnosis. With regard to Mr. Heath's suggestion that the drum-like conditions of the belly might be regarded as diagnostic of gas in the cavity, Mr. Maunder thought that this condition could not be looked upon as characteristic. The information derived from examination of the abdominal wall is so contradictory and variable in different patients, and even in the same patient at different times, that it is not reliable. In his last colotomy case (*Medical Times and Gazette*, February 3, 1877) the small intestines were remarkably visible through the abdominal wall; but at a later period, when the patient had consented to the operation, the surface of the abdomen was so tense that the state of any organ within could not be determined. Right colotomy was performed, and a month afterwards this gentleman was out and about his business.

Dr. Cayley said that in the case spoken of by him the gas was not fetid.

In reply to the President, Mr. Heath said that in his second case the colon had no mesentery, but was quite normal.

Neuro-Retinitis in One Eye, followed by Partial Atrophy of the Optic Disc and accompanied by Colour-Blindness.

Mr. B. Thompson Lowne read notes of this case. The patient was a young lady aged eighteen. The cause of the attack was unknown. The optic disc was much swollen, presented an indefinite outline, and was surrounded by numerous streak-like ecchymoses; and numerous exudation patches were apparent on the retina. The atrophy commenced about five weeks after the commencement of the attack, and was preceded by colour-blindness. The patient was, and still remained, insensible to red and green. These colours appeared as pale orange and yellow respectively; dark green, however, seemed nearly black; blue and violet were scarcely distinguished, the former appearing like the latter. The field of vision had never been contracted, but, at first, the periphery only was sensitive to light and capable of vision; all power of direct vision was extinct at first, but she now read $\frac{14}{20}$. Indirect vision was, during the attack, $\frac{10}{200}$ only in the inner portion of the field.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 13.

Charles West, M.D., F.R.C.P., President, in the Chair.

After a few neat and appropriate remarks from the President on taking the chair, a paper by Dr. Gowers and Mr. H. R. O. Sankey was read on

The Pathological Anatomy of Canine "Chorea."

The paper gave an account of the changes found in the nerve-centres in two cases of the disease of the dog, which has been termed "chorea," although it bears little resemblance to the chorea of man. The affection consists of quick muscular contractions, separated by an interval, and without inco-ordination or fidgetty movement. In the two cases the movements were similar. In one they were confined to one foreleg; and the changes found in the nerve-centres were slight. The medulla oblongata presented nothing abnormal. In the spinal cord the large nerve-cells of the cervical region were very granular, and appeared swollen, the body of the cell being in some instances apparently distended with granules, so that it had an almost globular form. This change was more marked on the right side than on the left. In the upper part of the cervical region there was a slight increase in the minute nuclei of the anterior column in the right side. In the upper lumbar region the nerve-cells of the right posterior vesicular column were much more granular than those of the left. In the other case (a young retriever) the twitchings were general, and had commenced (in one foreleg) after distemper, two months before death. They were more marked when the animal was at rest, and were accompanied with considerable weakness in the limbs, especially the hind limbs. Sensation was considerably diminished, the posterior half of the trunk and hind limb being quite insensitive. The muscles of the neck, and those of the larynx, tongue, and jaw, were involved in the twitching. After death, the heart, the muscles, and the cerebral hemispheres, with the central ganglia, were healthy. Microscopic examination showed extensive disease in the spinal cord, medulla oblongata, and cerebellum. The most conspicuous change was an infiltration of small, round lymphoid cells, precisely resembling white blood-corpuscles. Areas so infiltrated were found abundantly in both white and grey substance in all parts of the cord, the distribution varying much—in some parts in the lateral, in others in the anterior, in others in the posterior columns. In places the anterior, in others the posterior, grey cornua were infiltrated. In some places the nerve-tissue appeared disintegrated and destroyed; but there the infiltration was slighter, and was, in the form of ramifying traits, always corresponding to the course of vessels. From this the authors are inclined to regard it as a leucocytal infiltration. The nerve-cells in many parts appeared healthy, but in others were very granular, and in some parts were surrounded by the lymphoid cells. Some nerve-cells had a granular centre and an ill-defined boundary. The protoplasm of many was encroached on by vacuoles, partly outside the cells. These had in places almost destroyed the cells. They appeared formed during the process of hardening; but the authors suggest that they are of pathological significance, since they were absent in another cord similarly prepared. In the medulla oblongata the changes were similar, but slighter, and confined to scattered areas of cellular infiltration. A similar infiltration existed extensively in the medulla of the cerebellum, and was in some places very dense. The cortex of the cerebellum folia was healthy. In each dog the effect of section of the cord was observed. In the slighter case Dr. Hughlings-Jackson had

noted (*Medical Times and Gazette*, May 1, 1875) that the movements continued for a few moments after pithing. In the other, in which the changes in the cord were extensive, artificial respiration was kept up after division of the cord; and no movements occurred in the parts below the section, although they continued in the muscles of the head and jaw. In other recorded cases, however, similar movements have been observed to persist after the section of the cord. It is remarkable, therefore, that in this case, in which the cord was so diseased, the movements should have been arrested. It is possible that in some cases the movements may be of encephalic (perhaps cerebellar), in others of spinal origin; but another explanation of the cessation of the movements may be that the section of the cord temporarily inhibited by shock the action of the weakened nerve-cells of the cord. The cellular infiltration appears from its course to have been the result of vascular disturbance, but whether primary or the result of functional over-action of the nerve elements, it is difficult to say. Its random position indicates an independent progress, and accounts for the motor and sensory paralysis; but its limitation to the cord, medulla, and cerebellum suggests a primary dependence on functional disturbance of the nerve-elements. The only morbid appearance common to the two cases was a change in the nerve-cells of the cord; and this may be regarded as the primary morbid change, the indication of their over-action, to which the vascular change and cellular infiltration are secondary in origin. To decide these and other points, however, further observations are necessary.

Dr. J. Harley thought Dr. Gowers' observations were quite applicable to man, choreic movements being probably due to disturbances in the nerve-cells. Cryptopia he had found to produce chorea in the dog. The symptoms followed in about half an hour, but by-and-by ceased. This showed that the choreic movements might not be permanent, but might arise from merely temporary changes in the nervous system.

Dr. Gowers said the changes in the cerebellum and medulla resembled those found in the spinal cord.

Lithotomy.

Sir H. Thompson communicated (for Mr. W. D. Wilkes, of the Salisbury Infirmary) a case of vesical calculus, the nucleus of which was a piece of necrosed bone, removed by lithotomy. The patient, M. P., aged fifty, an agricultural labourer, a tall thin man, was admitted into the Salisbury Infirmary, in October, 1876, for stone in the bladder. A small orifice to urethra and sensitive passages indicated lithotomy rather than lithotrity, and the former operation (lateral) was performed on October 30. After several unsuccessful attempts, the stone was grasped by a large forceps, and became crushed in them, whilst holding it firmly for extraction. After extracting the large fragments, a large piece was found on a kind of shelf on the upper and back part of the bladder, of which a piece of necrosed bone was the nucleus. There was no vessel to tie, no tube was inserted, and the patient was in a very fair state. After the operation, it was learned that thirteen years ago the patient fell from a tree, some eighteen or twenty feet, upon his right hip; an abscess formed, and two or three pieces of dead bone came away from the inside of the right thigh, just below the adductor longus. He had no trouble till March, 1876, when bladder symptoms began. The nucleus of necrosed bone weighed eight grains, the crushed fusible calculus (dry) 430 grains. The patient was now all but well. The case was another illustration of an unusual cause of calculus in the bladder, from necrosed bone detached from a neighbouring portion of the skeleton, the first case having been reported to the Society by Sir Henry Thompson in 1866, who also had had a similar case at University College Hospital, in 1872, in a lad of fifteen years of age, who made a good recovery.

On Congenital Dislocation of the Knee, Tibia forwards.

Mr. Richard Barwell read a paper on this subject, giving notes of the case of Harry B., aged six weeks, who was brought to Charing-cross Hospital on October 24, 1876, to see Dr. Barlow on account of an eruption about the thighs. This affection was quite unimportant, but Dr. Barlow detected an abnormal condition about the lower limbs, and asked Mr. Barwell to see the child. The posture of thighs and legs was unusual, the former being kept extended on the body, the latter hyper-extended at the knee. Across the front of the joint was a deep tegumentary fold; above which the parts, more especially in the middle line of the limb, were soft, the finger sinking deeply, and below which the tuberosities of the tibia could be felt unduly prominent. The popliteal depression was replaced by a protuberance which could be felt as double, and was easily recognised as the condyles of the femur; below this the normal hardness over the back of the tibia was lost. Mr. Barwell diagnosed congenital dislocation (almost complete) of the tibia forward. On the left side the patella, though small, was evident. On the right he could, with the most careful examination, find no patella. Besides this condition of the knees the following peculiarities existed:—The thighs could not be straightened on the pelvis; this was compensated by remarkable flexibility of the loins, the position simulating, though not due to, hip dislocation. There was equino-varus of the right foot, and slight double internal strabismus. This was the fourth child of healthy parents; there was no deformity in any branch of the family. The birth was normal; head presentation, without instrumonts. During the third month of gestation the mother had a fall downstairs; during the sixth she had a severe fright. She had a very uncomfortable pregnancy, not being able to get about, for it was very low down. Partly on account of the skin eruption, partly on account of his being "a very wet baby," Mr. Barwell thought it better to postpone active treatment, but saw the child from time to time. Although a simple attempt to flex the limb entirely failed, yet he found that by placing the thumbs on the tuberosity of the tibia in front, and the fingers on the femoral condyles behind, he could partially reduce the dislocation and then bend the limb somewhat. Therefore, when other circumstances suited, he had the child admitted into hospital; and on January 9, chloroform being administered, he pressed the joint as far as possible into position, and flexed the limbs as much as could be effected without using too much force, then placed them in plaster of Paris. The left could be more perfectly bent than the right.' In a fortnight (23rd) this operation was repeated. Both limbs could then be well bent, and the tibia lay in good position; the left patella had increased in size, and the right one could be felt, but was small. February 24: Patient had been seen in the interval, and on the 10th the plaster was removed. The knee was now in good position; movement good; no dressing was applied, but free passive motion in the direction of flexion enjoined. At this date the knees were normal; they could both be bent till the heel was close to the buttock; the patellæ on both sides were nearly or quite normal; the fold of skin across the front of the joint had disappeared. The author said that this deformity was so rare that there were not half a dozen cases on record—viz., by Von Ammon; two specimens, probably still-born children, shown by Guérin; one case seen by Hilton; one mentioned by him as having been seen by Sir Astley Cooper; and one case recently reported at the Clinical Society by Mr. Godlee. Some of these cases were described as congenital absence of the patella; others (Guérin and Godlee) as dislocation forwards of the tibia at the knee. The author submitted that since dislocation was not always present when the patella was absent, and the patella was present when dislocation occurred, this absence or presence was an unessential feature in the case, and ought not to give the name to this condition. The only writers who spoke of any treatment were Hilton and Godlee. The former surgeon's could hardly be termed treatment—the patient only learned to walk fairly well in about twenty-four years. Mr. Godlee treated his case by instruments; the child crept about tolerably well, but did not use the leg nicely at the fifteenth month. Mr. Barwell's own case was cured in about six weeks of treatment, and he thought his mode of treating the dislocation the correct one.

Mr. W. Adams thought that in some of these cases there was too much attention paid to the joints, and too little to the limbs. Was the presentation in this case a breech one?—as in some children thus born he had seen rigid limbs and small patellæ. The displacement was, however, so slight as hardly to merit the name of dislocation. Some by gradual bending were made able to walk.

Mr. Hulke remarked that in Mr. Barwell's case the limbs were loose; in Mr. Adams's they were fixed.

Mr. Wood asked how long Mr. Barwell's treatment lasted. He did not suppose the distortion was complete.

Mr. Spencer Wells was anxious to know whether the idea that such deformities were caused by breech presentation was correct.

Mr. Hulke said that in a preparation shown by Mr. W. Adams before another society the sole of the foot was turned upwards; yet there was no true dislocation of the knee, but rather of the epiphyses of the bones.

Mr. Barwell said his case was totally different from those

spoken of by Mr. W. Adams. The tibia was well forwards, but this did not seem to be due to muscular shortening. The joint was stiff in all directions.

NEW INVENTIONS AND IMPROVEMENTS.

NEW INSTRUMENT-BAG.

Mr. J. Millikin, of St. Thomas's-street, Borough, has placed before us a bag specially intended for carrying midwifery instruments. It is long enough to hold Dr. Barnes' long midwifery forceps, and large enough to contain all necessary midwifery implements, including one or two drugs, for which pockets are provided. The bag itself is exceedingly strong and well made, and is lined throughout with wash-leather. The woodcuts show its general character. It has struck us, however, that Mr. Millikin might easily make one or two slight improvements on the bag as now made, which could not fail

of being beneficial. We think that an inch or two of additional depth would add to the appearance of the bag, and certainly much to its capacity. From an æsthetic point of view it now looks too long and too shallow. Again, as regards the lock: the present arrangement does not admit of a key at all strong in proportion to the strength of the bag, and it is very liable to get out of order. These are matters easily remedied, and we are sure that with some such slight modification the practitioner will find this bag a most useful companion, not for midwifery alone, but for many other purposes.

OBITUARY.

WILLIAM SQUIRE WARD, M.R.C.S. Eng.

The county of Nottingham lost an able and worthy man when William Squire Ward, of Wellow Hall, Ollerton, after a long laborious life of usefulness and kindness, and only a short but severe illness, went to his rest on the morning of the 9th inst., in the sixty-eighth year of his age. Mr. Ward, having distinguished himself in the London hospitals and in Paris during the prevalence of cholera at the commencement of his medical career, succeeded to his father's practice at Wellow and the neighbourhood, and was from first to last an example to the professional man, whose duties he defined to be, "to cure, if he can; to relieve, if he cannot cure." His skill, his anxious attention, and pleasant manner, won for him a confidence, which he never lost, from all degrees of society, from the noble owners of "The Dukeries" to the hewers of wood and drawers of water, for he was the friend of rich and poor alike. His heart was in his work, wherever it lay—a good and generous heart. The last act of his professional life was to arrange and attend a consultation of medical men at Nottingham, for the benefit of a poor man afflicted with cancer. From that journey he came home to die. He was stricken on his return by a sudden chill, and this was followed by violent and persistent diarrhœa, which defied the skill of the wisest, and which ultimately, in little more than a month from his first seizure, caused his death. He lived and died a man worthy of his manhood, a true gentleman, who did the work which God gave him to his own honour and to the happiness of his fellow-men.

RICHARD NEWMAN TOWNSEND, B.A. Oxon., F.K.Q.C.P. Ire.

This highly esteemed physician died of fever, contracted in the discharge of his duty, on March 3, at his residence in Queenstown, county Cork. He was but forty-one years of age, and has left a widow and several young children to mourn his untimely death. Dr. Townsend graduated in Arts at Oxford University in 1859, but his medical qualifications were Irish. In October last he was elected Fellow of the King and Queen's College of Physicians. Dr. Townsend was one of the most rising of Irish physicians, and his numerous public appointments and extensive private practice testified to his abilities.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 22:—

Andrew, John Edward, Tyrwhitt-road, New Cross.
Dalton, Charles Gerald, Fillingham, Lincoln.
Eliot, George, Limpsfield, Surrey.
Morris, Clarke Kelly, Spalding, Lincolnshire.
Shipton, Arthur, Buxton.
Warliker, Damodar Purshotam, Bombay.

The following gentlemen also on the same day passed their primary professional examinations:—

Buckle, John, St. Bartholomew's Hospital.
Callender, John Hawkes, Newcastle-upon-Tyne.
Chattock, Charles Piercy, Queen's College, Birmingham.
Wainwright, Arthur Stenton R., St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bullen, Beresford, R., M.R.C.S., L.S.A.—Third Assistant Medical Officer to the Third Middlesex Asylum, Banstead Downs, Surrey.

Gillespie, J. W., M.D.—Medical Secretary to St. Thomas's Hospital.

Lawson, Robert, M.B., C.M. Edin.—Senior Assistant Medical Officer to the Third Middlesex Asylum, Banstead Downs, Surrey.

Murchison, Finlay, M.B., C.M., M.A. Edin.—Second Assistant Medical Officer to the Third Middlesex Asylum, Banstead Downs, Surrey.

Poynder, G. F., M.R.C.S. Eng., L.R.C.P. Lond.—House-Surgeon to the Dover Hospital and Dispensary.

NAVAL AND MILITARY APPOINTMENTS.

Admiralty.—The undermentioned medical officers have been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of 4th inst:—Richard Lovell Bluett Head and Alexander Collins, M.D., March 24; Staff-Surgeon Peter Mitchell Roe, R.N., to be Fleet-Surgeon in her Majesty's Fleet, with seniority of March 16.

War Office—Medical Department.—Surgeon-Major Robert Edward Heath, M.D., retires upon temporary half-pay; Surgeon Thomas Edward Carroll resigns his commission.

BIRTHS.

Andrews.—On March 23, at Everleigh, Hampstead, the wife of James Andrews, M.D., of a son.

Blackley.—On March 21, at Holly-leigh, Netley, the wife of Surgeon-Major T. M. Blackley, C.B., M.A., M.D., LL.B., of a daughter.

Evans.—On March 22, at 9, Chad-road, Edgbaston, the wife of George H. Evans, M.B., F.R.C.S., of a son.

Keele.—On March 22, at 81, St. Paul's-road, Highbury, the wife of George Thomas Keele, M.R.C.S.E., of a son.

Kerans.—On March 21, at Moss Cliffe, Northwich, Cheshire, the wife of Thomas George Kerans, L.K.Q.C.P., of a daughter.

Legg.—On March 22, at 47, Green-street, the wife of J. Wickham Legg, M.D., of a son.

Scatliff.—On March 21, at 13, Charlotte-street, Marine-parade, Brighton, the wife of J. M. Elborough Scatliff, M.D., of a daughter.

Wilbe.—On March 21, at York Lodge, Finchley-road, N.W., the wife of R. H. Wilbe, M.D., of a daughter.

MARRIAGES.

Miller-Cade.—On March 22, at St. George's, Hanover-square, John Patrick Miller, 64th Regiment, eldest son of J. R. Miller, M.D., Deputy Surgeon-General, Indian Army, to Annie Theresa, only daughter of Francis Cade, Esq., of Frankfort, Cork.

ODLING—ODLING.—On March 20, at Wendover, Tom Francis Odling, M.R.C.S.E., of H.M. Telegraph Service, Shiraz, Persia, to Lucy, only daughter of Edward Odling, M.R.C.S.E.

RICHARDSON—WEDGWOOD.—On March 22, at the Wesleyan Chapel, Hammersmith, Edwin J. Richardson, F.R.C.S. Lond., L.R.C.S. Eng., son of James Richardson, Esq., of Castle-hill, Ealing, to Florence, only daughter of John Raphael Wedgwood, Esq., of Etruria, Barnes.

DEATHS.

CAPE, LAWSON, M.D., at 28, Curzon-street, Mayfair, on March 22, aged 69.

CARR, WILLIAM, M.D., F.R.C.S., at Lee-grove, Blackheath, on March 22, aged 63.

EDE, JOHN ROBERT, M.D., late of Islington, at Avenue-road, Bexley-heath, on March 24, aged 62.

FENNELL, EDWARD HENRY, M.R.C.S., at Southampton-street, Bloomsbury-square, on March 20, aged 57.

GARNEYS, PHŒBE, wife of Charles Garneys, M.R.C.S.E., at Bungay, on March 21.

KING, THOMAS, F.R.C.S., at Chepstow, on March 20, aged 82.

SEETHER, P., M.D., Deputy Inspector of Hospitals and Fleets, at Dunkeld Villa, Nelson-road, Southsea, on March 21.

SCHOLFIELD, HENRY DANIEL, M.D., formerly of Birkenhead, and late of Nantcribba, Welshpool, Bath, on March 22.

STEVENS, RICHARD HOWELL, M.B., late of the Bengal Army, at Denmark House, Slough, on March 22, aged 31.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BUCKINGHAMSHIRE GENERAL INFIRMARY, AYLESBURY.—Resident Surgeon and Apothecary. Candidates must be unmarried Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Apothecaries' Company, London, or possessed of some other duly recognised equivalent medical qualification. Applications, with testimonials, to Mr. George Fell, solicitor, Aylesbury, on or before April 3.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. Candidates must be registered to practise both in Medicine and Surgery. Must be unmarried, and free from the care of a family. Applications to Mr. H. Howells, Secretary, 58, King-street, Carmarthen, on or before May 2.

HULL AND SCULCOATES DISPENSARY.—Resident House-Surgeon. Candidates must have a medical and surgical qualification. Applications to the Hon. Sec., Mr. G. W. Stourton, on or before March 31.

WESTERN GENERAL DISPENSARY, MARYLEBONE-ROAD, N.W.—Honorary Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Testimonials and qualifications to the Secretary, on or before April 9. Gentlemen will oblige by presenting themselves to the Medical Committee, at the Dispensary, on the same evening at 7.30.

THE Clothworkers' and Merchant Taylors' Companies have each contributed one hundred guineas to the fund being raised by the Chemical Society for the promotion of chemical research. A few months ago the Goldsmiths' Company presented £1000 to the same fund.

RECENT advices from Rome state that a society has been formed there for the defence of family principles. This body confers special privileges on those who are the fathers of three children, and it has just awarded its civil crown to a lady named Madame Bouillet, who has given birth to her thirty-sixth child.

ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.—We are very glad to observe how successful the scholars of the Medical College at Epsom have just been at Cambridge. Three of them went up last week to that University to compete for Natural Science Scholarships at different colleges, and all three were successful. L. H. Armstrong gained the Junior Scholarship for Natural Science at Clare College; Shaw, one at Sidney Sussex College; and Hoffmeister, that at Gonville and Caius. Each of the Scholarships is worth £60 a year.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Anæsthetics.—The Société de Médecine of Lyons pronounced strongly in favour of ether, as being less dangerous than chloroform, in 1859.

A Liveryman.—Yes, at the age of sixteen Sir Christopher Wren's proficiency was such in anatomical science, that Sir Charles Scarborough, the eminent physician, employed him as a demonstrating assistant. Wren's knowledge of anatomy generally is acknowledged by Dr. Willis in his "Treatise on the Brain" thus—"It was when at Oxford, and, it is said, while reading the story of Jason and Medea, that the idea occurred to him of the possibility of curing diseases by the transfusion of blood from the veins of one man into those of another." Wren's physiological experiments, exhibited at Oxford, of injecting various liquids into the veins of living animals, are described by him, in his letters to a friend, supposed by Mr. Elwes to have been Sir William Petty.

Dr. Morrison.—Your best plan would be to write to Messrs. Sotheby, Wellington-street, Strand, or to Messrs. Puttick, Leicester-square, for any sale catalogues containing autographs of John Hunter.

Antiquarian.—Antonius Mnsa was a freedman, and physician of Augustus. He cured his imperial master of a dangerous disease under which he laboured, by recommending to him the use of the cold bath and the eating of lettuce. He was greatly rewarded for this cure. He was honoured with a brazen statue by the Roman Senate, which was placed near that of Æsculapius, and Augustus permitted him to wear a golden ring, and to be exempted from all taxes. He was not so successful in recommending the use of the cold bath to Marcellus, and his illustrious patient died under his care. The cold bath was for a long time discontinued, till Charmis of Marseilles introduced it again, and convinced the world of its great benefits. Musa was brother to Euphorbus, the physician of King Juba. Two small treatises, "De Herba Botanica" and "De tuenda Valetudine," are supposed to be the productions of his pen.

A Provincial Teacher.—The Court and Board of Examiners of the College of Surgeons are quite distinct. At the former the following Hospitals are represented:—Guy's, by the Chairman and Vice-President, Mr. J. Birkett and Mr. J. C. Forster; St. Bartholomew's, by Messrs. W. S. Savory and L. Holden; St. Thomas's, by Mr. F. Le. G. Clark; the London, by Mr. T. B. Curling; University College, by Messrs. J. Marshall and J. E. Erichsen; St. George's, by Mr. F. Holmes; and (now for the first time by a provincial gentleman) Professor Humphry, of Cambridge. The Board of Examiners consists of—Messrs. H. W. S. Savory (the chairman) and Mr. H. Power, of St. Bartholomew's; Messrs. J. Birkett and A. E. Durham, of Guy's; Messrs. T. Holmes and T. P. Pick, of St. George's Hospital; Mr. J. Wood, of King's College; Mr. C. Heath, of University College; and Mr. J. W. Hulke, of the Middlesex Hospital. The Board of Examiners in Midwifery has ceased to exist.

WHAT IS GOUT?

Trousseau's remark was, "Notwithstanding the pretensions of modern medicine, we have made no advances since the time of Sydenham in our knowledge of the treatment, phenomena, and special knowledge of gout." The late Lord Derby's celebrated answer to some wine merchants who sent him a sample of "anti-podagric sherry," was that he was much obliged to them, but he preferred the gout.

SUPPLYING DRINK TO DRUNKARDS.

The recent instances of the terrible results of supplying drink to men already drunk may, we hope, be made the means of strongly warning publicans, who, notwithstanding the illegality of the practice, will supply intoxicated men with drink. It is a practice which, it may be feared, is extensively carried on, albeit the primary cause of terrible consequences. Mr. Cross's reply to an inquiry, a few nights since, in the House of Commons, in reference to the murderer then under sentence of death for murdering his wife at Rochdale when in a state of drunkenness, was satisfactory so far, as the local authorities have summoned before the magistrates a publican who is alleged to have infringed the law by supplying drink to the murderer when he was intoxicated. If a conviction follows this magisterial inquiry, it is to be hoped the delinquent will be punished to the full rigour of the law. A severe example seems to be necessary to stop this practice.

THE THERAPEUTICS OF SYPHILIS.

"Tempora mutantur et nos mutamur in illis."

Syphilis is acknowledged to belong to the order of zymotic diseases, being produced by the entry of a specific poison into the blood, and its multiplication therein by a process of fermentation. It differs, however, from other diseases of this class by its method of entry being local, generally visible, and certainly controllable.

The application of the specific virus has for its special effect the production of an induration at the point where the contagion has been established, the subsequent lymphatic engorgement and glandular infarction demonstrating clearly the channel by which the poison enters the blood.

Since a period of time elapses during which the disease is local (confined to superficial tissues), it is reasonable to imagine that the complete ablation of the infected part would entirely rid the patient of his disease. Naturally, a sufficiently free excision, upon the principles adopted in the extirpation of cancer, is the only reliable method of procedure. It appears probable that this plan has not been sufficiently tried, and we may reasonably ask our hospital surgeons to assist us with data for the final resolution of the possibilities of success of local extirpation of the infected area, which may possibly have failed hitherto from tardy adoption, or not sufficiently complete excision when undertaken. The authorities *pro* and *contra* this proceeding are, perhaps, pretty equally balanced so far, even admitting that Mr. Berkeley Hill's case is a powerful argument *in contra*, both from the potency of the caustic used (nitric acid) and the recent character of the contagion (twelve hours); it still was but cauterisation.

The period of superficial infection is limited by days; then follows the lymphatic engorgement. The disease is still local, but is of course now only treatable by general means; still, the condition appears quite hopeful since M. Ricord gave to the British Medical Association the consolatory assurances of curability derived from his unequalled sphere of observation,—proofs which those who see much of this disease can thoroughly corroborate,—proofs which, perhaps it is not too much to say, have greatly influenced wavering opinions of the efficacy of mercury in this affection, confirming supporters and reclaiming opponents; effecting, in fact, marvellous conversions. So, too, with regard to the remedy, M. Ricord's favourite preparation, the protiodide of mercury: it appears well adapted for this stage, since, although it is a powerful agent, and not infrequently produces enteric discomfort, many support it extremely well. The special point in M. Ricord's indications was the necessity for a continued administration of the remedy; and this gentleman, doubtless, is in a position to demand, and obtain, a patient extension of confidence from his clients. It would seem, however, that where the disease remains local a more limited duration of treatment is sufficient, and that within three months, instead of a year, that may be completed.

Weeks have passed, and the disease has become general; the virus, having once entered the blood, is naturally carried far and wide, it is also probably enormously increased. No one yet has succeeded in segregating the poison, so that we do not know its nature, but it possesses certain vital properties apparently. Has it, then, an antidote? Mr. Hutchinson says, "Yes, and that antidote is mercury" (Hunterian Society). Are there such things as antidotes in medicine? Can the complex actions of disease be reduced to the simple reactions of the chemist's laboratory? It is generally held, perhaps, that the active principle of Peruvian bark is an antidote(?) to the specific poison of malaria. In writing some time back on yellow fever (*Medical Times and Gazette*, 1871), I explained that it appeared that the antidotal action of quinine was a consequence of its specific action upon the nervous system, which is probably counter to the effects of malarial poisoning. Mr. Hutchinson has departed from the position he took up in writing the article on syphilis in the first edition of Dr. Russell Reynolds's "System of Medicine," a decade since, where, classing syphilis amongst the specific fevers, he argued thereon that different stages would require different treatment; nevertheless, the modification of Mr. Hutchinson's views will undoubtedly work a beneficial change in the minds of those who had become imbued with his teachings of an earlier period, even if some of them may consider that he has gone somewhat too far in his desire to account for the undoubted benefits of mercury in curing this disease.

It is assumed, then, that constitutional syphilis is of the nature of a specific fever, differing from others of this class by the usual mildness of the pyrexial symptoms, the frequency of relapses, and the occasional occurrence of certain manifestations which are called sequelæ; the whole premising a disease of much longer duration than any of its congeners, but, like them, during its existence protecting the subject of it from liability to a new contagion. Now, up to the present time no remedy antidotal *per se* has been discovered for these diseases, for hardly anyone will claim such a property for styptic preparations of iron (very efficacious though they be) in diphtheria and erysipelas; and therefore many have, by way of experiment, adopted the *laissez aller* plan, and contented themselves with studying the natural course of the disease. Thus von Bärensprung, M. Diday, and Zeissl; and with what results? Von Bärensprung believes that mercury delays the definitive cure of the disease. M. Diday divides syphilis into two classes—increasing and diminishing,—and employs mercury only in the first form; and since (according to his view) syphilis, even when specifically treated, does not disappear within from twelve to fifteen months, he would, except in urgent cases, watch during that period. Professor Zeissl, however, states that in some cases simply treated the symptoms will disappear by themselves in from four to six months, and he makes the startling announcement that should they disappear the cure is almost (!) a definitive one (*nahezu eine definitive*). Such a limited duration of symptoms in simply treated cases is, however, probably quite exceptional; and the Professor himself admits that the simple treatment suffers by comparison with the specific in the wards of a hospital, and is so nearly inadmissible. Finally, Hermann declares that the use of mercury in this disease should be forbidden by law.

On the other hand, M. Ricord, as previously stated, advocates the continuous employment of mercury (and *par excellence* the protiodide) for six months and of iodide of potassium for other six months. It is difficult to apprehend the reason for what it may be presumed is an eliminative course of the iodide of potassium when the mercury has been previously given in combination with iodine. M. Fournier goes further, and advises specific treatment to be continued for two years, interrupting the administration from time to time, so that the patient takes mercury altogether for about ten months out of the period of medication. Mr. Berkeley Hill, too (Hunterian Society), states that eighteen months or two years will be occupied in the cure. On the other hand, Professor Zeissl states that many cases which have not passed away by lapse of time, can be cured by a very limited use of mercury (nine to twelve frictions, or the Zittman decoction). Professor Bäumler states that for the cure of the scleral or primary stage, three or four months' specific treatment by mercury is necessary; but if the disease be general, six to eight months; and he generally insists upon the necessity for a gentle and continuous treatment. Mr. Hutchinson seems specially to have avoided the stating in measured terms the duration the treatment should have; and Mr. Henry Lee, less decidedly avoiding the subject, leaves much to be desired in defining this matter. Practically we can rely on our patients for four or six months, and it is an object to produce our results within such period if possible. With respect to method of treatment, if one may be permitted to express the result of one's experience, we give a decided preference to that recommended by Mr. Henry Lee. The objections to the calomel vapour bath will, it seems to us, be entirely obviated by the indication given by Mr. Lee in his lectures of graduating the quantity of water, and only using a small amount. We think that patients are cured more quickly and more pleasantly by this method than by any other. However, there are some cases where the bath is inadmissible, perhaps for social considerations; and in eye affections we prefer the internal administration of mercury. For that internal administration we prefer the old-fashioned Plummer's pill—four grains night and morning—to any other form, since we find that it less frequently disagrees than other preparations, even the simple hyd. c. cretâ (Hutchinson). The protiodide is more adapted for the primary disease, we think, where rapid absorption of the sclerosis is desired; it is a potent remedy, and often causes intestinal trouble; as also, we think, does the hydrargyrum bicyanidum (Tilbury Fox). We think the "friction cure" disagreeable, and much less certain than the methods we have presumed to indicate.

The symptoms have disappeared *a long while*—can anything be done to lessen the liability to a relapse?

In Europe, the baths of Aix-la-Chapelle enjoy a great reputation as an "after-cure" in this disease; it has been opined that sulphur-bathing is useful as a criterion of the cure of the disease. Dr. Ziemssen (of Aachen), however, speaking at the Hunterian Society, denies the baths any specific virtues, and attributes the good effects of treatment there to the method of employing mercury by frictions, and its limitation in amount and duration. It is certain, however, that a large number of patients are apparently cured at this Spa, and it appears probable that the success is due to a combination of favourable hygienic conditions—quiet, pure air, cleanliness of the surface by the constant bathing, only regulated exposure to the atmosphere during treatment, and a carefully regulated dietary. It appears that in attention to the hygiene of the patients we are probably less careful than the old surgeons were. It is known that exposure powerfully influences unfavourably mercurial treatment, yet how often do we not allow our patients to follow their usual avocations; and beyond excluding alcoholics from the dietary, how little do we interfere in this respect. The old surgeons certainly confined their patients more strictly to the house. So, too, hydropathic treatment has undoubtedly favourably influenced syphilis, not during a mercurial course, or in lieu of it, but following a carefully carried out specific treatment. Such a hydropathic treatment as is composed of aspersion of the surface by extremely cold atomised water once daily is certainly beneficial in toning the patient and removing the sensibility to external changes which so commonly succeeds mercurial treatment. Beyond these plans, a sea-voyage, it is well known, is an excellent regenerator of the debilitated strength of the patient; and Professor Bäumler praises it as enabling a patient again to derive advantage from a specific treatment, should such be advisable.

It is at this point that we may well take into account the influence of remedies which, though inferior to the special specific, mercury (which some consider the antidote to the disease), are certainly capable of rendering valuable service in this disorder. And thus of the iodide of potassium, —this remedy enjoys a well-merited reputation for its speedily beneficial effects upon advanced stages of syphilis, and Professor Zeissl even claims for it a favourable influence upon the earliest stages. This, however, is rather opposed to general observation, which fails to appreciate that it has any very decided influence on the primary and secondary periods. All who have employed it can attest its surprisingly rapid benefits in advanced phases of the malady; but it is equally generally objected that relapses are speedy and frequent after its use. Nevertheless, it seems probable that some cases (perhaps small in proportion) have been cured by this remedy; and its quick effect in relieving osteocopic pains will always retain it in use. The sarsaparilla-root also has long enjoyed a popular reputation for the cure of syphilis; but it has failed to a great extent to maintain the confidence of the practitioner. Mr. Henry Lee, in his lectures lately delivered at the College of Surgeons, has possibly given us the clue to the cause of this mistrust. The two cases he cites of the cure by this remedy of syphilis in an advanced stage are certainly very striking, and I can corroborate the evidence to such an extent that apparent cure has been effected where mercury and iodine have failed; and only lapse of time is required to demonstrate if the cure is definitive. If our mistrust of sarsaparilla arises from having employed it in too small a quantity, the assertion of the cause of it suffices to insure a fairer trial, upon the principle that the old indifferent dose of the extract shall be replaced by a sufficient quantity (a pint daily) of the freshly prepared simple decoction.

We may now consider the Zittman treatment, which may be considered eliminative—a limited diet, and the exhibition of large quantities of a decoction of sarsaparilla and senna, in which calomel and oxysulphuret of antimony have been boiled (enclosed in a bag). The effect of this is clearly by derivation. The patient is confined to bed, and takes the decoction hot. The result is—catharsis, diuresis, and diaphoresis. Modifications have been adopted by limiting the quantity of decoction administered, and by giving a nutritious diet during the treatment, which, to be of value, must apparently extend to a period of upwards of a month. Thus modified, the treatment is commended by Professor Zeissl; and doubtless it has given, in a certain (though perhaps small) proportion of cases, good results.

The guaiacum and sassafras woods previously enjoyed considerable reputation in the treatment of this disease; but to-day they are, perhaps undeservedly, relegated to obscurity. It would be advantageous to know if, by employing their decoctions in large quantities, as Mr. Lee recommends, with the sarsaparilla, they approach that drug in efficacy.

A word may be stated about the hypodermic treatment. It not unfrequently causes sloughing and abscesses, and is thus hardly to be selected.

The term "cure" has been constantly employed in this paper, but, as Professor Bäumler says, we have unfortunately no criterion for asserting in any case a complete cure. There exist, of course, two criteria of such a fact, however, but naturally they are almost entirely inapplicable. One is a new infection, because so long as the disease exists the individual is impervious to the contagion; the other is the non-appearance of any signs in a patient, or in his offspring, throughout life. To general practitioners we must look for data for the resolution of this problem, if it is capable of resolution. Our *résumé* has shown to us that the cure of syphilis may be brought about in many ways; so in some rare cases can a cure ensue spontaneously, but, we believe, too rarely for reliance upon simple treatment, in spite of the weighty dicta of von Bärensprung. On the other hand, no purely antidotal action can, we believe, be claimed for any one of the several remedies mentioned, nor any exclusive application for any one method of treatment or any single form of preparation.

Pathological considerations have not entered into this paper, but two remarks may perhaps be permitted. It is true that the proofs, upon research, of modified syphilis must to a certain extent influence our opinions, and is favourable to the views of unicists; but, therapeutically, dualism still holds its own. And further, that probably pathologically, as apparently therapeutically, the advanced stages of this disease are to us, practically, diseases of the blood, although the dyscrasia of such states may be but temporary, and explicable upon the Virchow theory of the latent existence of depôts become active by reabsorption. Mercury, iodine, sarsaparilla, hydropathic treatment, the sulphur spa plan—all, and each, have probably cured syphilis; while quinine, iron, opium, and sea-voyaging have equally arrested the ravages of the disease.

The iodide of potassium often causes unpleasant coryza in mercurialised subjects. Its combination with an equal quantity of nitrate of potash seems to obviate this. For the specific treatment of syphilis, mercury, gently administered if there is no eye affection, more rapidly if that organ or the larynx is affected, and as an after-cure sarsaparilla, cold bathing, and sea voyaging, seem the means most worthy of our confidence. Extension of the treatment, and its amplification, seem likely to warrant an augmentation of confidence in our capacity for curing the disorder. Mr. Henry Lee, Mr. Hutchinson, and Mr. Lane have done much to dissipate the lack of faith in treatment so prevalent a decade ago. With regard to the probable limitation of the period of hereditability of this disease, mentioned by Mr. Hutchinson in his philosophic reply at the debate of the Pathological Society, and in support of his statement, I may state that I have in observation a strumous family of five children, of the respective ages of ten, seven, four, two, and one years. The child of four years of age is markedly syphilitic (physiognomy, teeth, and affection of the eyes), and the information that it nearly died in the first year of its existence. When I first saw it at about one year old it was highly marasmatic, and had no power over its lower extremities; now it is well nourished and strong in muscular power, but suffers with eye affections. The two eldest and the two youngest children appear simply strumous. The mother occasionally suffers from advanced specific affections. Finally, I may state that I have seen syphilis apparently cured by all the methods mentioned in this paper, but I have yet to appreciate a case of its spontaneous disappearance.

W. N. Hiron,
Buenos Ayres. M.D. Brussels, L.R.C.P., M.R.C.S., L.S.A.

COMMUNICATIONS have been received from—

Messrs. Probyn and Co., London; Messrs. May and Co., London; The Registrar of Apothecaries' Hall, London; The Secretary of the Statistical Society, London; Dr. E. Sparks, Mentone; Mr. H. Hitchcock, Lewisham; Dr. Gillespie, London; The Secretary of the Royal Microscopical Society, London; Mr. H. Raynes, Gringley-on-the-Hill; The Secretary of the Royal Institution, London; Dr. George Johnson, London; Dr. Willoughby Arding, Wallingford; Dr. Edis, London; Mr. G. Cooper Franklin, Leicester; The Secretary of the Pathological Society, London; Dr. John Williams, London; Mr. John Chatto, London; Dr. Bruce, London; Dr. Barlow, London; Mr. B. R. Wheatley, London.

BOOKS AND PAMPHLETS RECEIVED—

T. Pridgin Teale, M.A., Dangers to Health in our own Houses—Probyn's Formulæ of Tasteless Pills, etc.—Eighteenth Annual Report, Sussex County Lunatic Asylum, Hayward's-heath—Dr. A. von Tröltsch, Lehrbuch der Ohrenheilkunde mit Einschluss der Anatomie des Ohres—Fifteenth Annual Report of the Cumberland and Westmoreland Lunatic Asylum, 1876—Richard O. Cowling, A.M., M.D., The Relations of Medicine to Modern Unbelief—T. R. Lewis, M.B., and D. D. Cunningham, M.B., The "Oriental Sore" as observed in India; Leprosy in India—Thomas Gurney, M.D., Cancer, Tumours, and Minor Operations, as Treated without the use of the Lance—Transactions of the New York Pathological Society, vol. i.—John Cockle, A.M., M.D., Notes on the Surgical Treatment of Aortic Aneurism—David Cullen, M.D., On some Undetermined Points in Typhoid Fever—William Macgregor, M.D., A New Form of Paralytic Disease.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Révue des Sciences Médicales—Home Chronicler—The Colonies and India—Malvern News—Sunday at Home—Leisure Hour—New York Medical Journal—Enciclopedia Medico-Farmaceutica—Medical Enquirer—Nashville Journal of Medicine and Surgery.

APPOINTMENTS FOR THE WEEK.

March 31. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

April 2. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal Institution, 2 p.m. General Monthly Meeting.

3. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. Godlee—Granulation Material from White Swelling of the Knee-Joint. Dr. Burney Yeo—Aneurism of the Superior Mesenteric Artery compressing the Renal Arteries. Dr. Fagge—1. Contraction of the Larynx after Tracheotomy; 2. Hypertrophied Bladder in Diabetes. Dr. Coupland—1. Lymphoma of the Stomach; 2. Lymphoma of the Prostate. Dr. A. Morison—Organs from a Case of Hodgkin's Disease. Dr. Greenfield—1. Lymphosarcoma of Abdominal Gland; 2. Case of Lymphadenoma. Dr. Irvine—Aneurism of the Coronary Arteries. Dr. F. Robinson—Case of Abdominal Cyst. Mr. Barker—Vesical Calculi.

4. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Specimens. Dr. Ashburton Thompson, "On a Case of Deformity" (living subject). Dr. Playfair, "On Fibroid Tumour complicating Delivery." Dr. James Braithwaite, "On a Mode of Treatment of Retroflexion." And other Communications.

Royal Microscopical Society, 8 p.m. Mr. Thos. Palmer, "On the Various Changes caused in the Spectrum by different Vegetable Colouring Matter."

5. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Harveian Society, 8 p.m. Mr. Carr Jackson, "On a Case of Traumatic Meningitis." Dr. Farquharson, "The Diagnosis and Treatment of some forms of Dyspepsia."

6. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 24, 1877.

BIRTHS.

Births of Boys, 1303; Girls, 1229; Total, 2532.
Average of 10 corresponding years 1867-76, 2322·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	944	858	1802
Average of the ten years 1867-76	781·1	778·5	1559·6
Average corrected to increased population ...	...	...	1669
Deaths of people aged 80 and upwards ...	...	...	83

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	1	3	...	4	...	1	...	2
North	751729	45	9	3	2	8	2	3	...	3
Central ...	334369	...	7	2	...	7	...	2	1	...
East	639111	15	6	2	...	11	1	5	1	3
South	967692	13	9	7	1	7	1	7	1	3
Total	3254260	76	32	17	3	37	4	18	3	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·317 in.
Mean temperature	37·7°
Highest point of thermometer	53·0°
Lowest point of thermometer	26·5°
Mean dew-point temperature	32·3°
General direction of wind	Variable.
Whole amount of rain in the week	0·56 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 24, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Mar. 24.	Deaths Registered during the week ending Mar. 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2532	1802	53·0	26·5	37·7	3·17	0·56	1·42
Brighton	102264	43·4	52	47	49·0	29·8	37·6	3·12	0·85	2·16
Portsmouth ...	127144	28·3	85	56	49·5	30·5	38·7	3·72	0·64	1·63
Norwich	84023	11·2	60	35	48·5	26·5	37·4	3·00	0·53	1·35
Plymouth	72911	52·3	41	33	49·7	30·5	38·7	3·72	0·63	1·60
Bristol	202950	45·6	142	85	54·3	26·0	38·6	3·67	0·56	1·42
Wolverhampton ...	73389	21·6	57	46	46·3	25·4	34·8	1·56	0·62	1·57
Birmingham ...	377436	44·9	361	241	49·2	27·4	37·2	2·89	0·33	0·84
Leicester	117461	36·7	102	63	52·8	26·8	38·0	3·33	0·43	1·09
Nottingham ...	95025	47·6	50	59	51·6	23·0	36·8	2·67	0·05	0·13
Liverpool	527083	101·2	426	309	49·0	30·0	37·7	3·17	0·60	1·52
Manchester ...	359213	83·7	301	218	53·0	25·0	35·5	2·50	0·26	0·66
Salford	141184	27·3	161	94	50·6	24·0	36·8	2·67	0·20	0·51
Oldham	89796	19·2	86	74	...	...	...	...	...	...
Bradford	179315	24·8	137	88	46·0	28·4	36·8	2·67	0·07	0·18
Leeds	298189	13·8	232	175	47·0	31·0	37·9	3·28	0·11	0·28
Sheffield	282130	14·4	220	163	48·9	24·4	36·5	2·50	1·29	3·28
Hull	140002	38·5	133	78	49·0	24·0	36·2	2·33	0·29	0·74
Sunderland ...	110382	33·4	99	50	53·0	30·0	39·1	3·95	0·19	0·48
Newcastle-on-Tyne	142231	26·5	93	73	...	...	...	...	...	...
Edinburgh	218729	52·2	142	97	48·9	25·3	36·7	2·61	0·30	0·76
Glasgow	555933	92·1	441	398	...	...	...	...	...	...
Dublin	314666	31·3	231	244	49·0	23·5	37·8	3·23	1·49	3·78
Total of 23 Towns in United Kingdm	8144940	38·3	6184	4528	54·3	23·0	37·4	3·00	0·50	1·27

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·32 in. The highest reading was 29·64 in. on Thursday evening, and the lowest 28·87 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE CLINICAL ASPECTS OF CHOREA,

AS AFFORDING A KEY TO ITS PATHOLOGY.(a)

By OCTAVIUS STURGES, M.D., F.R.C.P.,
Assistant-Physician to the Hospital for Sick Children; Physician to the Westminster Hospital.

LECTURE I.

DESCRIPTION AND MODE OF ORIGIN.

GENTLEMEN,—The subject of these lectures hardly needs formal justification. It will not be urged against the discussion of chorea and diseases of the same class, that their nature is already sufficiently understood. Take, for instance, these three affections, whooping-cough, chorea, hysteria, and observe how wide is the difference of opinion in regard to all of them. As to the first, the prevalent belief (and that which the State sanctions in its official returns) connects whooping-cough not with nervous diseases, but with enteric fever and small-pox. As for chorea, the assertion that it is a derangement of function is denied both by those who would reject that expression altogether, and, more explicitly, by some modern histologists who would derive its symptoms from vascular repletion or minute emboli. And of hysteria, the very name, indicating as it does a uterine origin and consequent limitation to one sex and a particular period of life, is regarded by many as a vicious expression which the facts of the disease sufficiently contradict. These disorders have indeed but this in common—that the names by which they are known are all calculated to mislead. Whooping-cough may exist without any sound of whooping. Chorea has no resemblance whatever to dancing. Hysteria, like hypochondriasis and "the spleen," preserves an old and mischievous fancy, which placed moral and mental attributes in the special charge of individual organs.

But while hysteria is a term of great antiquity, recalling conceptions belonging to the infancy of medicine, chorea and whooping-cough are comparatively modern. The old term *chin-cough*, as Dr. Lee mentions, first appears in the bills of mortality of 1678, and for the year 1701 there were in London two deaths from chin-cough and but one from whooping-cough. There are now about 4000. The first description of chorea was that of Sydenham, whose observation so far differs from our own that he speaks of it as "a sort of convulsion which chiefly invades boys and girls from ten years of age to puberty, showing itself first by a certain lameness or rather instability of one of the legs, which the patient drags after him like a fool." We have to assume, therefore, in the case of whooping-cough, either that it is a modern disease, or else that its special characters of infectibility and non-recurrence passed unrecognised through a long series of years; while, in regard to chorea, we must suppose either that the period and manner of its attack have changed since Sydenham's time, or else that this observer was in gross error in his description of what he saw. It is difficult to avoid the conclusion that affections of this class have become more prominent in our day, whether by actual increase, or because our notions alter as to the true limits of disease.

To Sydenham's description of chorea, then, must be added what he failed to see in regard to its cause and common accompaniments, and what he could not know in regard to its concurrent heart-disturbance. Yet it is possible in the definition of disease to include too much as well as too little. Our own view of chorea may be as erroneous as was Sydenham's, from giving undue weight to exceptional symptoms, and forcing certain accidents of the disease into unnatural prominence. Chorea has to be considered first of all in its customary shape, and no considerations as to its exceptional forms must be suffered to narrow—though it may properly help to define—that first view of it. The symptoms of gravest weight must be those that are found to be essential; those without which chorea cannot be. The pathology which finally obtains acceptance must be that which accommodates the largest number of instances, while it is not contradicted by any.

It is needless to spend time and pains in the description of a disease which is familiar to everyone. Yet, if chorea itself were not within easy reach, the accounts given of it would convey but a feeble picture of the actual thing. Not to mention the comparison to the feats of Merry Andrew, which I cannot regard as peculiarly happy, to speak of it as a convulsion, as though various groups of muscles were successively agitated by spasm, would describe, at most, those severe forms of the disease where chorea has lost its special distinguishing characters. Ordinary childish chorea is not convulsion, though it may become so. No formal terms convey a notion of it half so well as the word "fidgetiness." Whoever can picture to himself a shy and restless child placed in circumstances of embarrassment will picture chorea; whoever can heighten the picture, conceiving of a greater degree of restlessness and confusion than ordinary shyness produces, *but no jot of change in the manner of either*, will have before him chorea of no mean severity. The difference between this kind of muscular disorder or over-movement and true spasm is best seen in the working of the muscles of the face. Anyone can imitate the facial restlessness of the choreic child: no one can imitate the facial distortion of the epileptic. Common chorea exhibits muscular fidgetiness and unrest. And as every child may serve to remind us of chorea, so, too, in tracing the mental and bodily development from youth to maturity we get further and further off from it, until in old age we reach its counterfeit, when the full muscular control of manhood becomes disfigured by an involuntary trembling.

It is necessary to dwell upon these characters of chorea, because other affections, differing from it in symptoms and origin and ultimate fate, have been called by its name. There is, for example, the so-called "electric chorea" of Milan, where the very high mortality, the rhythmical character of the movements, the presence of fever, and the adult age of the patients, are all in marked contrast to our own childish chorea. I would even venture to maintain that the instances of involuntary muscular movements quoted by Dr. Radcliffe in his well-known paper upon this subject in "Reynolds's System of Medicine," are not instances of true chorea. There is, at all events, enough in the child's affection of that name, in its guise of exaggerated restlessness, its disposition to come and go, its association with mental disturbance and with rheumatism, and, above all, in the heart affection that goes along with it, to justify the exclusion of cases that have none of these characters. So, again, muscular twitching and instability, where either a particular muscle of the face is repeatedly contracted, or the head is kept in continual oscillation, are phenomena interesting, as I shall try to show, as illustrating the pathology of chorea, yet differing from the chorea we have now to discuss.

This notable feature in chorea—that its movements are neither rhythmical, like the "electric," nor intermittent, like the twitching which habit so easily generates—is fully recognised by writers who would yet seek for some vascular explanation of its phenomena. "Let it be granted," says Dr. Dowse in a paper upon the subject,(b) "that in chorea we have *something unique*—movements, in fact, which can scarcely be called tonic or clonic, without rhythm, uniformity, or regularity." Nevertheless, these movements, difficult and anomalous as they are to the pathologist, are sufficiently familiar to mothers and nurses. By coaxing, or diverting, or alarming a shy little child you may produce in turn a miniature resemblance of all the main characters of the disease.

I hope to be excused in dwelling upon these preliminary points. The necessity for doing so arises out of the many attempts to construct a pathology of chorea from its exceptional examples—a pathology which requires, for instance, that the affection should be sudden, or one-sided, or involuntary, or consequent upon cardiac imperfection, or upon anæmia; whereas the notorious fact is that such cases as these err from the common rule.

The chorea that I have before mo is an affection of childhood, exhibiting, as I have said, in exaggerated degree those characters of fidgetiness which belong to the child by nature. It is so far obedient to control that by an effort on the part of the patient the movements can be quieted for a while, although the period of calm is apt to be followed by increased disorder. Similarly, when the attention is fixed on something external, or when the mind is engaged in settled musing apart from itself (a condition rare and difficult with children), the movements are at the least;

(a) Delivered at the Hospital for Sick Children, Great Ormond-street, March, 1877.

(b) *British Medical Journal*, January 13, 1877.

while with the opposite state of mind—self-consciousness or embarrassment—they are at the greatest. It is easy, moreover, even with chorea of some violence, to hold an arm or a leg with sufficient firmness to prevent chorea so far as that limb is concerned. But the agitation, thus forcibly arrested in one place, will be transferred to another, so that the sum of deranged movement is not lessened. Further, this chorea is seldom one-sided, although commonly partial; certain muscles, that is to say, escape—the face, or the legs, or the speech, or the heart (according to no anatomical rule, yet after a law, as I think, which is not capricious); and of the muscles that are implicated all do not suffer in equal degree. The more disturbed limbs, or those in which disturbance lasts the longest, become eventually weakened, the loss of power being sometimes very obvious. Yet there is no actual palsy (I speak of the rule, and not of the very rare exception), nor arrest of nutrition, nor loss of tactile sensibility, nor of electric response—no permanent change, indeed, of any kind. The weakness has all the characters of fatigue, and none of the characters of partial paralysis from nerve-lesion.

Upon these main features of chorea (with others, less common, to be mentioned in their place) I shall venture to insist, yet without ignoring the fact that the disease is occasionally one-sided; that it may become a quite involuntary spasm; and that it has been known to end in paralysis and even in death.

And except that the subjects are children between four and thirteen, and in a very large proportion of cases girls, I know not whether we can safely indicate what manner of person chorea will seize by preference. Sir Thomas Watson has observed that children with dark hair are "much more frequently attacked than others," and believes he has seen the same remark in a book. Dr. Dickinson, on the contrary, believes that a predisposition can be recognised in children "whose pink-and-white complexions and colour of hair give them what is known as the Saxon type." It has been attempted, with little success, to associate the disease with scrofula and with syphilis. The familiar doctrine that would make such children the ready prey of a great variety of ailments finds but little support from the history of chorea, which is very indifferent to diathesis.

It is not altogether the same with temperament. Just as the less stable sex suffers in large excess, so, taking both sexes together, it is the emotional children that suffer most and worst. Yet the emotional element is not always prominent in chorea. Children will sometimes exhibit a stolidity and general indifference singularly inappropriate to their age, and making them very like men. Such children are not on that account safe from chorea. I had charge lately of a girl of thirteen, in her fourth attack of it, who, to all appearance, is heavy and unexcitable. I had also a boy, with severe and protracted chorea, who, in respect of imperturbability and precocity, resembled the youth of the London streets. It is very necessary to bear such examples in mind, lest at the outset the field of inquiry should be unduly narrowed. Although the emotional element is very largely represented in chorea patients, the disease embraces a great variety of temperament, and, except it be for rheumatism (whose claim in this respect we have yet to consider), is remarkably impartial in its choice of subjects.

The relationship between chorea and rheumatism was first asserted, I believe, by Dr. Copland. It has been accepted in this country and in France (hardly so much in Germany), and in some quarters has almost displaced the older belief in the efficacy of mental causes. I think I am accurately representing the prevalent opinion upon this subject by saying that it recognises two main causes of chorea, the one *rheumatism*, the other *fright*; admitting, at the same time, that a large number of the cases arise in neither of these ways, and are, in fact, unaccountable.

Now, turning to the naked statistics, I have to refer very briefly to four separate series of cases, comprising together 124 instances of the disease. These were taken consecutively, except in the one series that relates to fatal cases, where the only selection had reference to that result. Of 22 cases (the first series) coming under my own observation, the origin of the affection was "doubtful or unnamed" in 13 (in 2 of these there being good reason to believe in some emotional cause); *fright* was the alleged cause in 5; *acute rheumatism* in 1. Of the remaining 3, 1 had chorea *concurrently* with acute rheumatism (the former being attributed to fright), 1 had chorea *first* and acute rheumatism *afterwards*, and in 1 the chorea seemed due to the irritation of round worms. Of the 13 first named, where the cause of attack was unknown, "rheumatism" was present in the histories of 7, *not in near connexion of time with the chorea*, and "acute" only in one instance.

Secondly, in a series of fatal cases tabulated by Dr. Dickinson (*Transactions of the Royal Medical and Chirurgical Society*, vol. lix.), where the total number is again 22, there are 12 of *doubtful or unnamed* origin, 4 are *immediately connected with fright*, and 2 with *other mental disturbance*. *Acute rheumatism* occurs *as the cause* in 3, including one where there was an interval of three weeks; it happened subsequently to the chorea in 1. Of the 12 first named, where the cause of attack was unknown, "rheumatism" was somewhere in the histories of 3.

In a third series, derived from the practice of the same physician at this Hospital, including 71 cases (*not* 70 as stated in the paper), there are 23 of doubtful origin, *where rheumatism may be absolutely excluded*, and 16 were preceded by fright. Of the whole 71, "rheumatism" is in the history of 17 (it was "acute" and immediately preceding in 5, "acute" but not connected in time in 1), *fright* is *in the history* of 25, and some mental emotion was rendered probable in 6 more; 9 were equivocal.

Taking, however, a fourth series of 9 consecutive cases, admitted into my wards at the Westminster Hospital (the average of age being somewhat older than at this Hospital), there is a distinct account of *fright* as the immediate cause in no less than 7; the two exceptions being a boy of twelve, of violent temper, who had had acute rheumatism some months before, and a girl of nine, who had had rheumatism two years before, and was now in her second attack of chorea, of which the severity of school discipline was the alleged cause. There is no "rheumatism" except in these two.

Taking these four series together, we have 124 cases where (dismissing other mental disturbance altogether) *fright* was the immediate cause in 32; *acute rheumatism* happened *before*, or *with*, or *after*, in 15 (occurring as *immediate cause* in 10), while "rheumatism," not acute, is *in the history* of about 21 more. Not to defraud rheumatism, however, let us admit every instance wherein this somewhat vague expression is made use of, against every instance where *fright* is mentioned *as immediately preceding the chorea*. We then get, out of the 124, 36 to the *rheumatic* account, against 32 to the *fright* account.(c)

Such being the naked statistics, it behoves us, before accepting them as absolutely true, to consider the circumstances of the case, and especially to give some account of the large number of instances of chorea which in every enumeration are counted as "*spontaneous*." As regards the frequency of rheumatic chorea, it behoves us further to consider three things—

First, children are subject to many pains (growing pains, and other unscientific disorders) certainly not rheumatic, yet eagerly seized upon afterwards as evidence of rheumatism.

Secondly, cardiac murmurs, heretofore regarded as deposing in favour of past rheumatism, are now known to be due as often to the chorea alone. We are rid of the error, but not of its consequences. Much of the belief of the connexion between rheumatism and chorea (which I am not denying) has thus been built up out of improper material.

Thirdly, pain of great acuteness, and sometimes attacking the joints, often precedes the muscular disorder as part and parcel of the chorea itself.

In illustration of these remarks, I would mention here a case to which my friend and colleague Mr. Richard Davy was good enough to call my attention the other day. A girl of eleven was brought into Westminster Hospital with acutely painful and tender knee-joint. There was neither swelling nor effusion to account for this pain, which, in effect, very shortly subsided abruptly on the appearance of chorea. A similar case came under my observation some years ago, where acute pain in the hip of a little girl suddenly departed on the appearance of chorea. In another (also a girl), pain referred to the heart, and of extreme severity, ended in the same way. Of these three examples, two, no doubt, will be put down hereafter to rheumatism; yet in all three the character of pain was precisely that which is associated with hysteria. Quite lately I

(c) A *fifth* series, completed since the above was written, would make the total number 143, with 38 to *rheumatic*, and 34 to the *fright* accounts in the sense used above. I do not assert the *precise* accuracy of these figures. There is a contention of causes in some cases, where, for example, both fright and rheumatism figure together, and the immediate cause of the attack must be left to conjecture. Errors of this source are not likely to be so numerous or one-sided as to vitiate the general conclusions.

came upon a case of chorea counted as rheumatic, but where upon strict inquiry the preceding rheumatism resolved itself into the limb-pains of an influenza cold.

And observe how the readjustment which these considerations and examples demand, while it is so much to the loss of rheumatism, is so much to the gain of mental disturbance as a cause of chorea. Acute rheumatism can never be overlooked, while much that is not rheumatism at all is very likely to be taken for it. Mental disturbance, on the other hand, is very apt to escape our attention; in all but its simplest forms, indeed, it is beyond the child's power of expression. Keenly interested as children are in all that is passing around them, subject to continual surprise and disappointment, and strong revulsion of feeling, their means of giving expression to their emotions are extremely limited, and such means as they have are reserved for very limited use. Quite unable to give any word-utterance to sensations which they yet feel with sufficient acuteness—remorse, pity, just indignation, the sense of injury,—their single symbol for all depressing feelings is tears; and these they reserve almost entirely for the expression of sorrow or alarm. The violent and uncontrollable screaming of childish passion (whose likeness to mania is overlooked in its impotence) is without tears. In more advanced life, and especially with women, this one sign —weeping—is of much wider signification. Although these latter are provided with so many more avenues for emotion than children—language, facial expression, imploring or defiant attitudes, and the like,—yet they employ tears for a variety of uses, and under many different states of mind.

In this dearth of expression-outlet, which is itself a source of irritation, many of the emotions of the child escape recognition, while some are misinterpreted. Vague sensations of uneasiness get expressed in terms of physical suffering; much that is not actual pain very easily passes for it.

Such considerations (assuming only that mental impressions have anything to do with causing chorea) would lead us to believe that various kinds of emotion were associated with a larger number of cases of chorea than appear upon record, be that number large or small; the more so when it is remembered that, as causative of chorea, all mental impression is by custom restricted to the single impression of fear. Yet, even with this arbitrary limitation on the mental side, and with no limitation whatever to "rheumatism," it still appears that *mental impression figures in statistical tables as being as potent a cause of chorea as rheumatism.* How would it be if we put these two causes on the same level—fear against rheumatism? —if, after asking, "Has the child ever had rheumatism?" we put the parallel question, "Has the child ever been frightened?" The effects of fright are as apt to linger as the effects of rheumatism. It is in the nature of a nervous impression to be renewed over and over again in all its original strength when circumstances arise to suggest it. There are sensations which never grow dim, which start up unbidden at a sight or a smell with no train of thought to lead up to them. Everyone who knows children knows how easy it is to move their light minds by the same expedient repeatedly; how the same story of wonder or horror will excite corresponding emotions over and over again upon each repetition.

The fact that in a large number of instances of chorea there is *an interval* between the assumed cause and the effect seems thus easier to provide for in the case of fear than in the case of rheumatism. The rheumatic origin of chorea depends upon the hypothesis that the rheumatic poison can produce this amongst its other results—as, for instance, it produces delirium. "The connexion," says Dr. H. Jones, "seems to me most naturally explained by regarding the motor disorder in just the same light as we do delirium." But, if that were so, why does not chorea, like delirium, happen *along with* rheumatism? Delirium of acute rheumatism is a part of it; when the rheumatism is past the patient is no more liable to delirium than anyone else.

These considerations, I say, taken along with the statistical fact that a single mental emotion—fear—is productive of as much, or nearly as much, chorea as the rheumatic habit, compel the admission that mental causes are more potent than rheumatism. And not only so, but we are entitled to say of the "spontaneous" and unexplained cases that *while rheumatism may often be excluded for certain, mental impression can never be excluded for certain.*(d)

We have then chorea, considered in reference to its cause, divisible into three classes—first is that which arises out of mental impression; next, that which is connected with "rheumatism," and less often with acute illnesses, as scarlatina and measles; and thirdly, the chorea which we call "spontaneous," but in regard to which, as I have just said, we can never certainly affirm that it is not of mental origin. Yet, be the source of the affection what it may, chorea once started runs a course of its own. Seldom recognised at its very beginning, the interval between cause and effect is really narrower than appears. Children are not so handy and dexterous that a slight defect in ordered movement should at once be put to the score of disease. Rather is the patient deemed careless or perverse. She drops the crockery or spills the milk, or goes back in her writing. These failures, being for the while misunderstood, are met by punishment and derision. By such treatment the child not only loses the confidence which is necessary for the regulation of all muscular acts, but endures as well the mental suffering arising from a sense of injury. Thus, the consequences of chorea become the cause of more chorea. We have here the material out of which muscular instability, so slight as to be beyond the domain of disease—a mere habit of awkwardness bred of some passing cause,—is so nurtured and fed, that it grows into a general disorder which nothing but time and increased mental strength will cure.

In these as in other respects we have to observe that the pattern of chorea is always the same, or, more truly, that choreas of whatever origin are inextricably mixed. You cannot say, for example, the chorea of fright will be severe, that of rheumatism trivial, or one sort will affect the legs, another the arms, or one kind will recur and another will not. *The difference is made by the difference in the subjects.* Thus, while the method of the motor disorder defies scientific description and has to borrow from the phraseology of the nursery, its classification is not less difficult. In the uniformity of its symptoms there is strong reason to suspect that its prime motive is always the same. We may at least hope by a careful analysis of its several phenomena to discover some common element in which all its causes coincide. To such analysis I shall ask your attention in the next lecture.

(d) Almost always, indeed, there is something or other in the history of these spontaneous cases very strongly suggestive of mental origin—*e.g.*, the child is the weakest of the lot. How often are we told this, and how much is implied in it, especially with the poor. How often must such a child in the common games and exercises and school be subjected to injurious (because excessive) mental strain.

ORIGINAL COMMUNICATIONS.

REMOVAL OF LARGE FIBROID UTERUS WITH OUTGROWTHS AND BOTH OVARIES: RECOVERY.(a)

By J. KNOWSLEY THORNTON,

Surgeon to the Samaritan Free Hospital for Women and Children.

Mrs. H., aged thirty-eight, came to me in September, 1875, stating that she had an abdominal tumour. She was a native of London, and had been married seventeen years to a Frenchman, by trade a tailor. During the last twelve years they had been residing in Canada. She had never been pregnant, and menstruation, which commenced at fifteen, had been regular, scanty, lasting two or three days, and accompanied by a good deal of pain in abdomen, back, and under left breast. About four years before I saw her she began to suffer from more constant pain in the back, and from a general sense of weakness and inability to go about as usual. Eighteen months later she noticed increase of size, and found a hard lump low down in the left side of her abdomen. This lump grew steadily but slowly larger, while the pain both at and between the monthly periods became so severe that she was unable to attend to her domestic duties, or to walk about without assistance. Her appetite became bad, bowels confined, and her nights restless from pain, which various sedatives failed to relieve. She consulted many doctors in Canada, and they all told her she was suffering from tumour of the womb, and any operation for its removal would kill her. She accordingly determined to come back to her native city, and see if she could get relief.

During the last few years before her return to England, and while consulting various medical men, she had three times had small intra-uterine polypi removed, but she could not remember the dates.

(a) Read before the Medical Society of London, February 19, 1877.

When she first came to me she was thin and worn, face deeply furrowed, and she walked with difficulty even when supported, the body bent forward and sideways. On examining the abdomen I found a hard movable mass in the left iliac region, extending slightly across the linea alba; pressing and moving it caused her considerable pain. In the right side was another similar, but much smaller and more tender, lump, and the two appeared to have some deep pelvic connexion. By vaginal examination I found a small hard and movable cervix, the os pointing rather to the right side, and having a small pediculated polypus hanging from it. Tracing up from the cervix, I felt some small nodular projections just at its junction with the body of the uterus, and then what appeared to be the body of the uterus much enlarged and displaced to the left side, this being, in fact, the left side abdominal tumour. The right side and back part of the pelvis I found occupied by a hard, elastic, globular mass, which appeared to arise from the enlarged uterus on its right side just above the vaginal portion of the cervix. It seemed nearly to fill the pelvis, and was but slightly movable with much pain to the patient; the lump in the right side was evidently the abdominal part of this mass. The sound passed nearly five inches into the mass on the left side. I have said that the mass in the right side was but slightly mobile; it was sufficiently so, however, to make me feel pretty sure it was only wedged, not adherent.

My diagnosis was, much enlarged uterus with outgrowths, the largest occupying the pelvic cavity.

I at once told the patient that I quite agreed with her Canadian advisers, and I at the same time recommended palliative treatment, to which she somewhat unwillingly consented. During the following three months I saw her occasionally, and each time found her worse than when last seen. At one time she had a smart attack of pelvic peritonitis, due, I believe, to an attempt being made, in the out-patient room of another hospital, to push up the pelvic portion of the tumour. I was puzzled to account for the attack at the time, and only learnt this afterwards, as she had not liked to tell me she had gone to another hospital while I was treating her.

I now became convinced that the pelvic mass was increasing in size, and would soon become a source of absolute danger to her, and her health seemed breaking so fast from constant pain, though she had no hæmorrhage, that I consented, at the earnest entreaty of her husband and herself, to take her into the hospital. Mr. Spencer Wells, Dr. Savage, and Dr. Bantock all at different times saw her with me, and all agreed with my diagnosis, and that removal of the tumour was the only possible cure, though not by any means a hopeful proceeding.

Having fully explained the danger to both the patient and her husband—though it was hardly necessary, so well did she understand her own case,—I consented to make an exploratory incision, and see if I could remove the tumour, promising that if I found it impossible I would endeavour to pull up the pelvic portion, and fasten it to the abdominal wall, to avoid the risk from its impaction in the pelvis.

The operation was performed at the Samaritan Hospital at 2.30 p.m. on January 10, 1877, some of my colleagues and many other gentlemen being present.

Feeling sure that I should have to cut across the cervical canal, I took the precaution to thoroughly cleanse both it and the vagina just before the operation—the former with cotton-wool and carbolised oil, and the latter by injection of one-to-sixty carbolic lotion.

Dr. Bantock and Dr. Champneys kindly assisted me, the latter administering bichloride of methylene. The patient being placed on her back as for ovariotomy, I made an incision four inches long through the parietes, commencing about two inches below the navel. The hæmorrhage was very free (even after the main bleeding points had been temporarily secured with Mr. Wells' artery forceps), and the flaccid red intestines lying immediately under the exposed peritoneum rendered the opening of the latter difficult, especially as the afternoon was very dark and foggy. When I had completed the section of the peritoneum, my attention was at once attracted by some small bubbles of gas and a drop of brown fluid on the surface of a coil of intestine. I seized it and sponged it, and found the point of my knife had slightly wounded it. I closed it by a continuous suture of fine silk carried backwards and forwards across the puncture through the peritoneal coat, and for some distance beyond each end of the wound.

This mishap delayed the operation somewhat, and a good deal of intestine was forced out, so that I had to carry my incision an inch higher up, and even then had some difficulty in returning the intestines, the patient not passing well under the influence of the methylene, and keeping up a sort of gasping abdominal respiration. Passing my hand into the abdomen, I found the pelvic portion of the tumour so nearly filling its cavity that I could not dislodge it until I had pressed the mass on the left side through my incision, and used it as a lever by pressing it forcibly over the left iliac crest. This showed how hopeless any attempt to push up the pelvic portion without abdominal incision was. Having at last succeeded in getting the pelvic portion raised into the abdomen, I passed a strong double-string ligature through the left half of the mass just at its junction with the pelvic mass, and having tied each of the strings tightly (taking care that they crossed one another at their point of insertion), I cut away the left half, and thus gained room to transfix the broad ligament on each side with a double ligature of strong silk—each transfixion being made so that the silks when tied included the base of an ovary with its tube. The ovaries were then cut away—a cyst about the size of a pigeon's egg, which sprang from the right one, bursting during its removal.

The broad ligament on the left side retracted somewhat towards the tumour, and free hæmorrhage occurred, requiring the application of a temporary clamp, after the removal of which one or two large vessels were tied separately. Nothing now remained but to deal with the remains of the uterine tumour, and this I did by transfixing the cervix just above the vagina with a curved needle armed with a double ligature of the same silk as I had previously used for the broad ligament. Each half was then firmly tied, and the mass cut away with the knife. No hæmorrhage followed, but I thought the stump rather large, and pared it with the scissors; this caused a slight oozing, and I therefore passed one of the ligatures round the whole stump, and securely tied it. Very little blood was lost, and only the pelvis required sponging. I left a sponge over the uterine stump during the introduction of the seven silk sutures with which the incision was closed, and on withdrawing it found it dry, and therefore closed the abdomen. All the ligatures were cut off short, and left with the stumps free in the peritoneal cavity. The operation occupied rather more than an hour and a half, much time being lost from the difficulty in keeping the intestines back after closing the puncture—a difficulty increased by the necessity for handling them very carefully lest anything should be squeezed out between the sutures in the wounded part.

The patient was placed in bed, and the nurse was ordered to keep the room cool, give her nothing but ice by the mouth, and twenty drops of laudanum by the bowel immediately; about fifteen drops of laudanum to be given in this way every two hours or so, in order to keep the bowel perfectly quiet. For the first three hours rather more than this quantity was given, as there was a good deal of pain. She was a little sick at 7.30 p.m. I saw her at 9 p.m.: temperature 99·2°; pulse 92; respirations 16; skin moist and warm; urine scanty and clear. At 3 a.m. she was again a little sick—merely ice-water smelling of methylene. At the morning visit, 9.30 a.m., temperature 99·8°; pulse 96; respirations 20; a good deal of pain across lower parts of abdomen and in hips. At 4 p.m. I saw her again, twenty-four hours after the operation: pulse 112; respirations 26; flatus passing well. At 7 p.m. the nurse found the temperature 101·2°, and put on the ice-water cap to prevent any further rise; it remained on twenty-nine hours, when it was removed, with temperature 98·8°; pulse 88.

The next morning, at seven, patient had some headache (temperature 99·6°), and nurse replaced the ice-water cap, and, as the patient found it comfortable, it remained on till the morning of the fourth day, when it was taken off, with temperature 99°. It was replaced at seven the next morning (temperature 100°), and finally discarded at 1 a.m. on the sixth day. During the first six days there was nothing worthy of note, the stitches being removed on the fourth and sixth days. On the latter nearly the whole wound had healed by first intention.

On the seventh day the dose of opium was gradually reduced in frequency, and it was altogether given up on the tenth day. On the ninth day some red offensive serum came away per vaginam, and this continued more or less till the eighteenth day. On the morning of the eleventh day the

bowels were freely relieved after enema. On the evening of the twelfth day she was sick and bilious; and on the thirteenth day I gave three grains of calomel in three doses three hours apart. At night she had great hyperæsthesia of the skin of abdomen; temperature 100·8°; pulse 92. On the fourteenth day the bowels were relieved after a simple enema, but not quite freely; and on the fifteenth day she had a colocynth, nux vomica, and henbane pill every three hours till they were well relieved.

On the seventeenth day she began to complain of some pain in the right iliac region, and on the eighteenth day the discharge per vaginam ceased, and temperature rose to 100·2°, pulse 92. The discharge returned during the night, and continued going and coming till the twenty-second day, when it quite ceased, and in the evening the temperature was 100·6°, next morning 101·2°, pulse 124 (quicker than it had ever been since the operation). She had a good deal of pain in the right iliac region, and I found evidences of some fluid accumulation in the abdomen on that side, and behind and to the left of the remains of the cervix, per vaginam. I accordingly placed her on her back in a good light, and introduced a speculum, when I saw a small slough filling up the external os; this I pulled away, and a quantity of fetid pus followed its withdrawal, with immediate relief to her pain. The vagina was well syringed during the removal of the slough and pus, Dr. Bantock again kindly assisting me. Immediately after this the highest temperature since the operation was reached—101·4°. There was free discharge for a few days, but temperature was normal, and pulse about 80. The bowels began to act naturally; the discharge gradually ceased. On February 6, the twenty-seventh day after operation, she was on the couch. She went out on February 16, and went to the Convalescent Home at Eastbourne on February 19.

I examined per vaginam the day before she left, and found a natural movable os and cervix, the vaginal vault rather hard, especially on the right side; otherwise little to tell of the formidable operation she had recovered from. She had entirely lost her anxious look and wrinkled brow, and was quite a bright, cheerful woman.

I believe this is the first case in which the uterus and both ovaries have been successfully removed, all the pedicles being ligatured with silk and left free in the peritoneum; and a few words are necessary as to my reason for adopting this method in preference to some of those which have proved successful in the hands of Wells, Keith, Péan, and others. I had watched the excellent results obtained in ovariotomy by Mr. Spencer Wells with the silk ligature, even when the stump of tissue left was considerable, and had confirmed my favourable opinion of it by several ovariotomies of my own in which I had used it; and I had also twice seen Mr. Wells successfully remove small fibroid outgrowths from the uterus after transfixing and ligaturing their base with thick Chinese silk.

With such experiences, and having anxiously studied the published cases of Péan and others, I came to the conclusion that the silk ligature was the best thing to use for the pedicles in the case which I have recorded. It has the advantage of being applicable in all cases; whereas Mr. Wells' ovariotomy clamp, the various serre-nœuds and écraseurs, wire, or wire and pins, can only be used in certain special cases. The only one of these methods which it would have been possible to apply in my case would have been a sort of half intra-, half extra-peritoneal method with wire, écraseur, or serre-nœud; and I think the pedicle should be either entirely extra- or entirely intra-peritoneal. I prefer the latter, as I think there is less danger of septicæmic infection; and there is not the danger from hæmorrhage when the clamp or wire separates a danger which experience shows to be by no means a small one.

I venture to think this case proves that the silk ligature is to be depended upon, and is worthy of further trial. At the same time, I am fully aware that one successful case of this kind is no good ground for establishing the superiority of one method of treatment; and probably, as in ovariotomy, so in hysterotomy, it will be found advisable to apply different methods in different cases.

I have not alluded to the cautery for division of the pedicle, because I have had no experience with it, and I cannot see that it possesses any advantage over the ligature, and it certainly has several disadvantages. The fact that it is sometimes necessary to ligature some vessels, after removing the cautery clamp, being, to my mind, the most serious objection, as the ligatures are applied to parts of which the vitality is already much weakened, if not destroyed, by the heat.

A NOTE ON THREE POINTS IN ANATOMY.

By HENRY MORRIS, M.A., F.R.C.S.,
Lecturer on Anatomy at, and Assistant-Surgeon to, the Middlesex Hospital.

I SUPPOSE if a student were asked the purposes served by the sacro-sciatic ligaments, he would be expected to say that they assist in binding the bones of the pelvis together, in forming part of the boundary of the sacro-sciatic foramina, in supporting the pelvic viscera, and in closing the outlet of the pelvis. There is, however, a more important function still which they serve. By a very little dissection some of the fibres of the tendons of origin of the hamstring muscles are seen to pass onwards into the great sacro-sciatic ligament, where the latter is connected with the tuberosity of the ischium; and by pulling upon either one of these muscles the whole ligament is tightened. More tension is made upon it by pulling on the biceps than on the semitendinosus and semimembranosus; but each gives a marked effect, and by traction on the biceps the coccyx can be made to move on the sacrum. In fact, the ligament may be not unfairly described as an expansion of the tendons of these muscles, whereby their action is in part exerted on the crest of the ilium, the sacrum, coccyx, and spinous processes of the vertebræ, as well as upon the tuber ischii. I mention the spines of the vertebræ for this reason—that the great sacro-sciatic ligament at the ilium has a connexion not only with the thick fascia which passes over the gluteus medius muscle, but also with the aponeurosis of the erector spinæ. It is, in fact, continuous with both of them beneath the gluteus maximus; and through this continuity of their structure the contraction of the hamstrings produces traction upon the greater part of the crest of the ilium, and also upon some of the spinous processes of the vertebral column.

The amount of leverage which these several processes afford is greater than that of the tuberosity of the ischium in proportion as they are farther away from the axis of rotation of the pelvis—viz., a line drawn through the head of the femur and the acetabulum on each side.

Thus these muscles get a much more advantageous purchase on the pelvis, and their power in extending the trunk on the thighs is considerably greater than if they were limited in their attachment, as they are stated to be, to the tuberosity of the ischium. This fact gives great importance to the ligament, and affords a much more satisfactory explanation of its size and wide connexions than does any of its other purposes.

The use of these ligaments in assisting to support the viscera of the pelvis has always seemed to me very problematical, as the muscles of the outlet are sufficient for this, and the viscera of the pelvis are supported chiefly by their own immediate connexions; while, as a matter of fact, when these connexions become relaxed the rectum and uterus prolapse in spite of the ligaments, and the whole tendency of the bladder during distension is to rise out of and not to descend in the pelvic cavity.

2. In connexion with the capsule of the hip-joint a set of short strong fibres is usually described as passing from the capsule about halfway between ilium and femur, on the upper and outer part of the joint, to the under surface of the tendon of the gluteus minimus. There is, however, another set, generally well marked, but, I believe, not described, extending across the capsule along the outer border of the ilio-femoral ligament, from the origin of the vastus externus from the "tubercle" of the femur to the long head of the rectus femoris. It forms quite a strong band, which moves with both these muscles. It must assist the ilio-femoral area of the capsule very considerably to support the trunk on the thigh in the erect position—a position in which the whole tendency of the body is to roll backwards. Possibly, too, it acts to tighten the long tendon of the rectus, after it is itself tightened by the action of the vastus externus. In this way the long head of the rectus, as well as the anterior head, may be brought into use while the thigh is fully extended.

3. In all the books in common use in this country, excepting Mr. Ellis's admirable work, which is silent on the point, it is stated that on the external surface of the ischium "a horizontal groove, occupied by the tendon of the obturator externus muscle, lies between the inferior margin of the acetabulum and the tuberosity." I quote the words used in th last edition of "Quain's Anatomy."

This, however, is not the case. I have often found that it puzzles students to know how the tendon of the external obturator gets into the groove, and they certainly can never find it there. The part of the muscle which during complete extension is pressed into this groove is the posterior and upper border of the fleshy mass, just before it turns outwards behind the neck of the femur, and before it passes into its tendon of insertion.

For some time past I have demonstrated these points upon the subject, and have illustrated them in my lectures on anatomy; but as they are not commonly (but for fear of doing some one an act of unconscious injustice, I should omit the word *commonly*) mentioned by anatomical authors, I think they are worthy of a brief notice.

NOTE ON

CEREBRAL ANEURISMS SUBSEQUENT TO EMBOLI.

By THOMAS BARLOW, M.D., B.Sc.

At the last meeting of the Pathological Society some valuable specimens were exhibited, by Dr. Goodhart and Mr. Bryant, of aneurisms, cerebral and otherwise, set up by emboli. Dr. Goodhart gave excellent reasons for the doctrine that an embolus may, by causing local arteritis and weakening of arterial wall, give rise to an aneurism in the vessel wherein it is impacted. Some time ago I made a post-mortem which, I think, supports Dr. Goodhart's view.

A boy, aged ten years, the subject of aortic regurgitation, suffered first from right, then from left hemiplegia. At the post-mortem there was cortical softening on each side of the lower part of the ascending frontal, and the posterior parts of the second and third frontal convolutions. The clue to this condition was found in the middle cerebral arteries. On both sides these vessels were diseased at the spot where the five branches were given off over the island of Reil for the supply of the cortex. Of these branches on both sides, the one supplying Broca's convolution and the one supplying the ascending frontal were also diseased. There was no aneurism to be discovered anywhere, but the walls of these vessels presented many small calcified nodules obvious to touch and sight.

It may be said that this calcification was due to ordinary atheroma. But, besides the early age of the patient, the facts that no arterial disease was found in the circle of Willis, and that the main arteries of the body were healthy, appear to me sufficient to negative such hypothesis.

There was enough in the aortic valve disease and old thrombosis in the left auricle to account for the possibility of embolism, and there was, moreover, proof of independent embolism in other organs—viz., the spleen and left kidney.

There seemed no reason to doubt that small clots had been impacted in branches of the middle cerebrals, and that they had given rise to chronic inflammatory changes in the walls of the vessels, succeeded by nodular calcifications.

Why, in Dr. Goodhart's cases, aneurismal enlargement should have taken place, and in mine calcification without any aneurism, is a question which confronts us in other diseased arteries besides cerebral ones. At all events, they so frequently co-exist that it seems fair to regard them as having a common starting-point. What I wish to show by this note is that my case supports Dr. Goodhart's first proposition—viz., that embolism may set up arteritis.

10, Montague-street, Russell-square.

THE

METEOROLOGY OF KING WILLIAM'S TOWN, BRITISH KAFFRARIA.

By CHARLES JAMES EGAN, A.B.T.C.D., M.R.C.S.E.

As South Africa has lately been much recommended as a health-resort for persons suffering from phthisis, it may perhaps be interesting to some of your readers to have presented to them a few statistics of the meteorology and diseases of this part of South Africa, as it is not very far from Bloemfontein, in the Orange River Free State, which is the place most recommended. Bloemfontein is, however, situated more in the interior and at greater elevation, being, as far as I can ascertain, nearly 5000 feet over the sea. The temperature in summer is as high there as here, but the winters are colder and drier; but, so far as I know, no regular statistics of the meteorology of the Free State have as yet been kept; and I believe that no statistics, such as I now give, have been kept for any part of the frontier districts of the Cape Colony.

The statistics I now bring forward are derived from registrations of the meteorology taken by myself during the six years 1870-75, both inclusive, and from the journal of my practice during the same period in the district of King William's Town; but my experience of the diseases of the country extends over a much larger period, as I have been in practice here since 1857.

The meteorological observations have been taken by me at the Civil Hospital, King William's Town, which is situated close to the town, at an elevation of about 1350 feet over the sea, and about thirty-five miles in a direct line from the sea-coast. The town contains over 3000 inhabitants, exclusive of the garrison, which consists of about 600 men, besides the women and children belonging to the garrison.

The statistics of disease are taken from the journal of my own practice, including both private cases and those attended by me as district surgeon; but does not include any cases among the native population. As there is only one other medical practitioner (in private practice) residing here, the statistics I give may be said to represent more than one-half of the disease occurring in the town and its immediate neighbourhood.

King William's Town is the largest town in British Kaffraria (it is the fourth town in size in the Cape Colony), and is in latitude 32° 62′ S., and longitude 27° 23′ E. It is built on a plain gradually sloping towards a river called the Buffalo. The soil is sandy, with a gravel subsoil lying over beds of hard primitive rock. The country round is much more elevated, placing the town in a valley; the river runs in a low bed, and there are no marshes or undrained land in the neighbourhood. Indeed, in all this part of South Africa the country is rather too well drained, as all the rivers run in low beds with high banks, making irrigation a very difficult process; but we derive some benefit, as it is on this account that the country is altogether free from diseases of malarious origin. Since I came here, in 1852, I have never seen a case of intermittent fever originating in this country; I have only met with it in persons who contracted the disease elsewhere. The water-supply of the town is very good, being brought by an aqueduct, taken from the river two miles above the town, and distributed in iron pipes. In reviewing the diseases of any country, especially those of the respiratory organs, the nature of the climate is a most important consideration. I therefore will first bring forward some statistics on this subject. The observations have been taken daily, morning and evening; but as it would take up too much space to give the meteorology of each month separately, I have taken the average for the quarters of each year—the spring quarter including the months of September, October, and November; the summer, December, January, and February; the autumn, March, April, and May; and the winter, June, July, and August.

Table I. gives the mean temperature of each quarter of the year for the years 1870 to 1875, both inclusive:—

Table I.

	Spring.	Summer.	Autumn.	Winter.	Mean for year.
1870 . .	62·7°	70·2°	65·5°	54·3°	63·1°
1871 . .	61·1	65·3	61·2	54·8	60·6
1872 . .	66·3	68·0	61·3	50·8	61·3
1873 . .	61·0	68·8	60·8	54·1	61·1
1874 . .	59·3	62·3	56·3	49·8	57·0
1875 . .	58·7	68·1	59·9	50·5	59·3
Mean of 6 yrs.	61·5	67·2	60·8	52·3	60·1

In considering the meteorological conditions of any country, with regard to its action on disease, especially in regard to those of the respiratory organs, besides the mean temperature, other important items must be taken notice of. First, the range of temperature in a given space of time—not the difference between the mean temperature of one quarter of the year and another, but the difference that occurs during the course of a day. In this respect the climate of this part of the country is at times rather trying to invalids.

Table II. shows the highest and lowest reading of the thermometer in each quarter, taken in the shade:—

Table II.

	Spring.		Summer.		Autumn.		Winter.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1870 . .	92°	31°	96°	49°	98°	32°	88°	29°
1871 . .	94	38	99	44	98	28	88	32
1872 . .	95	31	101	42	90	37	85	27
1873 . .	99	32	99	42	96	30	86	29
1874 . .	93	32	98	44	86	27	83	24
1875 . .	90	27	101	42	96	30	80	28

In order to render Table II. more complete, I add a table giving the greatest and least ranges of the thermometer occurring in the space of twenty-four hours, registered in each quarter, and also the mean range for the quarter, as deduced from the daily observations:—

Table III.

	Spring.			Summer.		
	Max.	Min.	Mean.	Max.	Min.	Mean.
1870 . . .	41°	5°	25°	37°	6°	18°
1871 . . .	39	5	23	48	4	21
1872 . . .	42	9	26	42	10	28
1873 . . .	50	9	22	37	9	27
1874 . . .	50	12	23	42	10	27
1875 . . .	47	10	27	49	14	28
Mean range of six years .	..	..	24	..	..	24·8

	Autumn.			Winter.		
	Max.	Min.	Mean.	Max.	Min.	Mean.
1870 . . .	34°	7°	19°	37°	10°	27°
1871 . . .	40	10	23	40	6	24
1872 . . .	37	11	21	38	10	23
1873 . . .	42	10	27	46	13	24
1874 . . .	46	10	26	46	14	28
1875 . . .	36	16	26	44	16	24
Mean range of six years .	..	..	23.6	..	..	25

Although the heat in the middle of the day is at times very excessive, yet the nights are usually much cooler, the thermometer rarely registering over 70° through the whole night, even in the middle of summer. In winter there are many hot days, the thermometer rising over 80°, and falling to below freezing-point at night.

The above table gives the range as taken in the shade; but the range taken between the highest point of the thermometer placed in the sun and the minimum at night is far greater, as is shown in the next table, giving the highest reading of the solar thermometer, and the range between it and the minimum of succeeding night:—

Table IV.

	Spring.		Summer.		Autumn.		Winter.	
	Max.	Range.	Max.	Range.	Max.	Range.	Max.	Range.
1870 .	128°	67°	124°	47°	134°	63°	122°	74°
1871 .	129	79	124	57	134	80	122	80
1872 .	124	84	128	67	133	82	127	86
1873 .	128	83	131	67	136	90	126	90
1874 .	132	92	132	69	132	93	121	90
1875 .	128	83	134	74	133	82	122	86

These excessive ranges of temperature, occurring rather suddenly at times in the afternoon, are the commonest causes of disease in the respiratory organs, especially in the autumn and spring—in autumn from persons keeping on their light summer clothing; and in spring from putting off the winter clothing too soon on account of an unusually hot day occurring at that season.

The second point to be considered with regard to causation of disease is the amount of moisture in the atmosphere. This is shown in Table V., which gives the mean dew-point temperature for each quarter, and also the average difference between this and the mean temperature. At times, when a hot north wind blows, this difference is very great; I have marked as much as 38° between the thermometer in the shade and the dew-point.

Table V.

	Spring.		Summer.		Autumn.		Winter.	
	Dew-pt.	Dif.	Dew-pt.	Dif.	Dew-pt.	Dif.	Dew-pt.	Dif.
1870 .	55·1°	7·6°	61·7°	8·5°	54·2°	9·3°	44·2°	10·1°
1871 .	53·8	7·3	60·3	5·0	53·5	7·7	44·0	10·8
1872 .	50·6	8·7	58·8	9·2	56·8	7·5	42·2	8·6
1873 .	53·7	7·3	61·9	6·9	55·2	5·4	43·7	10·3
1874 .	55·7	3·6	61·7	1·1	54·5	1·8	41·1	8·7
1875 .	50·3	3·4	62·8	5·3	53·9	6·0	43·4	7·1
Mean	..	6·2	..	6·0	..	6·2	..	9·2

Table VI. gives the rainfall in inches and the number of days in each quarter on which rain fell:—

Table VI.

	Spring.		Summer.		Autumn.		Winter.	
	Rain. ins.	Days. No.	Rain. ins.	Days. No.	Rain. ins.	Days. No.	Rain. ins.	Days. No.
1870 .	6·78	26	11·99	51	7·26	37	1·92	11
1871 .	10·02	34	9·18	33	3·24	24	4·75	20
1872 .	4·57	38	3·67	28	17·68	34	4·31	27
1873 .	6·03	39	9·43	31	4·54	13	1·22	34
1874 .	5·42	29	19·27	43	8·18	24	8·55	12
1875 .	3·82	28	7·47	34	6·80	34	4·67	22

The mean rainfall, taken from observations for the years 1868 to 1875, both inclusive, gives a mean average of 27·63 inches per annum; and the average number of days per annum on which rain fell is 115.

The greatest rainfall occurs in the summer and autumn, though on an average there are more days on which rain falls in the spring months. This is on account of the heavy thunderstorms in the summer and autumn, when a greater quantity of rain falls in a shorter space of time than in the spring.

The average rainfall for each quarter, and the average number of wet days, are—spring, 6·73 inches and 41 days; summer, 9·90 inches and 37 days; autumn, 7·23 inches and 26 days; and winter, 3·79 inches and 16 days. The average rainfall for the month of June is only 0·40 inches.

The most prevalent wind during the summer months is the south-east. It is generally a pleasant fresh breeze, but at times sets in with heavy rains lasting three or four days. The north and north-east winds are hot and dry, and very disagreeable. They come on at all times of the year, and produce very high temperature, generally followed during summer in the afternoon by a pleasant south-easter, and in winter by frost at night. The north and north-west are most prevalent during winter, blowing often in strong gales from 9 a.m. till sunset. The south and south-West winds generally bring with them rain and damp cloudy weather.

The last point to be brought forward in these meteorological notices, is the state of the barometer. This is shown by the following table, giving the maximum and minimum for each quarter:—

Table VII.

	Spring.		Summer.		Autumn.		Winter.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1870 .	28·88°	28·14°	28·58°	28·10°	28·78°	28·09°	28·93°	28·08°
1871 .	28·81	27·99	28·74	27·94	28·75	27·94	28·96	28·00
1872 .	28·84	28·07	28·67	27·80	28·73	27·96	29·13	28·09
1873 .	28·84	28·12	28·64	27·90	28·83	28·07	28·93	28·18
1874 .	28·87	28·00	28·59	28·00	28·85	28·06	29·07	28·19
1875 .	28·94	28·13	28·56	28·05	28·77	28·05	29·05	28·35

From all the observations taken, the mean height of the barometer is 28·49°. The average height in winter is much greater than in summer. The prevalence of thunderstorms in the summer and autumn months makes this difference, as the mercury goes very low before and during a thunderstorm. These thunderstorms are very frequent during the summer, coming on in the afternoon. Here they generally come from

the north-west, against a south-east wind, the wind suddenly changing as the storm commences.

In a future communication I hope to give some statistics of the diseases of this part of the colony.

King William's Town, British Kaffraria.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

THROMBOSIS OF LEFT VERTEBRAL ARTERY AT BASE OF BRAIN—SOFTENING OF LEFT LOBE OF CEREBELLUM—FACIAL PARALYSIS.

(Under the care of Dr. SIDNEY COUPLAND.)

[For the notes of this case we are indebted to Mr. E. H. Lendon, M.A., M.B., late Resident Physician's Assistant.]

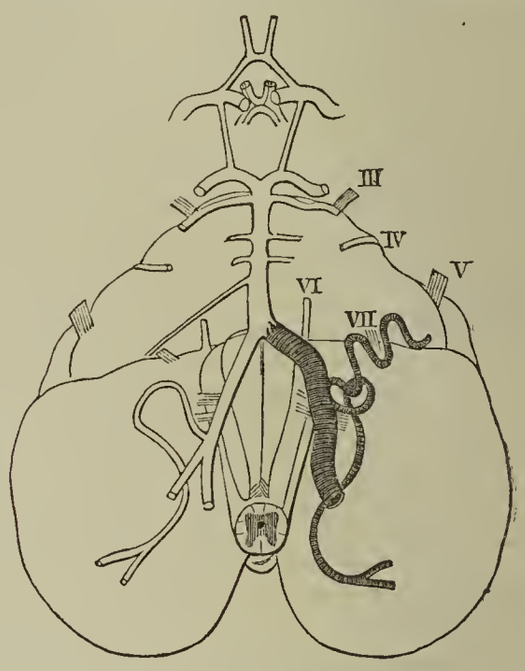
William R., a tailor, forty-two years of age, and married, came to the hospital on the afternoon of October 28, 1876, suffering from well-marked left facial palsy. At the same time his power of articulation was very defective, so that it was impossible to understand him, except that he went to bed perfectly well on the 25th, and awoke on the morning of the 26th with pain in the head. The facial paralysis appears to ave come on at the same time.

The patient, a well-nourished and muscular man, complains of pain in the head, chiefly on the left side, and of inability to swallow. He cannot cough at all strongly, and his articulation is imperfect. The power of swallowing is impaired, and the mouth is full of saliva, which he can scarcely get rid of except by turning his head over to one side, and allowing it to flow out of the mouth. The left naso-labial sulcus is obliterated. When he shows his teeth or smiles the muscles of the right side of the face act alone, the mouth being drawn over to the right side. A like asymmetry in action of the two sides is seen when the patient frowns. He is unable to close the left eye, the conjunctiva of which is everywhere injected, and the cornea heavy. The uvula is drawn up to the right, the left half of the velum palati being lower than the right. The tongue is protruded decidedly to the left.

The pupils are equal and normal; there is no strabismus. There is no loss of sensation in the face. There is no paralysis of the limbs. The heart-sounds are very indistinct; they are obscured by bronchial râles, which can be heard all over the front of the chest. Posteriorly there is dulness on percussion at both bases; but feeble respiratory murmur, accompanied by creaking râles, can be heard over the dull regions. Pulse 90; temperature 98·4°; respirations 30. The patient was prescribed an ice-bag to the head; a simple enema at once, and, if necessary, nutrient enemata. He got somewhat rapidly worse, and died at 8 a.m. on the 29th, or twelve hours after his admission.

At the post-mortem examination, made thirty hours after death, the sinuses and veins of the dura mater were found to be full of fluid blood. The pia mater covering the hemispheres was exceedingly vascular, the smallest vessels being injected. Some difficulty was experienced in removing the brain, owing to the greater part of the left lateral lobe of the cerebellum being in a soft pulpy condition. The lobe was much lacerated in removal, and further examination of the brain was deferred until the organ had been immersed in spirit for twenty-four hours. The following conditions were then noted:—The left vertebral artery was seen to be completely plugged (see Fig.) in the whole extent of the vessel as removed with the brain; but the lowermost point to which the plugging extended was not made out, the artery not being examined in the neck. At the point of division the clot presented a uniformly dark-red colour, but it was firmly united to the wall of the vessel, the distended state of which formed a marked contrast to the flaccid and empty condition of its fellow artery. The two left inferior cerebellar arteries, which arose in this case close together from the vertebral trunk, were likewise plugged, and stood prominently out on the inferior surface of the cerebellum and pons. They were exceedingly tortuous, and had the following course:—The *anterior* inferior cerebellar made three sharp bends backwards in its outward and forward course to the pons, and within the angle formed by the second of these flexures the seventh nerve was seated; the nerve appeared to be compressed by the blocked vessel. The *posterior* inferior cerebellar artery, arising immediately below the anterior, described a complete circle close to its origin, so that its loop thus formed came to lie in close apposition, but in a posterior plane, to the first bend of the anterior trunk. The former then took its usual backward course, and was distributed as usual to the posterior two-thirds of the inferior surface of the cerebellar lobe. This lobe (the left) was for fully two-thirds of its bulk in a state of softening, presenting a pinkish creamy aspect on section, and under the microscope numbers of bodies like leucocytes and a few "compound granule corpuscles." A drop of the softened substance also showed many capillaries distended with blood, varicose nerve-tubules, and granular material. The upper one-third or so of this lobe was tolerably firm; nor did any softening appear in the pons and medulla, or in the remaining lobes of the cerebellum.

In addition to the abnormality shown in the left anterior cerebellar artery arising from the vertebral, the right vertebral artery was seen to be formed by the union of two trunks opposite to the middle of the medulla; and at their point of junction the right posterior cerebellar artery arose. This vessel, like those on the left side, was tortuous, but not to the same extent. The rest of the arterial supply was normal, the right anterior inferior cerebellar arising from the basilar, and taking a straight course directly backwards and outwards over the pons, passing over the seventh nerve on this side. There was slight and by no means advanced atheroma of the vessels at the base of the brain, a few small patches only occurring here and there, the most notable being one on the plugged vertebral artery. (The specimen being kept for mounting in the museum, the vessels were not laid open.)



There is but little to note about the condition of the other organs. The lungs were much engorged with blood, especially in their lower lobes. There was some thickening both of the mitral and tricuspid valves, and entangled in the chordæ tendineæ near the margins of each of these valves were some tags of pale yellow fibrin, but no defined masses of ante-mortem coagula in the chambers of the heart. The liver and spleen were natural, the kidneys greatly engorged with blood, and the bladder fully distended with urine.

Remarks by Dr. Coupland.—In spite of its imperfect history, this case presents several features of interest. It must be confessed that all the symptoms were not explained by the lesions found; nor, conversely, were all the lesions represented in the symptoms observed during the few hours that the man was in the ward. The case, then, illustrates a not infrequent paradox—that the morbid changes revealed after death are at once too few and too many to account for symptoms observed during life. The most striking symptom was the left facial paralysis; it was as complete as in any case of Bell's palsy. Moreover, so far as could be gathered, it with headache formed the only trouble complained of by the man himself up to the day of his admission, when difficulty in swallowing and in articulation appear to have supervened. These latter symptoms were of grave import, indicating the supervention of bulbar paralysis, which led to the rapid death. Although the facial palsy was so marked and so complete, its occurrence was probably due in

this case to an accident, viz., the fact that the tortuous, plugged, and misplaced anterior cerebellar artery (see diagram) passed directly over and around the superficial origin of the seventh nerve on the left side. Other cases of facial palsy associated with plugging of the vertebral or basilar arteries have been recorded; but in them, and notably in that recorded by M. Hallopeau in the current number of the *Archives de Physiologie*, the paralysis, although of wide extent, has been incomplete, and has been combined with paralysis of the sixth nerve, pointing to softening, involving the common origin of the portio dura and the latter nerve, the "facial-abducens nucleus." M. Hallopeau's case is so interesting, and contrasts so well with the present case, that a brief outline of it may be given here:—The patient, a female, thirty-six years of age, in the eighth month of her ninth pregnancy, was admitted into Lariboisière Hospital on June 3, 1876, with mitral stenosis, bronchitis, albuminuria, and anasarca. On the same day she had a severe attack of headache; and next day there was noticed left facial paralysis (complete in extent, but not in degree), left internal strabismus, and slight paresis of the right external rectus muscle of the eyeball. At the same time there was paresis of the right upper limb, some vertigo on standing, and exalted sensibility of the left side of the face. On the 5th there was well-marked cross-paralysis, the right limbs being now paralysed. Before her death (which took place on the 13th, from asphyxia, after much prolonged dyspnœa), some paresis of the left lower limb was noticed. At the post-mortem examination extensive vegetations were found in the mitral valve, and infarctions of various dates in the spleen and kidneys. There was softening in the floor of the fourth ventricle, corresponding to the left facial-abducens nucleus; total occlusion of the left vertebral artery and its posterior inferior cerebellar branch, which was reduced to a filose cord, and also of a small median branch traceable to the pons; and plugging of the basilar artery, partly by extension from the vertebral, and partly by a recently superadded thrombus. Hallopeau attributes the occlusion of the vertebral and its branches to embolism, the fatal issue being due to the supervention of thrombosis in the basilar trunk. He refers to a case of Voisin's, of thrombosis of both vertebrals at their junction, and of the basilar, in which there was right facial palsy, and right-sided deafness, but no evident paralysis of the limbs (here the right half of the pons was softened); and to another case (of Herard's), with cross paralysis, due to a lesion in the anterior third of the pons. And the facial palsy in this case he attributes to involvement of the nerve-roots rather than their nucleus. In the present case the plugging was limited to the left vertebral artery and its branches. It is seldom that such an event by itself leads to death, even although, as here, two such important vessels as the inferior cerebellar arteries are occluded. I have failed to find a precise parallel to it, and believe it is usually recognised that thrombosis of a single vertebral artery is compatible with recovery, and that death may subsequently result from extension of the clotting into the basilar, as in Dr. Duffin's valuable case (*Medical Times and Gazette*, 1876, vol. ii., page 622), and in Hallopeau's. In the fourth volume of the *Pathological Society's Transactions* (page 71), Mr. W. F. Barlow records the case of an old man who died suddenly from fatty degeneration of the heart, in whom the left vertebral artery, which, in common with the rest of the cerebral arteries, was very atheromatous, was the seat of a "mass of fibrine about the third of an inch in length. It entirely surrounded the artery, but there was a channel through it, so that the blood-current was diminished, not obstructed." And cases might be quoted in which one of the vertebral arteries has been rendered completely impervious, with resulting softening of part of the corresponding hemisphere of the cerebellum, long antecedent to death, which has resulted from another attack of thrombosis affecting the opposite vertebral and extending into the basilar. In the present case the basilar trunk and the right vertebral were perfectly pervious and empty, and there was no indication of softening of the pons or medulla. May not, then, the graver disturbances—the glosso-pharyngeal paralysis—have been due rather to the pressure exerted by the swollen and thrombosed vessel on the roots of the eighth and ninth, than to deeper lesion involving their nuclei in the fourth ventricle? The extensive disorganisation of the cerebellum corresponded to the portion of its left hemisphere supplied by the inferior cerebellar arteries, and the character of the softening pointed to the occurrence of their occlusion at the same time as the onset of the facial palsy—viz., three days before death. It is noteworthy that the only symptom directly referable to the destruction of so large a part of the cerebellum was headache. There does not even seem to have been vomiting, and there was certainly no evidence of hemiplegia. Nor does there appear to have been any disorder of vision, nor vertigo; but the few facts elicited in the history do not warrant any dogmatic statement on these points. The occurrence of hemiplegia is so variable a symptom in cerebellar disease—being met with in very limited lesions, and yet (as this case illustrates) absent in very extensive disorganisation—that it seems impossible to predicate anything concerning the relation between the two. That the case was one of thrombosis, and not embolism, has been assumed from the local degeneration and tortuosity of the affected vessels; from the absence of any sources of embolism except from coagula in the cavities of the heart; and from the extreme rarity, added to the improbability, of the occurrence of embolism in a vertebral artery, and not in any other cerebral vessel or elsewhere in the body. Lastly, attention may be drawn to an anatomical variation far more rare than the origin of the anterior cerebellar artery from the vertebral—viz., the union of two trunks to form the right vertebral vessel. "The left vertebral artery in a few instances, and the right vertebral in one, have been found to arise by more than a single root" (Quain's "Anatomy," eighth edition, vol. i. page 385). The omission to pursue the vessels in their course through the intervertebral foramina deprives the present observation of much of its anatomical value.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

NOMA VULVÆ—RENAL AND CEREBRAL EMBOLISMS, DERIVED PROBABLY FROM CLOTS IN LEFT AURICULAR APPENDIX.

(Under the care of Dr. GEE.)

[For the notes of this case we are indebted to Dr. Garlick, Registrar.]

Emma E., aged five years and three months, a rather weakly child, was brought as an out-patient to Mr. Owen, February 21, for noma vulvæ. This gradually got worse, so that on March 1 there was an ulcer the size of a shilling on the right labium, and there were two small ulcers in the right groin. The child had been very low from the onset, but on this day, about 11 a.m., whilst in her mother's arms, she began to twitch in the left arm, leg, and left side of the face. The twitching continued for half an hour. The mother affirms that there was no movement on the right side of the body. After the fit the child never spoke again; she took no notice, and did not swallow when liquid was given to her. She was brought to the hospital, and admitted under Dr. Gee, but died immediately after admission, at 6 p.m.

Post-mortem.—Brain: Dura mater natural; superior longitudinal sinus contained a non-adherent red clot, and some fluid blood; pia mater natural; convolutions and brain-substance natural in consistence; amount of fluid in ventricles natural. Vessels: Basilar and posterior cerebrals natural. Projecting from the left internal carotid, where it was cut across, there was a firm reddish clot, distending the artery, extending into the left middle cerebral for some distance, and into the anterior cerebral almost up to the left anterior communicating. The right middle cerebral was also blocked for some distance, the clot extending into its primary branches, which looked like a piece of coral. There was a similar blocking of the anterior cerebral of this side beyond the anterior communicating artery. The walls of these vessels were quite natural. There seemed no reason to doubt that these clots were derived mainly from the left auricular appendix. In that cavity were found similar masses, varying in size from a pea to a small horse-bean; they were firm, parti-coloured red and pale yellow; on section they were found to consist of a quasi-capsule of firm pale substance, with soft reddish contents, not laminated. The heart otherwise natural. There was a little clear fluid in both pleuræ, and some adhesions on the right side. The lungs were congested posteriorly; otherwise natural. There were no clots in the pulmonary veins or artery; no pulmonary apoplexies, and no abscesses. The liver and spleen were natural. In the right kidney there was a small pyramidal infarction in the cortex, quite pale and with no congestion round it; the

capsule stripped easily. In the left kidney there was a large pyramidal infarction reaching from near the calyx quite to the surface; it was only slightly redder than the rest of the kidney, but contained a small darker-red portion. There was a small artery the size of a pin seated in the kidney near the apex of the large infarcted area, blocked with a white clot and empty beyond. There was no proof of phlebitis or thrombosis in the veins of the pelvis. The iliac veins contained fluid blood.

Remarks.—The derivation of splenic and renal infarcts from clots formed in the left auricular appendix is so commonly insisted upon that the renal infarcts in this case scarcely merit notice, except as throwing light on the cerebral condition. The possibility of cerebral embolism derived from the above source is not sufficiently recognised in clinical teaching, In ordinary routine investigation of a case of hemiplegia having excluded Bright's disease and the likelihood of hæmorrhage, the student proceeds to exclude embolism because he is unable to find evidence of valvular disease, and he takes refuge in the hypothesis of thrombosis, either from altered vascular walls or altered blood-state. This case shows that even where no valvular disease is present the possibility of embolism derived from the left auricular appendix must be borne in mind. From the conditions found it seems likely that emboli had been carried along both internal carotids, and that after they had been lodged in the middle cerebrals subsequent clots had formed upon the emboli. The child died almost immediately after being brought into the hospital, so that no clinical details could be obtained. The mother's statements would have led to the diagnosis only of the block in the right middle cerebral, with consequent anæmia of the convolutions, etc., supplied by it.

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Medical Times and Gazette.

SATURDAY, APRIL 7, 1877.

VACCINE VIRUS.

Since the meeting of Parliament, various questions have been put to the Government authorities on the subject of vaccination and of vaccine virus. One of the most recent of these interrogatories was with reference to the source of the vaccine virus now in general use. Even on this point the answers given were far from clear, and, where clear, far from satisfactory. To the same subject the *Times* has devoted a special article professing to deal with the whole subject, but doing so in a somewhat one-sided manner. In short, resting its faith on the assertions of the Government *employés* chiefly concerned, the *Times* sets itself, as far as possible, to still clamour by repeating doubtful statements, which thus receive all the great weight and authority of its name and prestige. We are no foes of vaccination,—we are only too glad to acknowledge the great benefits derived from it; but we are aware that the risks are not entirely on one side. We have reason to believe that it might be rendered safer and more efficacious if due care were taken to renew the stock of lymph, and to keep a constant supply of heifer vaccine available for all who might desire it.

To this scheme the Government authorities—at the instance, we suppose, of the present medical adviser of the Local Government Board—seem to be opposed; and their opposition seems to be based on two sets of grounds, viz., that the present supply of vaccine virus, though passed on from individual to individual since the time of Jenner, is both ample and satisfactory; and, secondly, that animal vaccination is less certain in its effects, and gives rise to more decided local and general symptoms than does thoroughly humanised lymph. That the use of ordinary vaccine virus carries with it certain risks, that it is not at all times satisfactory, and that its employment excites in the minds of some a strong feeling of repugnance, few will be prepared to deny. These are matters of experience, and it is only by referring to the result of similar experience with regard to animal vaccine that any sound convictions, good or bad, but equally powerful, can be safely arrived at as far as animal vaccination is concerned. The sources of such information are unattainable in this country, but abroad experience has been accumulating for years—in France, in Belgium, and in America. Curiously enough, it is from America that the most extensive and the most accurate records of animal vaccination come to us; though there they have been almost entirely the work of a private individual, whereas on the continent of Europe the system of animal vaccination has been so far fostered by governments as to become a kind of national institute.

Dr. Henry Martin, a native of England, but settled in the United States, had long been interested in the subject of vaccination, had for many years supplied vaccine lymph to the profession at large, and was, moreover, specially struck by what he saw during the American civil war. In the result he became profoundly dissatisfied with the vaccine virus ordinarily used, but was unable to obtain any other for some time. Ultimately, as the result of the discovery of a true case of cow-pox at Beaugency, in France, during the year 1866, and the propagation of the virus by Dr. Depaul of Paris, Dr. Martin was able to obtain directly from Dr. Depaul a supply of lymph taken from the heifer with every precaution, and carried to America by Dr. Martin's special messenger. Since that time the American physician has kept up the supply by the regular vaccination of healthy young heifers, and has thus been able to supply the means of thousands upon thousands of vaccinations in all parts of America even during smart epidemics. In the first instance Dr. Martin was no great believer in animal vaccine, for his earlier experience was not satisfactory. He had vaccinated some heifers with human vaccine matter, but the matter taken from the resulting vesicles was, he says, inoperative. Moreover, he declares that, contrary to Mr. Ceely's belief, a heifer inoculated with small-pox only generates small-pox, and that the matter taken from an animal so infected is liable to produce small-pox in the human subject. It was not, therefore, until he obtained samples of the true vaccine virus derived from the Beaugency source that Dr. Martin was able to proceed to the attainment of the results he had longed for. To this end he devoted

himself entirely to the propagation of the vaccine virus, abandoning all other practice, and employing certain members of his family along with him. Only the best kind of stock was procured for this purpose, the health of the animals was and is carefully looked after, and whilst under the influence of the vaccine virus they are kept carefully secluded in warm and dry chambers. The progress of the vesicles is carefully watched, and when ripe (which occurs a good deal earlier than in the human subject) the virus is either employed for direct vaccination, as recommended by Dr. Martin, or is collected on points for subsequent distribution. No tubes are used, though he mentions the somewhat offensive method of utilising the crust from the cow-pox.

From this source many thousands of people were vaccinated in Boston in 1872-73, and thousands of points sent to all parts of the Union. By means of these, also, a fresh source of supply was originated at New York by Dr. Frank Foster in connexion with the New York Dispensary—a source of supply which has since, we believe, been adequately maintained.

Now, what are the results claimed by Dr. Martin as accruing from the use of true heifer vaccine virus? During the last six years and a half he has obtained and distributed from his own stables animal virus enough to vaccinate over a million of persons, and this has been employed by eight or nine thousand physicians, yet in no single instance has erysipelas followed its use. During previous years, whilst using humanised virus, attacks of erysipelas were constantly making their appearance.

As to efficacy, Dr. Martin is equally convinced. No adult, he says, who has once been properly vaccinated from the heifer (and the vaccination in this way is as easy and efficacious as in any other) ever has small-pox. This is a bold thing to say, but facts seem to bear out the statement, as far as facts are attainable. In Boston, where small-pox was epidemic in 1872-73, and where Dr. Martin's method was largely used, no one was admitted into the small-pox hospital after heifer vaccination. This matter is not, however, fully ripe for discussion; in reality, the materials are not before us on which to found an opinion. Inasmuch, however, as Dr. Martin has been appointed chairman of a Committee of the American Medical Association, and proposes to lay an elaborate report on the whole subject before that body in Chicago, where it this year meets, we may hope for fuller details as embodied in this report.

Let us, however, take matters as they now stand. Is the whole of this great and important question to be brushed aside and laid on the shelf by a few words spoken in Parliament in reply to a very appropriate question? We trust not. We should be the last to deny the exceeding great services rendered to the country and to mankind at large by the National Vaccine Establishment. Neither do we in the slightest degree underrate the care, the trouble, and the attention of the officials connected with it. These we have too often experienced to overlook. But this is not everything. From the cases which have been brought prominently under the notice of the profession it is plain that slips may and do occur. Granted they are but few, why should those who object to run them be compelled to do so? If Government have made vaccination compulsory on all, surely they are bound to take away all risks which can be taken away. The great objections to the present system are—that infants which may be unhealthy, though they look healthy, may be made the sources of vaccine supply; that infants are not seen after vaccination at a time when it can be known whether they have been inoculated with any other poison than that of vaccinia; and that the main sources of supply must be from towns and other large concourses of people, where constitutional taint is most likely to exist and most difficult to trace. And thus, though every precaution be taken to prevent contamination of the virus with blood, we are not justified in saying that this exclusion will prevent all risk of constitutional infection. Such being the case, we again say that the public have a right to demand at the hands of Government, as an alternative to ordinary vaccination, a source of vaccine supply to which none of these objections can refer. The cost would be trifling, and it would remove a cause of ill-feeling and of opposition to the laws which we are bound to say, under the existing circumstances, is not altogether unfounded. Should these objections continue after due remedies have been applied, Government will at least be able to say that they have done everything to satisfy popular demand; and no obstinacy or stolidity on the part of officials ought to be allowed to stand in the way of this reform.

THE LOCAL TREATMENT OF PUERPERAL FEVER.

Starting from the stand-point that the febrile affections which follow parturition, and which are generally comprehended in the expression "puerperal fever," are due to the introduction of septic matter from without, and only acquire their specific character from their seat of origin, and from the peculiar condition of the generative organs existing at the time, Dr. Heinrich Fritsch, of Halle,(a) recommends the systematic adoption of certain antiseptic measures, not only with a view to prevent infection by the hand of the accoucheur or midwife, but also to remove and destroy any decomposing secretions which may develope in the uterus itself. In the first place, before any examination is made, the hands are to be well washed with soap and then scrubbed with a nail-brush and a solution of carbolic acid. The most convenient arrangement for preparing this solution is to have a number of thirty-gramme bottles filled with concentrated carbolic acid dissolved in glycerine (thirty grammes acid to three glycerine), and to take one or two in the pocket when called to a midwifery case. By measuring out a litre of water into a basin, and adding the contents of one bottle, a solution of a proper strength is at once ready for use. Any instruments that have to be applied must also be previously disinfected. Instead of ordinary oil, carbolic oil must alone be employed to grease the hands and instruments. The patient herself is, if possible, prepared by a sitz-bath, in which the vulva and perineum are carefully cleansed with soap. The vagina is then washed out with carbolic acid solution, with the remainder of which the vulva is washed for the second time, and any incrusted hairs are, if necessary, removed with the scissors. Contrary to what might be theoretically expected, the injection of dilute carbolic acid into the vagina does not render the parts either rigid or rough, and the finger can scarcely distinguish between their condition before and after the irrigation. After the birth of the child, attention must especially be directed to maintaining a free escape for the lochia. In the ordinary position of the patient, with the buttocks slightly depressed below the level of the surrounding portion of the mattress, the lowest part of the hollow of the sacrum is lower than the posterior commissure, so that liquid has to collect and rise to a certain level before it can escape outwards. Hence, a greater or smaller quantity will always remain behind if nature be left to herself, and may thus set up decomposition in the secretions which escape from the uterus later on. Moreover, the lochia tend to escape at the upper part of the vulvar aperture, and not at the posterior commissure, owing to the way in which the labia overlap and become adherent to one another, so that a considerable quantity of fluid may be retained in the vagina, and there undergo those changes which are so liable to give rise to septic infection. On these and other considerations Dr. Fritsch founds his method of vaginal and uterine

(a) *Volkmann's Sammlung Klinischer Vorträge*, No. 107, "Ueber das Puerperalfieber und dessen locale Behandlung."

irrigation, which consists in injecting a 2 per cent. solution of carbolic acid (salicylic acid has been found to be too feeble an antiseptic), at a temperature of 88° Fahr., into the generative cavity by means of an irrigator containing at least a litre (two pints) of liquid. The instrument must not be raised higher than one and a half to two feet above the patient's body, and it may be necessary to use two or three litres of the solution before the liquid returns completely colourless. For the injection of the uterus, Fritsch finds the best form of catheter is one made of German silver, thirty centimetres long and six centimetres in circumference (to be obtained from Baumgartel, of Halle), and which has a curve somewhat greater than the midwifery forceps. In those cases in which there is slight difficulty in introducing the catheter, there is the greatest probability of the retention of fluid in the uterus, owing to kicking from anteversion of the organ. The introduction of the catheter must be invariably controlled by the finger in the vagina. The ordinary dangers which are supposed to result from post-partum digital examination are prevented by the presence of the antiseptic, and the finger is able to detect and to loosen adherent clots, which irrigation alone has not force enough to detach, and which might become sources of putrefaction and infection if allowed to remain. Dr. Fritsch ordinarily irrigates three times a day, at six, one, and eight o'clock; while the vagina is washed out by the nurse every three hours. While vaginal irrigation should be a *sine quâ non* in the after-treatment of every parturient woman, Dr. Fritsch limits the irrigation of the uterus to cases where an operation has been performed, especially where the fœtus was dead and decomposed; to cases in which liquor ferri perchloridi has been injected into the uterus to arrest hæmorrhage, and in which the formation of clots is an essential concomitant of the treatment; and lastly, to cases in which fever has existed for several days when the practitioner is called in (as may be the case when the woman has been delivered by a midwife), provided the lochia are still present.

The advantages derived from irrigation under such circumstances may be summed up as follows:—1. After one or two injections the vulvar aperture ceases to be painful and tender, even though it may have undergone considerable laceration; the introduction of the finger becomes painless, œdema rapidly subsides, and wounds heal without the formation of a definite granulating surface. 2. The lochial discharge rapidly diminishes in quantity, the only exception being when irrigation is used after the injection of perchloride of iron into the uterus, their prolongation being here probably dependent on the destructive action of the perchloride on the tissues of the uterus, so that a considerable period must elapse before the whole of the sloughs are thrown off. 3. The uterus undergoes involution quicker than under expectant treatment. 4. *The temperature falls after the first injection.* The influence of irrigation on the pulse is less marked, especially if there has already been severe hæmorrhage or fever of several days' duration. By this method Dr. Fritsch has succeeded in saving severe cases of puerperal fever in which the first injection was made on the fourth to the sixth day after delivery, with a temperature of 40° Cent. (104° Fahr.) or higher; and his experience as assistant for many years in the obstetric clinic at Halle is sufficient guarantee for his statement that these cases were really of the most serious kind. The irrigation of the uterus must be continued for at least five days, or in any case until the complete cessation of febrile symptoms. As a rule, Dr. Fritsch irrigates the uterus for the last time on the second evening on which the temperature remains normal, but the vaginal injections are continued for another week, as occasionally fetid lochia and a return of fever have been observed when they have been left off too soon. There need be no fear that pain or secondary hæmorrhage will be excited by irrigation; practically, they are not found to occur. The patients themselves make no objection to the treatment, provided the medical attendant explains to them its object. Collapse only occurs where there has been much loss of blood or several days of fever, and in such mainly when the liquid has been injected too cold. In carrying out the method much will depend on the tact and care of the medical man. A few spoonfuls of wine may be given before and after the injection. Internally it is well to give quinine. Salicylate of soda in such small doses as two grammes administered in the course of four hours caused so much delirium and collapse in women after childbirth as to deter Dr. Fritsch from repeating its use.

We have entered at some length into the details of the above method because it seems to us to mark a distinct advance in obstetric surgery, and to hold out a real hope of success by taking advantage of a rational indication for the prevention, and even the cure, of puerperal fever, where the use of other remedies has as yet been scarcely more than empirical and unscientific. If the great "peril of childbirth" can be lessened by means so simple, the introduction of antiseptic midwifery will be a boon indeed. The need is pressing, for every year many a young wife and mother is snatched away, the victim of puerperal infection.

THE WEEK.

TOPICS OF THE DAY.

We may occasionally find fault with the sanitary authorities of the metropolis and its suburbs for want of energy and forethought; but it cannot be denied that they are frequently seriously hampered in their operations by public opposition. Thus, a panic has been caused at Isleworth through the determination of the Guardians of the Brentford Union to build a small-pox and fever hospital, with accommodation for twenty patients, in the garden of the Union Workhouse, upon a site approved by Mr. Henley, the Inspector of the Local Government Board, for the use of pauper patients of the Union. Meetings have been held to protest against it, and a memorial signed by the inhabitants has been prepared for presentation to the Local Government Board. At the last weekly meeting of the Guardians a deputation attended to endeavour to induce the Board to reconsider the matter. One of the deputation reminded the Board that there were some 20,000 acres of land within the Union, and doubtless there were many more eligible sites to be procured for building a hospital for the use of all the parishes; and he considered that it would be better to adopt some other site rather than to erect a pest-house in the parish of Isleworth, and within 80 or 100 feet of a workhouse containing some 500 helpless paupers. Mr. Moore, representative of the Duke of Northumberland, said he was of opinion that the adoption of the Guardians' suggestion would drive many persons from the neighbourhood. In the end the Guardians resolved to postpone the further consideration of the Committee's report until their next meeting. Experience has proved that the history of the opposition to the erection of hospitals for contagious diseases is always the same—local interests are invariably evoked to the detriment of the public good. In the present instance a duly qualified official has certified to the fitness of the site chosen, and that should be sufficient to warrant the Brentford Guardians adhering to their original determination.

In their report for the year 1876, the Managers of the Prisons of Scotland call attention to an instance belonging to the class of persons who bring on lunacy of the most dangerous type by protracted fits of hard drinking. The man referred to killed one of his children, and was committed to the lunatic department of the Perth Prison. He was conditionally discharged under the powers of the Criminal and Dangerous Lunatic Act, but it was suspected that he evaded the vigilance of his brother-in-law, a clergyman, who had

become responsible for taking charge of him; and intemperance at last brought him under the notice of the police, and he was re-committed to prison under a warrant obtained from the Secretary of State. The Prison Managers make the following report on this case:—"This man is not held to be insane by the medical authorities, but he is very morose and irritable. He would be a very dangerous inmate of the lunatic department if it were not that, under the arrangement for conditional discharges, the old companions who were in the same condition as himself—that of sane persons detained among lunatics—are no longer there. The officers of the establishment have never been apprehensive of those really insane plotting together, as none would trust another; but there was always some apprehension about the topics of discussion in the group of those who had recovered their sanity, who naturally associated with each other apart, and among these the man here referred to was the chief object of suspicion. He has considerable ability for business, and during his conditional discharge he filled a responsible office in a local public department. The Board of Lunacy for Scotland, who have afforded us ready assistance in the delicate duty of disposing of this class of people, made inquiry as to the practicability of finding for him a situation as clerk in a lunatic asylum. It occurs to us that it might be practicable to employ him in a prison store, sleeping and taking his meals in the lunatic department, with permission to pass occasionally beyond the prison walls. But this would be a novelty in prison organisation, demanding, for obvious reasons, much caution and consideration."

At the Liverpool Police-court, last week, a provision dealer, of Leece-street, was summoned for selling a ham coated with a substance containing chromate of lead. The ham was called "sugar-cured American," and the object of the covering was to keep off flies and insects. Dr. Campbell Brown, the Public Analyst for Liverpool, stated that if the powder were partaken of it would cause inflammation and ulceration of the stomach and bowels; and the prosecuting solicitor said that in cutting the ham there would be great danger of portions of the outer crust falling upon the inside. The magistrate ruled that the cover not being an article of food did not come under the Act of Parliament, and the summons was therefore dismissed.

An important inquiry was held last week by Dr. Hardwicke at the House of Correction, Coldbath-fields, on the body of a prisoner who had died from small-pox. Mr. Cheshire, chief sanitary inspector of Clerkenwell, was present on behalf of the local authorities, it being alleged that the practice of allowing warders who had charge of small-pox patients in the prison to go out and mix with their families and others was calculated to spread the disease. Mr. Smiles, the surgeon to the prison, deposed that deceased was well on admission, and was removed to the small-pox infirmary directly it was found that he was suffering from that disease. Since December there had been eleven cases and three deaths from small-pox. The patients were advised not to send for their friends, and every precaution was taken. Mr. Cheshire wished to know if it was not true that warders in the small-pox hospital did go home to dinner and to sleep, and that one of the warders had been off duty some time owing to having caught the disease. Mr. Smiles said it was true, but the officer in question was away until thoroughly well, and the warders who went to their families outside always washed themselves, and put on fresh clothes before doing so. Moreover, the warders were cautioned not to come in contact with other people. The foreman said that he and others of the jury were of opinion that these men should not leave the prison whilst the disease lasted. It was a question whether the changing of the clothes was sufficient. After some discussion, Mr. Smiles remarked that the opinions of the jury would be laid before the proper authorities, but he still believed the disease came in the air. A verdict of "death from small-pox" was then returned.

A very distressing state of affairs is exposed by Dr. J. M. Ballenden, the Medical Officer of Health for the District of Sedgley, near Wolverhampton, in his last annual report. Mining and nail-making are the staple occupations of the inhabitants of the district, and Dr. Ballenden states that nearly two-thirds of the deaths during the past year were of children under five years of age. This terrible rate of infant mortality demands very earnest consideration. One important cause of mischief was the utter disregard of ventilation in dwellings. Considering the dangerous nature of many of the occupations of the people in that district, the accidental deaths were very small indeed. There had been much misery and sickness caused by the depressed state of trade, the mining population having suffered more than any other class, and much infantile mortality had been caused by want of sufficiently nourishing food.

The Conference of the Society of Arts on the Health and Sewage of Towns is fixed to be held on May 3 and 4 next, under the presidency of Mr. Stansfeld, M.P., late President of the Local Government Board. A large gathering of representatives from the principal cities and towns of the United Kingdom is expected to attend. An exhibition of sanitary appliances will be got together for inspection.

It will be remembered that the town of Chatham recently suffered from an epidemic of small-pox, which prevailed also in the vicinity to a considerable extent, and there were a large number of cases and many deaths. The epidemic may now be said to have entirely disappeared from the town, and at the present time there is not a single case in the locality. But, unfortunately, an epidemic, distinct from the one at Chatham, has broken out at Troy Town, in the neighbouring city of Rochester, and several cases and one death have already occurred. A very bad case has also occurred in the village of Upnor, on the banks of the Medway.

The Wimbledon Local Board are desirous of strictly carrying out local self-government in all matters which essentially concern the interests of the parish. They have just completed the engineering and other works in connexion with a new sewage farm for irrigation purposes. In addition, they are now taking steps to obtain a separate and distinct water-supply, independent of one of the metropolitan water companies, by which the parish is at present supplied. They are negotiating with an engineer who has laid certain plans before them, and to assist them in their calculations they have issued a circular to the ratepayers of the parish, inviting them to report the amount paid by each to the water company for the past year.

The town of Dover and the Local Government Board are not quite in accord. A memorandum was lately received by the Town Council from the Board, requesting the Clerk to be good enough to reply to a previous communication. The Town Clerk was directed to inform the Board that he was not their clerk, and could only reply when ordered to do so by the Town Council. The information which the Local Government Board required was as to what had been done with regard to the enforcement of the Artisans and Labourers' Dwellings Act; and eventually the Clerk was directed to send up the reports of the Medical Officer of Health, and the resolutions thereon, without comment.

Mr. D. Cubitt Nichols, by direction of the Home Secretary, held an inquiry last week at the Vestry Hall, Clerkenwell, into the Metropolis (Peartree-court, Clerkenwell) Improvement Scheme of the Metropolitan Board of Works. Dr. Griffith, the Medical Officer of Health, gave evidence in support of the scheme, and, after a considerable amount of

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opposition on the part of owners of property in the vicinity, the inquiry was adjourned until the 12th inst.

THE VACANCY ON THE STAFF OF KING'S COLLEGE HOSPITAL.

It must now, we believe, be considered that Professor Lister has definitely declined to accept the position offered to him by the Council of King's College. In considering how the vacancies caused by the death of Sir William Fergusson should be filled up with the greatest advantage to the Hospital and Medical School, it was felt, we believe, and very justly, that Professor John Wood had an indisputable claim to the vacant chair of Clinical Surgery and the post of Senior Surgeon, and therefore the Council of King's College could only offer to Professor Lister the office of Surgeon to the Hospital, with thirty beds, and the Professorship of Systematic Surgery. But this was a high compliment to Professor Lister's reputation and recognised position, and he, in acknowledgment of this, came to London, went over the Hospital, and conferred with various members of the Medical Board and of the College before deciding whether to accept it or not. It appeared, however, that he was not willing to undertake the Professorship of Systematic Surgery, being determined to devote himself entirely to the teaching of Clinical Surgery; and though various suggestions were, we believe, made for giving him a position as clinical teacher, none of them were found to be acceptable to all the parties concerned. We must confess that it appears to us that, had a surgeon of Professor Lister's powers and reputation really desired a position for teaching in London, he would have been content, in default of anything better, to take the office of Surgeon with thirty beds, and would have found, or made it, a very good platform for his purposes, though without the title of Professor of Clinical Surgery. But we are not in the least surprised that the Professor has decided not to give up for that the eminent position he holds in such a school as that of Edinburgh, though it is unfortunate that matters were left so long in doubt. Now it seems, uncertain what is to be done, the chair of Systematic Surgery is vacant, as well as the Surgeoncy; and, judging from the cautious reply made by Professor Wood to the students of the School, it seems doubtful whether he is willing to bear the burden of that, or of a part of that, as well as of the chair of Clinical Surgery. It is said that the Surgeoncy with the Professorship of Systematic Surgery is to be advertised as open to general competition; but this intention, if it exists, has, at any rate, not yet been carried into execution.

THE HEALTH OF LAMBETH IN 1876.

The Twentieth Annual Report on the Health of the Parish of Lambeth for the year 1876 has recently been issued. Dr. Archer Farr, the Medical Officer of Health, states that the death-rate of the whole parish compares favourably with that of the previous year, it being 23·6 per 1000 of estimated population as compared with 24·6 in 1874-75. After the winter of 1875—one of almost unprecedented severity, attended by a serious inundation of the River Thames, and a subsequent outbreak of scarlet fever,—the result as to mortality may be regarded as satisfactory. The death-rate of the parish is, however, considerably swollen by the deaths of strangers brought from different parts of the metropolis and the provinces to be treated in the various public institutions in Lambeth: thus, the deaths in St. Thomas's Hospital during the period in question were 243; in the Stockwell Fever Hospital, 98; in the Royal Infirmary, Waterloo-road, 6; in the Stockwell Small-pox Hospital, 4; and in the Lying-in Hospital, York-road, 3. The parish consists of two well marked districts, the one very poor and crowded, and the other containing a better class of inhabitants. It is interesting to note how the death-rate declines in comparing the statistics of the former with the latter. It is in the overcrowded dwellings of the poor where, independently of epidemics, the death-rate becomes swollen by pulmonary and infantile diseases. The corrected death-rate for the entire parish is 22·11 per 1000; but in the crowded districts it is 28·77, whilst in the open districts it is only 17·67 per 1000. The total deaths from small-pox last year were 24, of which number 12 occurred at the Stockwell Hospital.

THE ELECTRICAL IRRITABILITY OF THE CEREBRAL HEMISPHERES OF THE FROG.

Dr. Oscar Langendorff, Assistant in the Physiological Laboratory at Königsberg, contributes the following statement of the results of his experiments on the above subject to the *Centralblatt*, No. 53, 1876:—1. Weak constant or interrupted currents applied to certain parts of the cerebral hemispheres of the frog produce movements in the muscles of the trunk and limbs; on the opposite side if the irritation be unilateral, and on both sides if bilateral. 2. The "irritable zone" is situated in the parietal portion of the hemispheres, and irritation of other parts of the cerebrum has no effect if weak currents only be used. 3. If the cerebrum be completely separated from those parts of the central nervous system which lie behind it, electrical irritation produces no effect. 4. Narcotism by ether destroys the electrical irritability of the cerebrum, whereas it is not affected by allowing the frog to bleed to death. 5. There is a spot *on the outside* of the frog's skull, irritation of which with the current produces precisely the same effects as direct application of the current to the hemisphere of that side. This spot lies between the tympanum and the eye, and can easily be recognised by a suture-like line which connects the eye and the ear, and which generally is of a dark colour.

THE IRISH PUBLIC HEALTH MEASURE.

On Monday, the 2nd inst., the Attorney-General for Ireland received a deputation of the Parliamentary Committee of the King and Queen's College of Physicians on the Public Health (Ireland) Bill; and next day the Committee of Council of the Irish Medical Association had a prolonged interview with him on the same subject. The Attorney-General is stated to have listened with great attention to the observations which fell from the members of both deputations, and promised his earnest attention to the suggestions made. We have elsewhere noticed the imperfections of the Bill as it stands at present, and the amendments thought most required by those who have carefully studied it. As the passing of the present measure will necessarily be a settlement of the question for many years to come, we trust the Government will see their way to granting the just demands of the profession as to the proper title, remuneration, duties, and position of the dispensary medical officers under the Bill. The suggestions as to sanitary inspection by inspecting medical officers of health, the sanitary treatment of infectious diseases, and the providing of hospital accommodation of all kinds, including convalescent homes and refuges for healthy persons removed from infected dwellings, have one and all our heartiest approval and support.

THE ANTI-VACCINATIONISTS IN YORKSHIRE.

The anti-vaccination party in the North of England have recently experienced a rude *contretemps*, which, singularly enough, was of their own preparing. The Guardians of the Skipton Union, who have been seeking to emulate the notoriety of their neighbours at Keighley, about two months ago formed a Committee, partly of anti-vaccinationists, and partly of members selected from their own ranks. The object of this Committee was the investigation of certain cases of supposed injury from vaccination, which were from time to time referred to at the Board as an argument against vaccination. After much deliberation, the members of the Com-

mittee have drawn up a report in which they state the result of their investigation. To obtain evidence, advertisements were inserted in the local papers asking for information on any cases of supposed injury from vaccination. In reply, thirteen cases were adduced, but the report states that they were greatly exaggerated, and the majority of them were reported by persons not related to the sufferers. Except in one case of rash, in respect to which the physician consulted could not positively say that all the symptoms were owing to vaccination, the Committee have come to the conclusion that no person reported to them has suffered in consequence of vaccination. Four cases looked very strong from the reports, but upon investigation it was found that in two instances the ailment was not complained of until two years after re-vaccination, and it was proved by communications from the medical men who had attended the cases that the illness had nothing whatever to do with vaccination, but appeared to be hereditary.

THE IMPROVED SANITARY CONDITION OF WORCESTER.

Dr. Strange, the Medical Officer of Health to the Urban Sanitary Authority of Worcester, in his annual report for the year 1876, after giving all the usual details of the vital statistics of the district, adds :—"The most fatal of diseases, especially amongst the young, are the zymotic, and it is upon this class of disease that sanitary precautions are expected, and, in fact, are proved to act in the way of prevention or mitigation. Moreover, clean and wholesome dwellings are greatly conducive to a higher standard of health and of vital resistance to the onslaught of all diseases, however they may arise. Taking the last three years, during which exact statistics have been kept, we find the death-rate to have been 23·7 per 1000, excluding the deaths of those who reside without the city boundary; but it has been shown that the suburbs of Worcester ought to form part and parcel of the city for the purposes of this calculation, and the average joint death-rate of the two populations for the three years will be found to be only a little over 22 per 1000, that of the whole of England and Wales being 22·4 per 1000 per annum. Now, taking, as I believe we must, the rate of mortality in former years to have averaged 25 per 1000, we have a saving of three lives per 1000, or over 100 lives every year. To this saving of human life a corresponding diminution of cases of non-fatal sickness should doubtless be added."

ROYAL COLLEGE OF SURGEONS.

Professor Flower, F.R.S., brought his interesting and most philosophical course of lectures on the Comparative Anatomy of Man to a close on Wednesday last, when he exhibited and explained the use of the stereograph, a very ingenious instrument invented by Professor Broca, for the purpose of taking mathematically accurate drawings of human crania, and other anatomical subjects. This instrument has lately been presented to the College by the President, Mr. Prescott Hewett, and will be a useful aid to the systematic study of the important collection of human crania now contained in the Museum, which has lately been enriched by many valuable donations. Among these, in addition to the *Pandora* Esquimaux skulls mentioned in this journal a week or two ago, are a series of thirteen skulls of natives of the East Coast of New Guinea, collected and presented by Dr. Comrie, Staff Surgeon Royal Navy, of H.M.S. *Basilisk;* four skulls of natives of the Samoa or Navigation Islands, by Dr. Pye-Smith; the skull of a Bulgarian killed in the recent war in Turkey, presented by Mr. A. Leslie; and one of an Andaman Islander, by Dr. Protheroe Smith. On several occasions during the course of his lectures, Professor Flower pointed out that far larger series of human skeletons and skulls are required than are at present contained in the magnificent Museum, before our knowledge of the comparative anatomy of man can be placed on a satisfactory basis, as the individual variations are so great, that it is only when a considerable series of any race can be brought together and compared that their true characteristics can be determined.

ALBUMINOUS URINE IN CHRONIC MORPHIA-POISONING: REMARKS ON THE TREATMENT OF THE LATTER.

In an interesting lecture on Morphomania (*Morphiumsucht*) and acute morphia-poisoning, given before the Berlin Medical Society, Dr. Levenstein, Superintendent of the Schöneberg Asylum, Berlin, stated that in a large number of patients with chronic morphia-poisoning albumen is present in the urine. It most commonly occurs in patients who have been in the habit of subcutaneously injecting morphia in large doses for many years. The quantity of albumen excreted appears to be directly proportional to the time during which the drug has been used and to the size of the doses, and varies from slight cloudiness to a flocculent precipitate. Albumen could be detected in casesof morphomania in which all other causes of albuminous urine could be excluded. Experiments on animals (dogs and rabbits) confirmed this observation. Two or three centigrammes subcutaneously injected three times a day give rise to albuminous urine in two or three days. Fatal doses of morphia, just as of chloroform, chloral, or curare, also cause the appearance of sugar in the urine.

Morphomania, with all its morbid phenomena, must be simply treated, according to Dr. Levenstein, by the complete withdrawal of the drug. The only cases in which it is unadvisable to withdraw it suddenly are those in which the patients are in a low physical condition owing to previous abstention from food or to protracted illness; here the strength must be raised by carefully regulated diet before resorting to extreme measures. In all cases during the first five days after morphia has been completely withdrawn the physician should take care not to be out of call should collapse occur. For this condition the immediate injection of morphia under the skin is the best treatment. In cases in which there is a suspicion that the patient, in spite of all his assurances to the contrary, is still secretly making use of morphia, the fact that after its complete withdrawal morphia disappears from the urine by the fifth or sixth day is a valuable aid to the detection of the fraud. "It is certain," says Dr. Levenstein, "that if morphia can be detected in such a case after the eighth day, the patient is deceiving his doctor." The simplest way to detect morphia in the urine is to evaporate to dryness, and to extract the residue with alcohol. After evaporation of the latter, the residue is dissolved in water, warmed, and shaken up with amylic alcohol, to remove the urea. The morphia can now be precipitated by the addition of ammonia, and detected by the usual reagents.

CHARITY VOTING REFORM ASSOCIATION.

The Duke of Northumberland, as President of the above Association, has issued a strong protest to the Surgical Aid Society against their present mode of affording relief. It appears that the applicants for surgical aid, after getting a letter which simply places them in communication with the surgeon of the Society, who advises them as to the nature of the instrument required, must canvass the town for an indefinite number of letters, each one of which represents an instalment towards the total cost. Thus an artificial limb, which is an expensive instrument, cannot be obtained without an immensity of labour on the part of the poor cripple. Nor is this the only disadvantage, as exercise at such times cannot always be borne, and it may lead to serious results if attempted or persevered with. The Charity Reform Association wish to abolish such unwise regulations; and in this view we fully concur. Aid to such cripples must be immediate, or it loses one-half its value; and mischief which might have been prevented, once set up, becomes altogether beyond the reach of surgical aid.

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 100 and 76 in the two preceding weeks, rose again to 86 last week; 39 were certified as unvaccinated, 15 as vaccinated, and 32 were "not stated" as to vaccination. Of the 86, 32 were recorded in the Metropolitan Asylum Hospitals, 3 in the Highgate Small-pox Hospital, and 1 each in the Pancras Hospital and the House of Correction; the remaining 45 cases occurred in private dwellings. Six of the 8 deaths in Islington, 5 of the 7 in Bow, all the 4 in Bermondsey and Rotherhithe, and all the 3 in Belgrave sub-district, occurred in private houses. The fatality of the disease continues greatest in East London. The Metropolitan Asylum District Hospitals contained 993 small-pox patieuts on Saturday last, including 52 convalescents at Limehouse; the numbers at the end of the five previous weeks had ranged from 898 to 952.

The deaths referred to diseases of the respiratory organs, which in the five previous weeks had steadily increased from 303 to 575, further rose last week to 645, which exceeded the corrected weekly average by 231; 427 resulted from bronchitis and 152 from pneumonia.

THE TREATMENT OF ATONY OF THE BLADDER WITH INJECTIONS OF ERGOTINE.

At a meeting of the Berlin Medical Society on November 8, 1876, Professor von Langenbeck stated that he had lately obtained remarkable results in three cases of atony of the bladder, accompanied with hypertrophy of the prostate, in old people, by hypodermic injections of ergotine. In all the cases there was an immediate increase in the contractile power of the bladder, so that the patients passed more water than they had previously done, and after a few days the bladder had so far recovered its force that scarcely any urine remained in it after micturition. His last case was that of a gentleman aged sixty-two, who daily made water three or four times, but only passed thirty grammes each time, although by introducing a catheter more than half a litre (about a pint) could be withdrawn. On the first day of the treatment by ergotine 0·12 grammes of Bonjean's solution of extract of secale cornutum were injected subcutaneously. On the same day the patient declared that he could pass his water better already, and, as far as Professor Langenbeck was able to make out, the prostatic hypertrophy was also considerably reduced. Four injections completed the cure.

ANTIHYDROPIN.

In Russia the common cockroach (*Blatta orientalis*) is a favourite popular remedy for dropsy. Dr. P. Bogomolow, of St. Petersburg, has lately (*Petersburg. Med. Wochenschrift*, No. 31, 1876) examined its effects in nine cases of Bright's disease, heart disease, and other affections accompanied with severe dropsy, and in all the result was the same. There was an increase in the secretion of the urine and perspiration, with rapid disappearance of œdema, and also almost complete disappearance from the urine of albumen and renal derivatives. The dose was five to ten grains of the powdered cockroaches in the twenty-four hours, but they were also administered as a tincture and as an infusion. These insects do not, like cantharides, produce any irritant action on the kidneys. Dr. Bogomolow has succeeded in extracting from them a crystalline body which he calls antihydropin, and which is their active principle.

ABSCESS AND HYDATIDS OF THE LIVER.

Professor Sanger, of Gröningen, records (*Berlin. Klin. Wochenschrift*, No. 12, 1877) two cases, one of hydatid of the liver, and the other of abscess of the liver, in which he cut down on the fluctuating region, then with a curved needle fixed the swelling with four sutures to the abdominal wall, and immediately opened it and evacuated its contents. In neither case was the liver adherent to the peritoneum. The incision was made in both cases under Lister's spray, and the hydatid cyst, which was as large as a man's head, was washed out with a 5 per cent. solution of carbolic acid. Both patients recovered completely within three weeks.

PATHOLOGICAL SOCIETY.

Dr. Wilson Fox, who took the chair on Tuesday evening last, in the absence of the President, announced that at the next meeting Dr. Klein would show specimens illustrative of the minute pathology of scarlet fever, and also of typhoid (so-called) in pigs. Members of the Society will be pleased to know that the ordinary routine business will not be in any way interfered with.

THE PUBLIC HEALTH (IRELAND) BILL, 1877.

This measure, recently introduced into Parliament by Sir Michael Hicks-Beach, Bart., as Chief Secretary, and by the Attorney-General for Ireland, is generally regarded as incomplete in its present form. While it consolidates the twenty odd Sanitary Acts now in force in Ireland, it signally fails to amend the existing law in some important particulars. The medical profession especially is dissatisfied because the Bill makes no attempt to define more accurately than did the Act of 1874 the position, duties, and remuneration of the district medical officers of health. In a word, there is imminent danger of a dead-lock in sanitary matters owing to the existing attitude of the dispensary medical officers on the question.

On behalf of this numerous body of ill-used gentlemen the Irish Medical Association has taken action. The Council of the Association has circulated a petition to the House of Commons to be signed by the dispensary medical officers, and has also made the following general observations on public health legislation and administration for Ireland:—

"That the Acts are not working efficiently at present is apparent, from the notes sent each quarter to the Registrar-General of Ireland by the registrars of the several districts; from the evidence given before the Select Committee on local government and taxation in Ireland, in 1876, and before the Commissioners now engaged in visiting the towns throughout this country; and from the present attitude of the medical profession on the question in general.

"The Public Health (Ireland) Bill of 1877 does not in any way remove the causes which have contributed to the failure of the existing sanitary organisation. Before the Act of 1874 became law these defects (which still exist) were sufficiently indicated by the Colleges of Physicians and Surgeons and other public bodies competent to give a skilled opinion on the subject.

"Immediately on the enforcing of the Act by the Local Government Board, protests were made on all sides by the medical profession in Ireland against the proposed regulations, organisation, and remuneration, in connexion with the services required of the medical officers under the Act; and representations were addressed to the Government to the effect that unless these defects were remedied the Act would prove a failure.

"In reply to a deputation from the King and Queen's College of Physicians, in November, 1874, the Chief Secretary for Ireland stated that all which had been done up to that time had been experimental. Subsequent experience has shown that those experiments were a failure, and on August 11, 1875, the whole question was brought under the notice of the House of Commons by the honourable member for Drogheda (Dr. O'Leary).

"The Solicitor-General for Ireland, in his reply to the honourable member's remarks, stated that the Irish Executive would pay close attention to the points he had mentioned, and endeavour to secure for the country the full measure of benefits which the Act was calculated to confer upon it.

"Notwithstanding the statements of the Chief Secretary and Solicitor-General for Ireland just referred to, the present Bill includes and confirms all the defects of previous legislation; and especially the unsatisfactory position of the medical officers under the Act is left untouched."

But the Irish Medical Association is not alone in the matter of watching public health legislation for Ireland. The fol-

lowing observations on the Bill introduced last session by Sir M. Hicks-Beach, and of which the present Bill is almost a counterpart, were agreed to on February 12, 1877, by a Committee of Representatives of the King and Queen's College of Physicians, the Royal College of Surgeons in Ireland, the Irish Medical Association, and the Dublin Sanitary Association:—

"*Sanitary Districts and Authorities: their Formation, Union, Separation, and Alteration.*—The Bill adopting the provisions of the Act of 1874 proposes to divide Ireland into two classes of sanitary districts—urban and rural. The urban authorities to consist of corporations, and the town or township commissioners of all the boroughs, towns, and townships in Ireland with a population of more than 6000, as well as a few townships having Commissioners under local Acts; in all forty-two in number. We adhere to the opinion expressed in our observations on the Public Health (Ireland) Act, 1874—that urban sanitary districts should consist only of towns, the population of which, according to the last Parliamentary census, exceeds 20,000, as experience has proved that in places with smaller populations than this the means for efficiently carrying out the provisions of the Sanitary Acts do not exist.

"We are of opinion that for the efficient carrying out of sanitary measures it is extremely desirable that there should be as much unity and simplicity of organisation as possible, and, therefore, that in respect to proposals for alteration or union of sanitary districts, or the separation of portions of districts, the Local Government Board should have the power of taking the initiative in issuing provisional orders, after due inquiry, without waiting to be set in motion by the sanitary authorities; or at least that there should be some provision made for giving the inhabitants of any district, or a due proportion of the inhabitants, the same power of initiative as is conferred on the sanitary authorities.

"We believe that, for the efficient carrying out of the provisions of this Act, it is necessary that the whole of Ireland should be divided into districts, for the purposes of sanitary inspection; that every such district should be subject to the supervision of an inspecting medical officer of health, such inspecting medical officers of health to be registered physicians and surgeons appointed by the Local Government Board.

"With reference to the scale of remuneration to medical officers of health, for the services performed by them under this Act, we are of opinion that this is a question of administration rather than of legislation, except in case of attendance on board ship; in which case the remuneration should, we think, be fixed at not less than one guinea for each visit.

"We think that the titles conferred on various sanitary officers under the Act should be sufficiently descriptive of their duties as to be generally intelligible. Much confusion has arisen from the titles adopted in the Act of 1874. We therefore recommend that the title Medical Officer of Health should be substituted for that of 'Sanitary Officer'; that the Executive Sanitary Officer should be called 'Clerk to the Sanitary Authority'; and that the Sanitary Sub-Officer should be styled 'Inspector of Nuisances.'

"*Infectious Diseases.*—We are of opinion that provisions should be made by every sanitary authority for the carriage of articles for the purpose of disinfection; for the retention in hospital of any person suffering from any dangerous or infectious disorder, until, in case of recovery, discharged therefrom, and in case of death, until removed direct to a mortuary or cemetery; for the punishment (1) of persons conveying, without due precaution, the bodies of persons who have died of any dangerous or infectious disorder; and (2) of persons who, in hiring a house or lodging, conceal the fact of contagious or infectious disease existing, or having existed, in their families within a certain period.

"*Markets and Slaughter-Houses.*—We recommend the insertion of a new clause prohibiting the keeping of cattle in any urban sanitary district without special licence, and providing for the making of by-laws for the management of such places for the keeping of such animals.

"*Hospital Accommodation.*—The Bill does not make any provision for hospital accommodation. We therefore recommend the insertion of a clause similar to sec. xxxvii., 29 and 30 Vic. cap. 90.

"*Mortuaries, etc.*—We recommend the insertion of a clause providing for a weekly return by the registrar of every burial-ground of the names, causes of death, etc., of persons interred, to be sent to the registrar of births and deaths of the district in which such persons died."

FROM ABROAD.

Prof. Billroth's Case of Splenotomy.

In a paper published in the *Wiener Med. Woch.* (1877, No. 5), Prof. Billroth observes that the recent success of Péan will probably render the performance of splenotomy—which in itself is a simple operation—more frequent; and he is desirous of relating a case which has come under his own care, as the accident which gave rise to its fatal termination may probably be in future provided against.

Mrs. C. A., aged forty-five, of strong build, was admitted to the Clinic, January 20. She had borne several children, had always had good health, and had never been exposed to the influence of malaria. During two years she had observed a tumour of the right side, which slowly increased in size; but until last summer she was able to continue a laborious employment. Since then she became weaker and weaker, and emaciated, but on her admission did not seem very ill. On examination, however, she was found to have an enormously hypertrophied spleen, together with some enlargement of the liver, and a little ascites. There was great leukæmia, the red globules being five to one of the white. The appetite was good, and the pulse 60. The operation was performed on the 27th. The incision through the integuments was continued a hand-breadth above and below the umbilicus, several small vessels being secured by catgut. On the peritoneum being opened a moderate quantity of fluid issued, and the lower internal edge of the enormous spleen, and a portion of the lower edge of the liver, presented themselves. The omentum and intestines lay behind the spleen, and were kept back by means of large flat sponges. The spleen, which nowhere adhered, was slowly forced down out of the wound, and the *ligamentum gastro-lienale*, together with the greatly enlarged splenic vessels, were secured by double ligatures in six places. On dividing the ligatured parts no blood flowed, and Prof. Billroth observes that his manipulations in this case were greatly aided by the experience he had gained by his experiments on animals. After it had been ascertained that there was no hæmorrhage, all remains of the dropsical fluid were sponged away, and two long drainage-tubes were introduced. From the commencement of the anæsthesia to the completion of the dressing of the wound the operation had lasted three-quarters of an hour, the impression of all present being that splenotomy is a simpler operation than most ovariotomies.

Calling to see his patient two hours after the operation, Prof. Billroth found his assistants engaged in endeavouring to arrest a hæmorrhage which had come on consequently upon the efforts made by the patient to pass some hardened fæces, which had remained undischarged after an enema given just before the operation. All efforts were in vain, and she sank four hours and a half after the operation. At the autopsy a large quantity of softly coagulated blood was found in the abdomen; and of the six ligatures one was missing and could not be found, the cellular tissue around the tail of the pancreas, close to which it had been applied, being lacerated. Water injected into the splenic artery and vein freely appeared at the surface of the wound.

The ligature doubtless gave way during the pressure made by attempting to pass the hardened fæces. Prof. Billroth had made use of strong hempen threads as ligatures, believing that where masses have to be tied they are far preferable to silk or catgut. He supposes either that his strength of fingers was not sufficient to embrace firmly enough the tissues closely surrounded by the pancreas, or that he had not carried compression far enough from fear of dividing the vessels, having in memory the thinness of the walls of the splenic vein as one of the causes of accidents in former operations. He would willingly have avoided tying in a portion of the pancreas, as in former fatal cases this had occurred, while it is the nature of the salivary glands to greatly swell if a portion be tied. In fact, however, this inclosure of a portion of the pancreas seemed unavoidable in order to obtain a sufficiently prolonged mass to make the requisite pressure on the dilated splenic vessels.

Treatment of Hæmorrhoids by Forced Dilatation.

At a late meeting of the Société de Chirurgie (*Union Méd.*, March 6), on the occasion of M. Anger reading a report on a paper by M. Fontan, of Lyons, strongly advocating the

employment of forced dilatation in the treatment of hæmorrhoids, Prof. Verneuil stated that the practice was originally recommended by Maisonneuve, but succeeded in attracting little notice. In 1873 he had himself to treat a very bad case, in which, together with large discharges of blood, there was excessive suffering, owing to habitual hæmorrhoids having become complicated by fissure of the anus. As a means of relieving this last, he performed forced dilatation, and found that the hæmorrhoidal disease itself, which was of very old standing, was also completely cured. Since that time he has had ample opportunity of confirming the favourable opinion he then formed; and he now thinks that, with rare exceptions, the various operations of excision, *écrasement*, etc., in spite of their utility under certain circumstances, ought in future yield to the practice of dilatation. When the hæmorrhoids are inflamed, or phlebitis is present, the dilatation must be deferred until the inflammation is subdued. For effecting it he considers the bivalve speculum an excellent instrument, the operation, however, not being performed too suddenly, but slowly and progressively, occupying forty or fifty seconds, in order to avoid lacerations. Another point that seems to M. Verneuil of importance in the pathogeny and treatment of hæmorrhoids is their relations to affections of the liver; and he referred to a case in which, with hæmorrhoids, there was great enlargement of the liver, and in which both affections yielded to the employment of local and general hydro-therapeutical agents—entirely obviating the surgical interference that seemed requisite. By means of hydro-therapeutics alone, hæmorrhoids can, in fact, be often cured, especially when connected with disease of the liver. This means, indeed, in conjunction with forced dilatation, fulfils the most general and the most important of the indications for the treatment of hæmorrhoidal affections.

M. Desprès observed that in inflamed and painful hæmorrhoidal tumours he almost always finds that relief and reduction can be obtained within twenty-four hours by means of baths and cataplasms. When the tumour is irreducible he removes it by Chassaignac's écraseur; and he does not think that forced dilatation will suffice for the definitive cure of hæmorrhoids. It is not the dilatation, but the consecutive treatment, that is the cause of the cure. M. Marc Sée has found dilatation succeed perfectly in three cases, but he prefers effecting it by means of the two thumbs introduced into the anus and then separated from each other until the ischiatic tuberosities are reached. M. Trélat, while regarding dilatation as an excellent means whenever the hæmorrhoids are complicated with contraction of the sphincter, believes it to be contra-indicated when there is procidence of the rectum without contraction of the sphincter, when ignipuncture is a good procedure, as it is in cases of procidentia with relaxed sphincter. M. Rochard is of opinion that surgical interference should be more and more restrained in hæmorrhoids. Very often simple hygienic treatment, conjoined with a suitable regimen, relieves these patients of their infirmities. He has cured a considerable number of such persons by simply advising them to go to stool only in the evening before going to bed, after a cold enema for the purpose of facilitating defæcation. After perseverance, defæcation takes place regularly, constipation ceases, the hæmorrhoidal flux stops, turgescence and procidence no longer occur, and the hæmorrhoidal tumour diminishing in size and consistence, the normal order of things is re-established. M. Verneuil observed that such a palliative treatment as this is far from sufficient in a great number of cases. Hæmorrhoids are not painful because they protrude, but because for the most part there are also contractions of the muscular rings which strangulate the veins. M. Gillette had practised forced dilatation in a case of inflamed hæmorrhoids in which there was contraction, but no anal fissure, and the pain and contraction had disappeared by the next morning; so that the operation may even be resorted to when the hæmorrhoids are inflamed. M. Anger considered the fingers the best means for effecting dilatation, as they convey better than the speculum can the sensation of resistance overcome. Contrary to the opinion of M. Desprès, he believes that a complete cure can be effected by dilatation, and although Chassaignac's écraseur is a good means of treatment, it is one that is more complex and less inoffensive than is the dilator.

Prussian Lunatics in 1875.

At the last meeting of the Medical Officers of the German Lunatic Asylum at Hamburg, Dr. Guttstatt communicated (*Berlin. Med. Woch.*, February 26), from the Berlin Statistical Bureau, an account of the lunatics treated in the Prussian asylums during 1875; this, however, not comprising the entire number of lunatics, as some are still treated in hospitals and poor-houses. The return relates to 18,761 lunatics, 10,127 being males and 8634 females; of these, 14,512 (7760 males and 6752 females) were treated in 46 public, and 4249 (2367 males and 1882 females) in 72 private asylums. The patients are classified under the following eight divisions:—(1.) Melancholia: 856 males and 1312 females; of these, 17·75 per cent. males and 19·48 females are returned as cured, 11·68 males and 10·14 females as improved, and 7·24 males and 6·24 females as dead. (2.) Mania: 1069 males and 1498 females; of these, 18·71 males and 15·62 females were cured, 6·74 males and 4·34 females were improved, and 5·23 males and 5·81 females died. (3.) Secondary Insanity (*secundarer Seelenstorungen*): 4312 males and and 3956 females; of these, there were only cured 0·60 males and 0·41 females, and improved 2·29 males and 2·50 females—5·80 males and 6·09 females dying. (4.) Insanity with Paralysis: 982 males and 181 females; three of the males recovered; 30·55 males and 24·31 females died. (5.) Insanity with Epilepsy: 815 males and 565 females; of these, 2·32 males and 2·30 females recovered, 2·46 males and 3·19 females improved, and 12·64 males and 10·62 females died. (6.) Idiocy and Cretinism: 962 males and 615 females; of these, 0·16 females were cured, 2·08 males and 2·60 females improved, and 13·31 males and 14·31 females died or were dismissed. (7.) Imbecility: 561 males and 451 females; of these, 3·49 males and 2·44 females improved, and 5·83 males and 9·09 females died. (8.) Delirium Potatorum: 603 males, with 9·95 deaths, and 34 females, with 3 deaths.

The following are the proportions of the various forms of the disease comprised in the return:—Of 100 patients of either sex, 8·5 males and 15·2 females suffered from melancholia; 10·5 males and 17·2 females from mania; 42·6 males and 45·8 females from secondary insanity; 9·7 males and 2·1 females from insanity with paralysis; 8·1 males and 6·5 females from insanity with epilepsy; 9·5 males and 7·1 females from idiocy and cretinism; 5·1 males and 5·2 females from imbecility; and 5·9 males and 0·4 females from delirium potatorum.

The Salaries of the Medical Professors of the Prussian Universities.

The *Berliner Klinische Wochenschrift* of February 5 publishes a tabular statement of the number and salaries of the Professors in the Medical Faculties of the nine Prussian Universities for 1877-78—viz., Königsberg, Berlin, Greifswald, Breslau, Halle, Kiel, Göttingen, Marburg, and Bonn. The "ordinary professors" of these amount altogether to ninety, and are in future to be diminished to eighty-three. The salaries vary from the minimum of 1800 marks (or shillings) at Königsberg to the maximum of 7500 marks at Göttingen. Of the "extraordinary professors" (sixty-five in number, to be diminished to sixty-three in future), twenty-five receive no payment at all, and the others salaries varying from 1200 marks to 3600 marks. The editor of the *Wochenschrift* remarks that it is in the highest degree surprising that, in a country which provides so large a budget for other purposes, such paltry sums should be devoted to the payment of the professorial body. "Some years since the Budget Committee of the Lower House seemed disposed to go into this question, but of late nothing has been said on the subject. Yet we hold it to be a matter of great importance. Teaching power, at least of a superior character, or even only sufficing, exists no longer in any superfluity; and mediocrity, visible enough to those who have eyes to see, is beginning to be spread abroad. In the Austrian universities this want of a sufficient teaching power has already become a calamity that can be no longer concealed. With us the university career should be encouraged, and not obstructed, and that speedily, without waiting until its defects have become so general as to be palpable even to the uninitiated."

In the number of the *Wochenschrift* for February 12, an official explanation is given that several of these professors with such small salaries have other employments in the universities, which considerably increase their incomes; while others have proved of such little service to the universities since their appointment, that increase in their pay is not called for. Of late years the State has exhibited every wish by its expenditure to enhance the position of the universities. In reply, the editor of the *Wochenschrift* replies that, satisfactorily as this statement is by showing that things are not quite so bad as they look, yet it leaves unexplained why *gratis* professors should be employed at all. As to not adding to the emoluments of those

who are worthless, he agrees to the propriety of the resolution, providing that it is carried out without exceptions. What proportion of such there may be, is not made known; but it is certain that some well-known professors, who fill important chairs, and whose teaching-power is shown by their success, still remain unpaid, or only partially paid, for their services. "Without failing to recognise the improvements that may have occurred, it is necessary to ascertain what remains to be done; and we should not take into consideration the possibility of doing all with the smallest means, but, adopting a higher standard, should so regulate dotations to the universities as to provide not for their mere existence, but also for their greatest possible development."

REVIEWS.

Lectures on Orthopædic Surgery. By B. E. Brodhurst, F.R.C.S., Surgeon to the Royal Orthopædic Hospital, etc. Second Edition. London: J. and A. Churchill. 1876.

A second edition of Mr. Brodhurst's "Lectures on Orthopædic Surgery" has recently appeared; but we cannot commend the book as one from which much can be learned. Whatever may have been the value of the lectures when orally delivered with appropriate illustrations, we think that a student taking up the volume in the hopes of obtaining from it even a theoretical knowledge of orthopædic surgery, would be grievously disappointed. The pathology is of the most superficial kind, and the description of many of the deformities very incomplete. The directions for treatment are often such as would give no idea of what is necessary. For instance, the author says, "affections of the sexual and of the urinary organs occasion disorders of the brain and spinal cord, and give rise to deformities. Thus it is not uncommon to see hysteria associated with spasmodic contractions."—(Page 11.) Surely it would be more correct to say that in most cases of hysterical contractions the nervous system is primarily at fault. The description of infantile paralysis is very slight, and its cause is stated to be exposure to cold. We are not aware, however, of any facts which prove this mode of causation. Rickets is properly described as "a general disease, and not a disease of the skeleton only," but is said to be "seldom seen whilst the child is being suckled at its mother's breast." Here we think Mr. Brodhurst overlooks a very common cause of the disease, for rickets is often produced by too long suckling. We cannot agree with Mr. Brodhurst that enlargement of the wrists is always seen in rickets, and is visible before any other affection of the bones is apparent. This is, no doubt, often the case; but in many instances, especially of acute rickets, nodulation of the ends of the ribs is by far the earliest apparent bone affection. We think, also, that sufficient importance is not given to the weakness of the muscles and ligaments so characteristic of rickets.

With regard to investigations made in animals upon the reunion of tendons, Mr. Brodhurst properly points out that for any useful deduction concerning the process in man, the animals should be kept at rest after the operation; and he gives an account of the observations made in this way by himself. In speaking of the treatment of various deformities, the author frequently recommends the application of "a suitable instrument," but he often leaves the reader in entire ignorance of what he considers such. Moreover, nothing is said about the necessity for frequently removing such instruments, or of the care needful for the prevention of irritation of the skin, and of undue pressure. Mr. Brodhurst gives examples of the advantage of dividing the hamstrings in some cases of painful contraction of the flexor muscles associated with ulceration of the knee-joint. The relief in the cases mentioned was immediate and striking; but in many instances of ulceration of the cartilages the contraction is of a spasmodic rather than of a continuous character, and may be prevented by well-devised extension. We think that the author's account of that troublesome affection, contraction of the palmar fascia, gives a very inadequate idea of the difficulty of remedying such deformities, and no mention is made of the method of applying mechanical extension. A remarkable case of gonorrhœal rheumatism is related, which well illustrates the liability to recurrence seen in this disease.

The best part of the book is that which concerns the treatment of articular adhesions; and we quite agree with Mr. Brodhurst in the value he attaches to the subcutaneous section of contracted tendons, fasciæ, and cicatrices, before attempting to straighten a contracted limb, or to rupture adhesions by forcible flexion. In speaking of congenital dislocation of the hip-joint, the author points out that in the ordinary cases of displacement upwards and outwards the bones will be found at birth unaltered in shape or dimensions. All that is necessary, therefore, is to reduce the dislocation and retain the bones in proper relation to each other. When, after infancy, there is difficulty in keeping the bones in position, section of the muscles inserted into and about the trochanters will prevent displacement. In the chapter on unreduced dislocations, a distinction is properly drawn between those cases in which the bone is not moved and becomes fixed by adhesion, and those in which movement leads to the formation of a new joint. This distinction is important in deciding the length of time after which an attempt should be made to reduce a dislocation.

We are surprised to find that Mr. Brodhurst speaks of lateral curvature of the spine arising from intra-thoracic disease as a very rare variety; we have certainly seen many cases produced by the contraction following pleuritic effusion. In the treatment of rickety curvature of the spine, nothing is said of the value of cod-liver oil and other medicines; and we think Mr. Brodhurst takes a somewhat too mechanical view of most of the spinal affections of which he speaks. It is refreshing, however, to learn that he finds "no difficulty" in carrying out the treatment of angular curvature by the recumbent posture, even with children, who have been thought by some to be not easily persuaded to submit to this most essential restriction.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital by Sir Henry Thompson. Fourth Edition. London: J. and J. Churchill. 1876.

This volume of Sir Henry Thompson's Lectures is so well known, and so justly esteemed, that we need scarcely do more than mention that a fourth edition, "with such modifications and additions as our increasing knowledge has demanded," has lately been issued. This edition is somewhat increased in size partly by the addition of several new lectures and illustrations and partly by the adoption of a larger page and type.

An excellent chapter has been added upon the structure and functions of the male urethra, in which is pointed out the error of regarding the urethra as a mere flexible tube. "It is rather a continuous closed valve, capable of transmitting fluids and solids in one direction only, and transmitting nothing whatever in the opposite direction, except in obedience to applied force." We are glad to notice the author's protest against the doctrines of the "mechanical school" in the treatment of urethral stricture, and also of the "school which has determined for itself a very high standard of patency to what we hear called the 'urethral tube,' which is accordingly said to have, or if it hasn't, that it ought to have, a calibre of so many parts, and very large parts, of an inch, or millimetres, as the case may be." The whole question of chemical irritants, as applied to the treatment of stricture, is also dismissed with the following words:—"I believe them to be unnecessary, undesirable, and often injurious." We hope that our young surgeons will take to heart each of the three warnings above alluded to, as well as the advice (page 108) concerning the use of accurate language in all that relates to pathological conditions or surgical practice. We observe that the author recognises the superiority of ether over chloroform as an anæsthetic, and that he now avails himself more frequently than formerly of the aid of anæsthesia. Sir Henry Thompson has now performed the operation of internal urethrotomy more than 200 times, and his results certainly justify his preference for the method. "Twice only has it been followed by fatal results." But he wisely says, "Do not confine your selection to any one method, whether I or anyone else recommend it; but have every resource at your disposal. If you have much to do with stricture or with such complaints, I can only tell you you will want all the resources within your reach. Consider them carefully, and select for each individual case that method which appears in your judgment to be best adapted for it."

The lecture on Lithotrity contains several new illustrations, among them representations of Mr. Clover's instrument for removing *débris*. Sir Henry now speaks very decidedly of the necessity for treating "any cystitis that may occur during

the course of the sittings, especially if it is severe, by freely crushing the stone without delay"; and he enlarges on "the importance of detecting, at all stages of the procedure, any inability on the part of the patient to empty his bladder by his own efforts," and, if this is the case, of the need for using the catheter.

Some good illustrations are added to the lecture on Lithotomy; and a lecture is introduced "On the Influence of Renal Disease on the Choice of Operation for Stone in the Bladder," in which the author gives his reasons for preferring lithotrity. There is a new lecture "On the History of the Treatment of Stone in the Bladder by Solvents," in which it is shown "that there is no chance for the dissolution of any but a small stone, and this provided only that it exists in the most favourable circumstances." Two cases are related in which portions of exfoliated bone were removed from the bladder, in one by lithotomy, in the other by lithotrity. In the lecture on this subject, occasion is taken to point out the value of a small, light, flat-bladed lithotrite, in determining the size, form, and composition of the foreign body to be removed.

In a lecture "On the Future of Operative Surgery for Stone in the Bladder" the author lays great stress on the necessity for the early discovery of a stone in the bladder, and clearly describes the early signs of calculus. These being recognised, and their importance understood, it follows that lithotomy will become more and more rarely needful for stone in the adult.

A lecture is added "On Operative Means for the relief of patients suffering with Advanced Prostatic Disease," wherein three cases are related in which the bladder was punctured above the pubes, and an elastic tube retained. The operation seems to us a valuable one, and we would suggest that for such cases Mr. Napier's retentive catheter would be found very useful, and likely to prevent the accidental escape of the tube, which was the source of much trouble in one of the cases.

The volume ends with a very useful chapter "On the Examination of Urine for Clinical Purposes, chiefly in connexion with the subject of Difficult Micturition." We are glad to note also the addition of an index, which was lacking in former editions.

Clinical Studies. By Sir John Rose Cormack, K.B. Two vols. London: J. and A. Churchill. 1876.

These "Clinical Studies," by this popular and successful Paris physician, are a collection of articles which, for the most part, have already been published in various journals and elsewhere; many of them, indeed, appeared in our own columns. They testify in no small degree to the honesty of the man, who has the courage to exhume opinions and doctrines, many of which have, no doubt, long since been discarded and rejected. In the first volume the articles all date back as far as 1840-44. In the second volume the ideas and doctrines are of a more recent date, and many of the papers therein included are both interesting and original; those on diphtheria and its sequelæ and treatment are very good. The author has evidently taken advantage of the opportunities which the endemic nature of the disease in Paris has placed at his disposal. We cannot agree in the doctrines he expresses, though we gladly acknowledge the ability with which he discusses his own particular views. The books will repay perusal, and the reader, however much he may differ in his views, will find much to instruct him and much to admire. The volumes are exceedingly well and tastefully got up, and they will add, if that be possible, to Messrs. Churchill's already extensive reputation as scientific publishers.

Saint Bartholomew's Hospital Reports. Edited by James Andrew, M.D., and Alfred Willett, F.R.C.S. Eng. Vol. XII. London: Smith, Elder, and Co. 1876.

The most important and valuable contents of a volume of hospital reports are, we take it, first, scientific summaries of the work done during the year in the different departments of the hospital; and second, records of the rare and remarkable cases. We place the latter second because we cannot but think that it is very often a great pity to entomb them in the volumes of hospital reports; and the more valuable they are, the greater is the pity of it. The volume now before us will come into the hands of comparatively but few of the profession; but it contains some papers of high interest and importance, which would have been gladly read by, and been useful to, the profession at large had they been made public through one of the societies, or through the medical journals. Summaries of and reports on the work done in a hospital are in their right place in the yearly volume of "Hospital Reports," and we venture to think that they might be made of much higher and more real scientific value than they now possess were more space given them. To this subject we may recur, however, on some future occasion, contenting ourselves now with a short consideration of the papers contributed to the present volume of the "St. Bartholomew's Reports" by the members of the staff and various *alumni* of that great Hospital.

The great impulse lately given to the study of nervous diseases is reflected in the number of papers devoted to this branch of medicine in the volume now before us. First in value we do not hesitate to place Dr. Gee's article on phrenitis æstiva. This term designates cases which would ordinarily be included under the title of sunstroke. In the instances described there had been more or less heat-exposure, and the two salient clinical features were fever and delirium. The only post-mortem obtained gave nothing very definite in the way of morbid characters. In the careful analysis of symptoms Dr. Gee states that in one of his cases the temperature rose to 107·4°, in another to 108·5°, in another to 109·5°. Great importance is attached to the *conjunction* of certain symptoms—*e.g.*, fever with delirium, fever with cold extremities, fever with convulsions. In all cases of convulsion Dr. Gee considers it necessary to study the body-heat, "for febrile convulsions stand apart from non-febrile in respect both of prognosis and treatment." In infants, as has been previously observed with respect to rigors, Dr. Gee points out that delirium is replaced by convulsions. In one case there was marked throbbing of the carotids, a symptom in common with tubercular meningitis. Vomiting nearly always occurred. The sequelæ in two of the cases that recovered—viz., dementia and deafness in one, and general paralysis in the other—would suggest to us some damage to the cerebral substance itself. With respect to treatment, one of Dr. Gee's cases shows the great value of the cold bath. The only criticism we can offer on this valuable paper is that we doubt the desirability of introducing or re-introducing terms like lipyria, lethargus, and crocodismus—which, however concise, require a dictionary to give us their derivation, and Dr. Gee to tell us in what sense they are to be applied. We do not deny the utility of single terms, descriptive of symptoms or groups of symptoms; but we should say it was better to follow the German example, and coin them from our own language rather than exhume them from the dusty tomes of Hippocrates and his disciples.

The cases of epidemic cerebro-spinal meningitis, reported by Dr. Hart, of Birmingham, are of value from the symptomatic point of view. It would have been interesting to know a little more about the physical surroundings under which these cases occurred—in short, the characters of the disease as an *epidemic*. Dr. Hart thinks that, in one case at least, mercury given till sponginess of the gums occurred, and followed by iodide of potassium, was beneficial.

We cannot congratulate Dr. Hollis on his contribution to our knowledge of the physics of the cerebral cortex. We must own that it rather reminds us of Sheridan's famous dictum, "The honourable member has said many things that were true, and many things that were new,"—we will not finish the quotation; but we will call attention to the following extraordinary description of what is now pretty well known as the "motor region" of the cortex:—"Immediately bounding the great transverse fissure of the brain, that of Rolando, are the two convolutions named by Ecker the anterior and posterior central; by Turner, the ascending and descending parietal respectively." First, the merest student ought to know that the great transverse fissure of the brain is *not* that of Rolando. Second, the anterior and posterior central convolutions according to Ecker, are the ascending frontal and ascending parietal according to Turner. It would be well for the author to revise his anatomy before he makes any further "contributions." Dr. Hollis believes "that the rudimentary methods of calculation in use amongst the lowest tribes, taken in conjunction with the small comparative size of their frontal lobes, justifies the assumption that this faculty is seated in the fore part of the brain." This is worthy of a phrenologist. With respect to the different races of mankind we know this much: that intellectual power and complexity (not size merely) of convolutions appear to go *pari passu*. The doctrine that mere comparative size of the frontal lobes will give any clue to the localisation of the calculating faculty is much too simple an hypothesis for us to

expect it to be of any service. It is not by speculations like this, and others which Dr. Hollis "contributes," that, to use his own words, "a correct system for the methodical study of the brain can be sketched out."

Mr. W. H. Kesteven supplements his father's well-known researches by some good and useful notes on the histology of degenerative changes in spinal cord and brain diseases.

The experimental researches by Dr. Brunton and his pupils on the action of various drugs enhance the value of this volume greatly. It is much to be desired that such researches should be extended without let or hindrance.

Of the other medical papers in the volume, one of the most complete is by Dr. de Havilland Hall on pleuritic effusion. We entirely agree with the author, that where, in a case of empyema, aspiration has proved ineffectual, double opening with through drainage-tube is by far the best treatment. One of the best papers in the book is the report by Dr. Bridges of a case of rheumatic fever treated successfully by splints. In this case the arthritis seems to have been very severe, and immediate relief to have followed the commencement of the above treatment. It deserves a further trial. The paper is a very valuable practical one, and just such a one as ought not to be hidden away in a big volume of hospital reports. It will be read with interest in connexion with the article we published last week on the mechanical treatment of rheumatic fever.

We have little space for the consideration of the surgical papers. Sir James Paget describes what may be called the surgical sequelæ of typhoid fever. Those which he considers are—phlebitis, periostitis of long bones (and especially of ribs), and local paralyses of muscles. He points out that these lesions commence after the fever is over, and when the patient is getting about. Two cases of abdominal section—one by Mr. Marsh for intussusception, the other by Mr. Willett for rupture of the bladder—are of great importance. The conscientious record of unsuccessful cases of this formidable operation, contributing as it does to the knowledge of the conditions which may obtain in such cases, is a substantial help for future efforts.

The preliminary remarks on the report of 100 cases of cataract, treated by Mr. Power and Mr. Vernon, are of interest as to the use of anæsthetics in eye surgery. Both surgeons have discarded the use of ether in cataract operations, on account of the local vascular congestion produced and the excessive muscular movements of the body. Mr. Power prefers to have no anæsthetic; Mr. Vernon has chloroform administered.

Tables of Materia Medica. By T. Lauder Brunton, M.D., etc., Assistant-Physician at St. Bartholomew's Hospital. London: Smith, Elder, and Co. 1877. Pp. 199.

"The object of these tables is twofold. They are intended, firstly, to recall to the student's mind what he has learned from larger text-books; and secondly, to help him to arrange the material he has acquired in a convenient order." "One of the great difficulties with which a student has to contend in the study of materia medica is that he has to learn so many isolated facts, each of which seems to stand entirely by itself, without any connexion with others." This quotation from the Introduction gives the object of the book, and its *raison d'être*. Certainly the student ought to welcome any text-book which is written in order to help him with his work, but we fail to see how the book before us can do so. It consists of nearly 200 pages of hard, dry, isolated facts, arranged in tables with a monotony which is chilling to the last degree. The only students to whom the book will be of any service are students of practical pharmacology, or lecturers on materia medica. We must, however, say that the book shows traces of plenty of work. We could only wish that the energy and scientific attainments of its well-known author had been more suitably exercised.

The Industrial Classes and Industrial Statistics. By G. Phillips Bevan. Two vols. London: E. Stanford. 1877. Pp. 228 and 252.

These two little volumes form part of a series, "The British Manufacturing Industries," edited by G. Phillips Bevan, F.G.S., etc.; and certainly, if all the volumes are as well and as carefully compiled as those before us, they are a valuable series of both useful and entertaining books.

One of these volumes treats of "Textiles and Clothing, Food, and Sundry Industries"; the other of "Mining, Metals, Chemicals, Ceramics, Glass, and Paper." Each contains a large amount of information concerning the operatives engaged in the various trades just referred to, and gives an account of their condition under old and under recent regulations; and it is very interesting thus to be able to compare their numbers, wages, social condition, mortality, and duration of life. The hardships of some special trades, and the noxious influences of the life of the workers, have long been matters of history, but up to the present no book has been published which gives such a concise and well-arranged account of all trades as the books now before us.

Traité de Thérapeutique et de Matière Médicale. Par A. Trousseau et H. Pidoux.

Treatise on Therapeutics and Materia Medica. By Dr. Trousseau and Dr. Pidoux. Ninth Edition. Two vols. Paris: P. Asselin. 1876. Pp. 971 and 1265.

This large and comprehensive work on therapeutics has gradually become the recognised authority in France. Nor is it to be wondered at, when we remember that it was under the direction of the great Trousseau, aided by his friend Dr. Pidoux, that it first saw the light. These authors did not simply compile a book,—they wrote it at the bedside. It is more than thirty years since the first edition appeared, and at that time the science of therapeutics may be said not to have existed at all. Beyond the natural history of drugs, a little pharmacology, and some incorrect data on usage, therapeutics, as understood to-day, did not extend. Our authors, who were great physicians as well as pharmacologists, studied the action of drugs at the bedside, and, after thirty years of observation and hard work, we have a magnificent and elaborate treatise on a subject which is of the greatest importance to the practitioner. Unfortunately, Trousseau is no longer alive; but his place has been taken by Dr. C. Paul, a Paris physician of great promise, and it is under his editorship chiefly that the volumes before us have appeared. The previous success of the work shows how well it is appreciated. We can fully testify to its continued excellence, and doubt not that this ninth edition will be as quickly taken up as the preceding ones.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

April 3.

The Death from Nitrous Oxide: Syncope or Asphyxia?—Future of the Infirmary.

An inquest was held last week at Manchester on the body of Mr. George Morley Harrison, aged fifty-three, a surgeon in good practice, and formerly Lecturer on Medical Jurisprudence at the Manchester Royal School of Medicine, who died whilst under the influence of nitrous oxide gas, administered at his own request previous to having a tooth extracted by a neighbouring dentist. Mr. Harrison, it appears, being unnerved and excited, partly from the suffering he had undergone, and partly owing to the want of proper food, which the condition of his mouth had prevented him from taking, insisted on the inhalation being pushed until he should snore, and—for, at any rate, part of the time—held the mouthpiece in his own hand, and inspired very vigorously. The first attempt at extraction was made before he was fully insensible, and was abandoned until more of the gas had been given. Eventually, however, two teeth were removed. The patient did not appear to be coming round properly after the operation, and the dentist, taking alarm, sent for medical assistance. On the arrival of a surgeon, Mr. Harrison was pronounced to be quite dead. At the post-mortem examination there was found some fat about the heart; the cavities on the right side were distended with blood, while those on the left side were empty. The lungs on both sides were gorged with dark blood. All the other organs were healthy.

The jury came to the conclusion that the deceased "died from syncope during the administration of nitrous oxide gas for the extraction of teeth whilst labouring under fatty degeneration of the heart."

Very few fatal accidents have hitherto attended the use of nitrous oxide as an anæsthetic; hence it has come to be looked upon as almost free from danger. For minor operations it is administered every day, and often by persons who would

shrink from the responsibility of giving chloroform. Dental practitioners especially use nitrous oxide very largely. A catastrophe such as has just taken place at Manchester serves to remind us that nitrous oxide can no more be said to be absolutely free from risk than any other anæsthetic with which we are acquainted. No opportunity, then, should be neglected of ascertaining the mode of action of nitrous oxide when it destroys life. In the only other fatal case which, so far as I know, has been recorded in England—I refer to the Exeter case—no inspection of the body was made. It becomes doubly important, therefore, that any fresh case should be reported with the utmost accuracy.

Now, judging from the facts of the case stated above, and especially from the condition of the thoracic viscera found after death, it cannot, I think, be doubted that the jury were mistaken in their verdict, and that the case was one of death from asphyxia, not from syncope.

The question is of the highest scientific and practical importance. It is most undesirable that nitrous oxide should be credited with a paralysing influence over the heart, if it possesses no such influence. While again, looking at it from a practical point of view, we want to know in what direction we are to be on the look out for the first signs of approaching danger, and it will not do for our attention to be concentrated on the condition of the pulse and the circulation, if the real danger is from suffocation. It is stated that, in order to shield the dentist from blame, the medical witnesses somewhat encouraged the opinion which the jury embodied in their verdict. This, however, I should be sorry to believe. I prefer to think that the jury, with the want of intelligence which is popularly ascribed to coroners' juries, misunderstood the drift of the medcal evidence, and returned their misleading verdict in spite of it.

The recommendations of the Committee appointed to prepare a scheme for the future management of the Infirmary are to be submitted to a special meeting of trustees on April 16. The Committee proposes that the institution shall be governed by a Board consisting of twenty-one trustees elected at a general meeting, one-third of whom shall retire annually, and that an annual meeting of subscribers shall be held for the purpose of filling up the vacancies on the Board, and transacting other business.

It appears to be pretty nearly decided to keep the Infirmary where it is for the present. A committee is now engaged upon a code of instructions to be submitted to a certain number of architects, whose opinions are to be taken as to the best means of remedying the constructive defects of the existing building, and providing for the necessary enlargement.

GENERAL CORRESPONDENCE.

TRAINING COLLEGE FOR TEACHERS OF THE DEAF.

Letter from Dr. E. Symes Thompson.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your recent editorial notice you point out some of the advantages of "lip-reading" and "articulation" over signs and the manual alphabet, which until recently have been almost exclusively in use in England. There is, however, another advantage of the oral method to which I wish to draw the attention of the profession. It has been frequently stated that in institutions for the deaf and dumb under the sign system the mortality from chest disease is very high. In my own experience, among 19,000 out-patients for whom I prescribed at the Hospital for Consumption at Brompton, compared with an experience almost equally large at a general hospital (King's College), the proportion of deaf and dumb patients was, in the former case, very much larger—at least twice as large as at the general hospital. I have sometimes had three or four deaf and dumb patients under treatment at the Hospital for Consumption at the same time.

Deaf mutes are often of feeble constitution; and, as they never use their voices, their lungs are not fully developed, and frequently become the seat of chronic disease. Inability to communicate his thoughts, except by slow and laborious signs, dissociates the deaf child from others. He leads a forlorn, solitary life, and does not enter into those games and amusements which do so much to develope the muscular and respiratory powers.

In schools conducted on the oral method, however, the pupils are taught to inspire deeply, to breathe through the nose, instead of the mouth, as is usual with the deaf; and the play of the organs employed in articulation, and of the muscles of expression excited by interesting intercommunion, soon removes that flabby appearance and heavy expression characteristic of the deaf mute. It removes, too, that suspiciousness in which all can sympathise who have travelled (say in a railway-carriage) with persons speaking a foreign language, whose smiles and glances suggest the notion that they are speaking about ourselves.

A further advantage of the oral system is that it lessens the danger of that exclusive association with deaf mutes which leads to intermarriage, and consequent propagation of the affliction.

It is found undesirable, even in schools, to congregate a large number of the deaf; if a great many are together, it is not possible to exercise sufficient surveillance to prevent the pupils from making signs to each other. Signs, if once allowed, lead to the withdrawal of attention from the lips, and the greatest barrier to successful lip-reading is thus introduced.

What is really needed is the establishment throughout the country of a number of small schools in which the deaf can be taught by the oral system to mix in ordinary society, and thus make their way in the world like other people.

To supply teachers for such schools, a Training College—such as that to which you have drawn attention—is the first essential. And it is not a single master or mistress, as seems, no doubt unintentionally, implied in your notice, that is needed, but a considerable number of well-trained teachers, who will spread broadcast the benefits of the German system.

I am, &c., E. Symes Thompson, M.D., &c.

"MALTED FOOD EXTRACT."

Letter from Salmon Brothers.

[To the Editor of the Medical Times and Gazette.]

Sir,—We beg to state, in answer to Dr. Druitt, that the "Liebig's Food for Infants" and the "Malted Food Extract" are synonymous, the former having been manufactured in a fluid state and keeping only twenty-four hours, and the latter in a dry state (an improvement effected by Baron Liebig), which will keep in any climate for an indefinite period. The name of the food was altered to protect the public from various inferior foods for infants with which the name of Baron Liebig has been most unwarrantably connected, and which are totally deficient in the valuable properties of this genuine preparation.

With regard to the last sentence in Dr. Druitt's letter, we are informed that due explanation was given to the members of the medical profession who signed the certificate advertised in the *Daily Telegraph*, and we have reason to believe that they were all satisfied.

Trusting you will give this publicity in your next issue,

We are, &c., Salmon Brothers,
Sole Consignees for Baron Liebig's Malted Food Extract for Infants and Adults.

Health and Sewage of Towns.—The Sewage Conference of the Society of Arts is fixed to be held on May 3 and 4 next, under the Presidency of the Right Hon. James Stansfeld, M.P., late President of the Local Government Board. A large gathering of representatives from the principal cities and towns of the United Kingdom is expected to attend. Papers on proved results of systems adopted in various localities are already promised for reading and discussion, and an exhibition of sanitary appliances will be got together for inspection.

The Russian Female Medical School.—This at the present time compriscs for the five years 430 students, of whom seventy-three are Israelites, nineteen Polish Catholics, eleven Polish Protestants, and the rest Orthodox. In order to belong to the School, women must attend the regular courses of lectures and undergo special examinations. All the Governments of the empire furnish students for this School. They belong to the middle classes, and are generally from twenty to twenty-five years of age, very few having passed their thirtieth year. Among them are sixty-eight married women.—*Gaz. des Hôp.*, March 29.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, March 16.

Dr. Dudfield, Vice-President, in the Chair.

The minutes of the previous meeting having been read and confirmed,

Dr. Vinen proceeded to bring before the notice of the Society a report received from the Clerk of the Metropolitan Asylums District respecting provision for the isolation and treatment of epidemic infectious disease. The managers say that the experience of the small-pox epidemic of 1871 and of that now existing shows that a large proportion of the patients received into the hospitals of the managers belong to a class above that of paupers, although sent as paupers with certificates from the parish authorities. On February 15 the proportion of patients who acknowledged to having previously received parochial relief was under 10 per cent. Only five out of thirty of the vestries and district boards of the metropolis have made provision for isolating persons other than paupers suffering from infectious disease, although the Legislature has imposed this duty upon them. This shows that adequate provision for the treatment of infectious disease does not exist in the metropolis. The managers considered that such provision could be best made by one central authority for paupers and non-paupers, and that such authority should have the powers of the Sanitary Acts conferred upon them, and not be merely a department of Poor-law administration, and that the constitution of the Metropolitan Asylums Board should be so altered that the managers could be entrusted with such powers. These suggestions were forwarded to the medical officers of health of the metropolis, inviting them to communicate their opinions thereon.

After a brief discussion, these proposals were referred to the Council for consideration.

On the Mutual Relations of the Birth-rate and Death-rate.

Dr. Bristowe placed before the members a table in which were set forth the mean durations of life under death-rates ranging from 0·5 to 4·0 per cent., as determined by these death-rates and by birth-rates varying for each case from about 100 to zero. He showed from this table that, just as with a stationary birth-rate the mean duration of life increases as the death-rate falls, and decreases as the death-rate rises, so in the same way with a stationary death-rate, the mean duration of life increases as the birth-rate falls, and diminishes as the birth-rate increases. And he showed further that (under quite possible conditions) the health of a population as determined by the mean duration of life might be the same under widely different death-rates. "Thus," he observed, quoting from the table, "the mean duration of life is the same (namely, eighty-one years) with a death-rate of 0·5 per cent. and a birth-rate of 2·5 per cent., as with a death-rate of 1 per cent. and a birth-rate of 1·5 per cent., or with a death-rate of 1·5 per cent. and a birth-rate of 1 per cent. It is the same (namely, thirty-seven years) with a death-rate of 1·5 per cent. and a birth-rate of 4·5 per cent., as it is with a death-rate of 2 per cent. and a birth-rate of 3·5 per cent., or a death-rate of 3·5 per cent. and a birth-rate of 2 per cent." "It is the same (namely, fifty-eight years) with a death-rate of 0·5 and a birth-rate of between 4 and 4·5 per cent., as it is with a death-rate of 4 and a birth-rate of 0·5." He discussed the results at considerable length; and, among other things, pointed out that, although he had, for simplicity's sake, assumed that all individuals of a population attained the same age, and that the children of each year were (so to speak) born in a lump, and after a time died in a lump, his results did not depend on that assumption, but were equally true if (as in nature) the mean duration of life was the resultant of lives varying widely among themselves in length, and births and deaths, instead of occurring in groups, were uniformly distributed. He applied the foregoing result to the vital statistics of the parish of Camberwell and of its sub-districts. And he pointed out how the same relation as regards mean duration of life existed between the immigration-rate and death-rate as between the birth-rate and death-rate, with this difference, however: that whereas from the birth-rate and death-rate was obtained the actual mean duration of life, from the immigration-rate and death-rate was obtained only the mean duration of the time during which immigrants were residents. In conclusion, he considered briefly (also mainly in reference to Camberwell) some of the other conditions which, apart from actual unhealthiness, modify the death-rate, and interfere with its value as an index of healthiness.

A short discussion followed the reading of Dr. Bristowe's paper, which was joined in by Mr. Humphries and Dr. Tripe, besides a few remarks from the Chairman (Dr. Dudfield).

Dr. Tripe believed that the birth- and death-rates were not so intimately related *per se* in actual practice as theory might imply. We must not place too implicit a reliance on comparative tables. Social conditions, and those of a sanitary character, have more influence on the death-rate than on the number of births.

Dr. Bristowe, in his reply, said that he had endeavoured to show that a certain average duration of life might be maintained with widely different rates of birth and death occurring in relatively varied but definite proportions.

THE PATHOLOGICAL SOCIETY.

Tuesday, March 20.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Aneurism from Embolism.

Dr. Goodhart showed a specimen of cerebral aneurism which he believed to have originated in embolism. A youth of eighteen, who was under treatment at Guy's Hospital for mitral disease of rheumatic origin, was found to have sudden arrest of the left radial pulse. Delirium followed; and death shortly after. Post-mortem, an apoplectic extravasation was found in the right hemisphere, and on the corresponding middle cerebral artery was a small aneurism. The left brachial artery was dilated into a fusiform pouch above its point of bifurcation, and contained there a grumous clot. The heart weighed twenty-three ounces, and long vegetations were connected with the mitral valve. The kidneys weighed sixteen ounces. In a second case, of a man of thirty-four, who had had rheumatism twice, right hemiplegia and aphasia occurred, with albumen in the urine: death ensued after convulsions. Post-mortem, a small aneurism was found on the left middle cerebral artery, with rupture into the region of the island of Reil. The heart was large; and the chordæ tendineæ were ruptured. The third case of the same kind was that of a lad of nineteen, who had double aortic disease of rheumatic origin, and was admitted with hemiplegia. Delirium and death speedily followed. On examination, a small sacculated aneurism was found on the right posterior cerebral artery, not ruptured; and in the opposite hemisphere a large extravasation, without discoverable aneurism. The heart weighed twenty ounces, the aortic valves presenting many vegetations; and the kidneys were diseased. The fourth case had been observed by Dr. Moxon. A man of fifty, who had been an out-patient with rheumatism in the feet, and mitral disease, presented himself one day with a swelling in the arm, which soon assumed the characters of an aneurism, and was cured by compression. The patient was, however, seized with apoplexy, and died. Post-mortem, a clot was found under the dura mater, and connected with the right middle cerebral artery were an aneurism and a corresponding apoplectic clot in the corpus striatum. The swelling in the arm proved to be due to an aneurism near the bifurcation of the brachial artery. The heart weighed only ten ounces, but the mitral valve was inflamed and presented vegetations, while the spleen and kidneys were infarcted. Dr. Goodhart said that these cases were, in his opinion, examples of aneurism due to embolism, and served to prove the connexion between the two lesions. Tufnell and Holmes had published cases of aneurism supposed to originate in plugging of the vessels, and other authors had done the same. Sir William Gull had recorded his opinion that apoplexy in young subjects was generally due to aneurism; and now Dr. Goodhart thought that it might be further said that such a connexion was generally associated with endocarditis. The proof afforded by the present series of cases was very strong. With respect to the mechanism of the production of aneurism by embolism, Holmes had suggested increased tension behind the plug as the cause of dilatation; but, as a matter of fact, dilatation of a vessel was rare behind

obstruction from any cause. Nor was Ponfick's theory more satisfactory, that the blood-stream was directed against one part of the wall by certain conditions of the plug. Dr. Goodhart offered as a better explanation the following: that the plug when formed in the vessel was driven onwards into the smaller lumen beyond, where it was jammed-in, and caused dilatation. Softening then ensued in the clot, and therewith softening of the wall. But this was not always sufficient; in all cases observed the plug had been of inflammatory origin, and infection might have to be taken into account in the production of the change.

Mr. Bryant showed two specimens of aneurism which he believed were examples of the same mode of origin from embolism. Both were in young subjects with valvular disease of the heart; both commenced after exertion; both were independent of other vascular disease; and in both recent endocardial mischief was found post-mortem. The first was from a man of twenty-nine, who had had rheumatism, and never syphilis. Three weeks before admission, pain began in the groin after a strain; pulsation appeared thereupon; and he was admitted into Guy's Hospital with cardiac disease and constitutional symptoms. Under Poupart's ligament was found a tumour, which extended into the abdomen, pushed the femoral vessels forwards, and presented the signs of aneurism. From certain peculiarities in situation and otherwise, the diagnosis was for a short time obscure, but it was ultimately determined, and the vessel was tied. The patient died twelve hours afterwards from the heart complication. Post-mortem an aneurism was found under the iliac fascia, spreading upwards and downwards. The artery itself was perfectly sound, as far as the point of departure of the profunda femoris, where there was a slit half an inch in length in the wall, associated with a false aneurism. The whole arterial system elsewhere was healthy. The heart weighed twenty-one ounces and presented not only old disease of both the valves of the left side, but also recent endocarditis. It appeared, therefore, as if the aneurism had been secondary to plugging at the bifurcation of the common femoral artery. Embolic spots were found in the kidneys and spleen. The second case was that of a man of thirty-three, who had had three times rheumatic fever, and was suffering from severe mitral and aortic valvular disease of the heart. Two weeks before his admission into Guy's Hospital he was seized with sudden pain in the right foot, and immediate swelling of the leg. Next morning there was pulsation, which increased with time. On admission there was discovered a large popliteal aneurism, with the usual signs. Compression having been tried without success, twenty feet of horse-hair was passed into the aneurism. The tumour became hard and firm, but the patient died on the fifth day of cardiac disease. Post-mortem a clot was found upon the horse-hair, and the sac was fairly filled with coagulum. Old disease was present of both aortic and mitral valves, and the latter was ulcerated. The arterial system was perfectly healthy generally. The spleen and kidneys were embolic. In this second case, Mr. Bryant said, the evidence of the origin of aneurism in embolism was very strong: there was a history of chronic cardiac disease; symptoms of embolism occurred; and these were followed by others of developing aneurism.

Dr. Wilks said that he considered these cases as supporting the view that Dr. Goodhart and Mr. Bryant had advanced. He considered it right to state that Dr. Ogle had been the first to mention their pathological connexion. He had himself exhibited examples of it twenty years ago, and at that time the question had been raised whether there was not a general rheumatic endarteritis. Yet the relation of aneurism to embolism had never been recognised in text-books. Dr. Goodhart's cases seemed to him to prove it to demonstration in respect of small arteries.

The President said that he had himself observed two cases of aneurism occurring suddenly in subjects of chronic cardiac disease.

The Bloodvessels in Bright's Disease.

Dr. George Johnson read a paper upon this subject, and exhibited a large number of microscopic specimens. He commenced by referring to the two papers written by Sir William Gull and Dr. Sutton, upon arterio-capillary fibrosis, and especially to the denial or doubt offered by them to his view of a muscular hypertrophy of the walls of the arterioles. He then proceeded to criticise their conclusions. Sir William Gull had objected to his view of muscular hypertrophy because the condition was difficult to establish on account of the different degrees of contraction in the same vessel; of the different thickness of the muscular coat in different vessels of the same size; and of the occasional occurrence even of atrophy. To this he would reply by an appeal to the specimens under the microscope, showing the vessels of the kidney, skin, pia mater, and muscles, in health and in chronic Bright's disease. In the latter case the walls were hypertrophied to two or three times their normal size. No amount of post-mortem contraction could simulate such hypertrophy. The same could be seen even in Sir William Gull's specimens; and Dr. Johnson proceeded to demonstrate this from a copy of one of Dr. Sutton's figures. What they had described as hypertrophied outer coat was really in part a greatly hypertrophied middle coat. When they added that the muscular coat varied in thickness, and might even be thinned, he would reply that, true as this was, it was only natural that an hypertrophied muscular coat should become atrophied in places, as did the wall of an hypertrophied heart. It seemed to be a necessary result of the high blood-pressure that the canal should become dilated, and the walls ultimately atrophied; and the quality of the blood might also excite degenerative changes. Passing to the history of the change described by himself, Dr. Johnson said that since the first discussion of the subject much evidence had been collected of a genuine muscular hypertrophy of the vessel-walls. Dr. Dickinson had agreed with him almost exactly in his account of the change, acknowledging the evidence of hypertrophy of the middle coat as well as of the others. The latter Dr. Johnson himself had never denied. With respect to the relation between the vascular change and renal disease, Dr. Dickinson believed that the former might be associated not only with the small contracted kidney, but with the large pale kidney in its contracting stage, and even with such renal conditions as obstruction of the passages by stone, etc. If this were the case, glandular inadequacy and impurity of blood must surely be the cause of the cardio-vascular alteration. So far Dr. Dickinson and he agreed; but Dr. Dickinson seemed, in discussing the pathology of the state, to try to throw ridicule upon his (Dr. Johnson's) theory of the relation of the cardiac and vascular hypertrophies, saying that the heart and vessels appeared to try to get the better of each other by growing muscle, like two athletes. This was misrepresentation. The vascular change was due to irritation; the cardiac change was due to difficulty of the onward flow of blood. Dr. Dickinson's own theory was that the impediment was in the capillaries, and that the arterioles, in attempting to force the blood on, became distended, and ultimately hypertrophied. This theory he himself had brought forward for the renal vessels, and again withdrawn, in deference to the facts of more modern physiology. With respect to cases of cardio-vascular change, independently of any renal disease, he would give the reply of the President at last meeting—that there were other forms of blood-impurity that might cause it, beyond that arising from renal disease. Thus he had observed the cardio-vascular change in chronic bronchitis and emphysema. Mr. Mahomed had shown how arterial tension rose after scarlatina, for example. Dr. Johnson then proceeded to consider the changes on the kidney in chronic Bright's disease with contraction. As he had described many years ago, the intertubular material in this disease consisted chiefly of wasted tubules—not of connective tissue. The primary change was a tubular one—destruction of the cells, yielding urinary products. This proceeded to denudation of the tubules, and consequent atrophy and contraction. In some of the tubules, small round cells replaced the normal cells; in others, cysts formed from plugging by *débris*. The origin of the disease was probably in a morbid quality of the blood which circulated in the vessels, due to dyspepsia, gout, alcoholism, lead-poisoning, disease of the skin, etc. There was but little increase of fibrous tissue between the tubes; the basement membrane and the capillaries were but slowly affected. It was true that the epithelium in some of the tubes remained perfectly healthy, but, of course, all could not be diseased if life continued. Dr. Johnson then stated his objections to the theory of arterio-capillary fibrosis:—1. The kidney in this disease maintained its colour and appearance until the last: the change was therefore not a fibrosis, otherwise anæmia would result; nor was fatty degeneration of the tubules found, which should be a result of anæmia. 2. In such a kidney the tubular changes might be found advanced while the capillaries were quite healthy. 3. Contraction of the capillaries should cause congestion behind in the glomeruli, hæmaturia, and albuminuria; but all these were rare. Dr. Johnson said that the facts of which Sir William Gull had spoken had been sug-

gested by a theory. Was there anything in the etiology or in the clinical history of these cases to bear it out? Much evidence was necessary before they could accept the account of the changes in the spinal cord. He knew that Sir William Gull and Dr. Sutton attached too much importance to the changes that they found in the kidney, and he suspected they did the same in other organs.

Dr. Dickinson replied to Dr. Johnson. He first disavowed any thought of ridiculing Dr. Johnson's theory of the pathology of the cardio-vascular change in Bright's disease. With respect to the histology of the granular kidney, he said that no pathologist except Dr. Johnson now believed that the change in it was purely tubular. Specimens were full of evidence of rapidly growing young connective tissue. Coming to the point at issue between Dr. Johnson and Sir William Gull, Dr. Dickinson said that they must be looking at different sides of a real truth. He considered that they were both nearly correct. From his personal investigations he believed that Dr. Johnson's hypertrophy was real. Equally real was a true fibroid thickening, quite independently of the action of reagents. The difficulty therefore lay in the interpretation as to its cause. Arterial thickening occurred in almost every case of kidney disease, from whatever cause. In kidney disease in children, where no senile changes could possibly be present—for example, in death from acute renal catarrh,—the heart became hypertrophied in about four or six weeks, and the arteries thickened, chiefly from muscular growth. As a further change, the fibrous coat became thicker. Thus, one might say the change was a consequence of the renal disease, and not a part of a general disease. The next question was, What was the *modus operandi?* At the same time that the heart was increasing in size there was high arterial tension, whether the obstruction was in the capillaries or in the arterioles. The arteries became full; the pulse and the heart corresponded. If the arteries did not become hypertrophied, the cardiac thickening did not occur—as, for example, in lardaceous disease. Dr. Dickinson believed that increased tension was the real key to the change. Venous congestion was known to cause fibrous growth; and so arterial tension might lead to fibrosis. In many cases of renal disease the spinal cord was œdematous, hyperæmic, or cirrhotic; but was not this also an effect of increased arterial tension?

Dr. Mahomed said that he was able to supply some of the clinical facts that Sir William Gull had desired. He had in the course of his observations in sphygmography found many apparently healthy persons suffering from high blood-pressure, especially if they were over forty years of age, and had been guilty of excess in any form. Dr. Mahomed suggested that in such cases the high blood-pressure might lead to fibrosis. With respect to Bright's disease, in the cases in which calculus in the passages seemed to have led to vascular changes, it was a blood-disease that was the cause of both phenomena. He had seen a case of Bright's disease of ten years' duration, in which there was neither vascular nor cardiac change.

Dr. Gowers brought forward a living subject with chronic Bright's disease, in whose fundus decided diminution of the arterial calibre could be seen with the ophthalmoscope. He also showed a drawing of the fundus from a similar case, in which white bands were observed along the sides of the vessels, as if a change were progressing at the side of the walls, of the nature of a fibrosis.

Sir William Gull began his reply by regretting that Dr. Johnson's remarks had extended over so large an area. The condition of the kidney in Bright's disease was not yet settled: it was erroneous to say that the pathology of contracted kidney had been settled. The history of Bright's disease had been written from its post-mortem characters: its clinical characters were obscure; but they certainly were not always renal to begin with. Passing to the state of the vessels, Sir William said that five years ago, Dr. Sutton and he had described how they "seemed" to them to be hypertrophied in some cases. One of the two of them still believed that muscular hypertrophy did sometimes occur; the other believed that it was impossible to tell true hypertrophy. He quoted Ranvier on the subject, who described the vascular change as a chronic arteritis. Thus far they had gone. It was not true that Dr. Johnson and he were both right. They did not agree; they perfectly disagreed. He himself would still say that the clinical history of Bright's disease could not be written from the direction of the kidney, but from the periphery. He was indebted to Dr. Mahomed for his observations. He could not yet say when a man was going to have chronic Bright's disease; but with respect to this side of the question they would speak at the Clinical Society. Dr. Johnson and they were quite at variance on this subject; there was a larger and a less, and theirs was the larger.

Dr. Sutton replied to Dr. Johnson's criticisms. It was often very difficult to distinguish muscular from fibrous thickening, and where muscular tissue could not be distinctly made out they had no right to assume its presence. Even were there muscular hypertrophy, it had yet to be proved that such muscle was stronger than before; but of this Dr. Johnson showed no evidence. With respect to the granular kidney, Dr. Johnson's objections were easily answered. It could be readily shown that the fibroid material was not a mere product of atrophy, but that there was true new growth.

Dr. Johnson replied. First, he agreed to differ with Dr. Dickinson and others in the histology of granular kidney; he would allow there was some fibroid growth, but what about the tubular changes? In amyloid kidney the absence of cardiac enlargement was explained by the disease of the muscular fibre. Dr. Mahomed's observations supported his (Dr. Johnson's) view, inasmuch as acute renal disease was the cause of the increased tension. He agreed with Sir William Gull that they did not agree. He himself believed that chronic Bright's disease did not always begin in the kidney; but that chronic dyspepsia might be the cause of it, just as diabetes might cause renal disease.

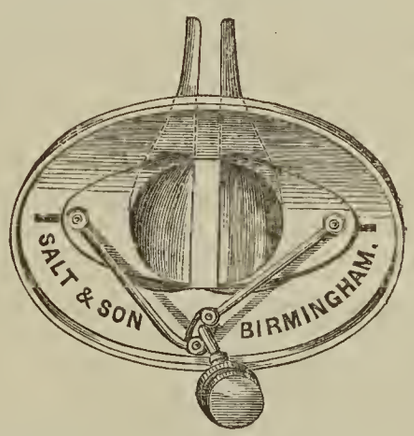
The President announced that the Council had resolved to appoint a committee to inquire into the subject that had just been under discussion.

NEW INVENTIONS AND IMPROVEMENTS.

NEW SPECULUM AURIS.

Messrs. Salt and Son, surgical instrument makers, Birmingham, write to us as follows:—

"Will you kindly permit us to introduce to the notice of the medical profession, through the medium of your journal, a new speculum auris which we have recently constructed. The mechanism of the speculum was suggested by that of Mr. Wagstaffe's tracheotomy instrument. It appears to us to possess



advantages over the various specula in ordinary use. The above engraving will sufficiently explain its mechanism, and it will be seen that it so arranged that the dilatation is at once simple and easy; the external orifice large and well polished, thus affording a distinct view of the meatus."

King's College Hospital.—The students of King's College assembled in the great hall of the Hospital on the 28th ult., for the purpose of presenting Professor Wood with a testimonial, congratulating him on his appointment to the chair of Clinical Surgery, in the vacancy occasioned by the decease of Sir William Fergusson, Bart., and expressing a hope that he would not entirely cease from lecturing on Systematic Surgery, that future students might enjoy the advantage of that instruction from which they had so largely benefited. Mr. Wood briefly replied, stating how very gratifying the address was to him, but that, for reasons to which he need not particularly allude, he trusted they would excuse his referring to passing events in the College, as it was possible too much importance might be attached to any observations just then uttered by him; but he was, nevertheless, deeply sensible of their kind and spontaneous expressions of sympathy.

OBITUARY.

DR. LAWSON CAPE, F.R.C.P.,

Whose death was recorded in the last number of the *Medical Times and Gazette*, held a very prominent position as a physician-accoucheur for many years in London; and, although he had for some time past retired from practice, his departure will leave a blank in a very wide circle, by whom he was universally beloved for his most kind and generous nature. Dr. Cape began his medical life in London as a student at St. Bartholomew's Hospital, and afterwards resided at Edinburgh, where he graduated as M.D. in 1833.

Before, however, commencing practice in London, he spent three years abroad, chiefly at the medical schools of Vienna, Berlin, and Paris, where he not only advanced his medical knowledge, but acquired a very competent knowledge of French, German, and Italian, which languages he continued to cultivate with interest, indeed, through the rest of his life. After becoming a Member of the Royal College of Physicians in 1835, he assisted his cousin, Dr. Locock (the late Sir Charles), in his very large obstetric practice.

In addition, however, to the calls of private engagements, Dr. Cape held several public appointments, having been Lecturer on Diseases of Women and Children at St. Thomas's, and Physician to the Royal Infirmary for Children and Women. But his principal public medical appointment was to the General Lying-in Hospital, to which he belonged altogether forty years, the exact length of time that Sir Charles Locock belonged to that Hospital, either as Physician or Consulting Physician. During much of that time he had for his colleagues there the late Drs. Ferguson and Rigby.

It would be impossible to express in words Dr. Cape's kindliness and warmheartedness in private life. His hospitable entertainments will long be remembered, and it must have been greatly owing to his genial spirit that at his table the older ones of the profession so coalesced with the younger, and became even the most joyous of the party; and the very youngest in the profession often met the oldest there.

But even still smaller folk—some, indeed, who are barely in their teens—have felt keen sorrow at hearing of his death; and, perhaps, the happiest moments of a very happy life were those in which he was conferring pleasure on the young.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 29:—

Byers, Decimus William, Hornsey-street, Holloway-road.
Callender, John Hawkes, South Shields.
Clifton, Cyrus Arthur, Northampton.
Culpin, Millice, Mildmay-park, N.
Emmerson, John Bolton, Jarrow Hospital.
Revell, Richard Carter, Saltash, Cornwall.
Rochfort, Walter Mingay, Leamington-terrace, Acton.
Welchman, Henry Palmer, Bore-street, Lichfield.
Whitcombe, Wm. Philip, Birchfields, Birmingham.
Willcocks, Frederick, Scarsdale Villa, Kensington.

The following gentlemen also on the same day passed their primary professional examinations:—

Ambler, Horace Edward, Middlesex Hospital.
Bisdee, Alfred James, St. Mary's Hospital.
Flewitt, Walter, General Hospital, Birmingham.
Johnson, William, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Collins, F. H., M.D.—Resident Medical Officer, Hulme Dispensary, Manchester, *vice* E. Owen Jones, M.B., resigned.

Jameson, L.S., M.R.C.S., L.S.A., M.B., and B.S. Lond.—Resident Medical Officer, University College Hospital.

Levinge, Edward George, B.A., M.B., L.R.C.S.I.—Assistant Medical Superintendent, Bristol Lunatic Asylum, Stapleton, near Bristol, *vice* T. V. de Denne, M.R.C.S., L.R.C.P., resigned.

Warner, Francis, M.D. Lond., M.R.C.P.—Assistant-Physician, East London Hospital for Children, Shadwell.

Williams, Edward Hanbury, M.R.C.S. Eng., L.R.C.P. Edin.—Resident Medical Officer, Lewes Dispensary and Infirmary.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office.—Medical Department.—Surgeon-Major Alex. Thomson, M.D., retires upon temporary half-pay. Staff Assistant-Surgeon William White, half-pay, has been permitted to commute his retired allowance.

Royal Denbigh and Merioneth Infantry.—Surgeon Owen Richards, M.D., resigns his commission.

BIRTHS.

Bonnyman.—On March 29, at Upper Phillimore-place, Kensington, the wife of Surgeon-Major J. Bonnyman, M.D., prematurely of a son.

Brown.—On March 28, at Shifnal, Salop, the wife of Joseph l'Oste Brown, M.R.C.S., L.R.C.P. Lond., of a daughter.

Crawford.—On March 28, at Hensleigh Cottage, Tiverton, the wife of Surgeon-General Thomas Crawford, M.D., of a son.

Fenn.—On March 28, at Richmond, Surrey, the wife of Edward L. Fenn, M.D., of a son.

Gardiner.—On March 23, at Brecon, South Wales, the wife of Surgeon-Major W. A. Gardiner, L.R.C.S.I., of a son.

Kingsford.—On March 28, at Upper Clapton, the wife of C. D. Kingsford, M.D., of a daughter.

Rogers.—On March 31, at 16, Hanover-square, W., the wife of Joseph Rogers, M.R.C.S., of a son.

MARRIAGES.

Baker—Barrow.—On April 4, at St. Mary Abbott's, Kensington, Albert de Winter Baker, M.R.C.S., younger son of Albert Baker, M.D., of Dawlish, to Mary Charlotte Kirby, second daughter of Francis Barrow, Esq., Recorder of Rochester and Judge of County Courts.

Belemore—Woodgate.—On March 24, at St. Philip's Church, Battersea, Surgeon-Major Alfred John Belemore, M.R.C.S.E., of Harlesden, Middlesex, to Amelia Angelina, second daughter of Thos. W. Woodgate, Esq., of The Boundaries, Balham, Surrey.

Fox—Falconer.—On March 26, at Old Aberdeen, Louis Windham, son of Francis Ker Fox, M.D., of Brislington House, Bristol, to Margaret Anna, third daughter of Peter Falconer, Esq., of Old Aberdeen.

Hansell—Blake.—On February 8, at St. Jude's, Oudtshoorn, Cape Colony, William Charles Hansell, M.R.C.S., L.S.A., third son of Rev. P. Hansell, of Kingston, Taunton, to Jane, only daughter of Joseph Blake, Esq., of Oudtshoorn.

DEATHS.

Barnes, John Wickham, F.R.C.S. Eng., late of Bath, at 126, Gower-street, Bedford-square, on March 26, aged 83.

Boxall, Henry, F.R.C.S., at Wisborough-green, Sussex, on March 29, aged 60.

Brookes, Benjamin, M.R.C.S., formerly Consulting Surgeon to the British Lying-in Hospital, at 7, Red Lion-square, on March 28.

Coleman, Henry Wm. Alexander, M.D., M.R.C.S., L.S.A., at Lutterworth, Leicestershire, on March 26.

Cranke, Emily, wife of John Cranke, M.R.C.S. Eng., at Fountain-street, Ulverston, on March 28.

Harrison, George Morley, M.R.C.S., at 30, Ardwick-green, Manchester, on March 27, aged 53.

Henderson, Charles Murray, M.D., late Bengal Medical Establishment, at 53, Albemarle-street, on March 28, in his 63rd year.

Purvis, Marshall Prior, youngest son of John Prior Purvis, M.R.C.S.E., at Royal Hill, Greenwich, on March 26, aged 13 months.

Richards, Henry Ebenezer, M.D., M.R.C.S., of H.M.'s Penal Settlement, Demerara, at George Town, Demerara, of dysentery, on February 14.

Sayer, Susan Elizabeth, wife of Charles W. Sayer, M.R.C.S. Eng., of Yatton, Somerset, at 117, Park-street, Grosvenor-square, on March 25, aged 32.

Somes, Harriet Ella, wife of S. F. Somes, Esq., and eldest daughter of Protheroe Smith, M.D., of Park-street, W., at Fortismere, Muswell-hill, on March 26, aged 36.

Spurgin, Branwhite, M.R.C.S. Eng., at Thrapstone, Northamptonshire, on March 12, aged 72.

Spurgin, Benjamina Amelia, widow of Branwhite Spurgin, M.R.C.S. Eng., on March 26, aged 66.

Thomas, Benjamin, L.R.C.S. Edin., M.R.C.S. Eng., at 1, Goring-place, Llanelly, on April 2, aged 62.

Titterton, Surgeon-Major Henry, M.D., at Westgate Lodge, Warwick, on April 2, aged 46.

Wilmott, Lily, wife of Julius J. E. Wilmott, M.B., of Weston-super-Mare, on March 20.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

County and County of the Borough of Carmarthen Infirmary.—House-Surgeon. Candidates must be registered to practise both in Medicine and Surgery. Must be unmarried, and free from the care of a family. Applications to Mr. H. Howells, Secretary, 58, King-street, Carmarthen, on or before May 2.

Gloucester County Infirmary.—House-Surgeon. Candidates must have registered medical and surgical qualifications. Testimonials and statement of qualifications to Dr. Batten, Gloucester, on or before April 21.

Macclesfield General Infirmary.—Senior House-Surgeon. Candidates must be doubly qualified, or graduates in medicine of any university in Great Britain or Ireland, with surgical qualifications, and duly registered. Applications and testimonials to Mr. Cooper, Clerk, at the Infirmary, on on before April 14.

Western General Dispensary, Marylebone-road, N.W.—Honorary Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Testimonials and qualifications to the Secretary, on or before April 9. Gentlemen will oblige by presenting themselves to the Medical Committee, at the Dispensary, on the same evening at 7.30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Atcham Union.—Mr. William Eddowes has resigned the Pontesbury District; area 5928; population 4362; salary £56 per annum.

Dover Union.—Mr. George Pearson has resigned the Second Division of the St. James's District; area 6328; population 2300; salary £40 per annum.

Gravesend and Milton Union.—William Adrian Sandell has resigned the Milton District; area 858; population 13,073; salary £85.

Honiton Union.—Mr. George Evans has resigned the Seventh District; area 1750; population 951; salary £30 per annum.

Leek Union.—Mr. Hugh Orr has resigned the Longnor District; area 22,881; population 3797; salary £40 per annum.

Peterborough Union.—The Crowland District is vacant by the death of Mr. W. N. Symonds; area 21,175; population 4032; salary, by fee per case.

Southmolton Union.—Mr. Thomas Sanders has resigned the Fourth District; area 25,887; population 2760; salary £50 7s. per annum.

APPOINTMENTS.

Basingstoke Union.—Frederic Daniell Miller, L.R.C.P. Lond., M.R.C.S. Eng., and L.S.A., to the Third District. Robert Bray Sweeting, M.R.C.S., L.M., and L.S.A., to the Workhouse.

Crediton Union.—Charles Broome, M.D., M.C., and L.M. Queen's Univ. Ire., to the Cheriton Fitzpaine District.

King's Lynn Union.—Joseph W. Barrett, M.R.C.S. Eng., L.S.A., to the Workhouse.

Southmolton Union.—Thomas Sanders, F.R.C.S. Eng. and L.S.A. Lond., to the Seventh District.

Letts, Son, and Co. (Limited), whose name as publishers of diaries has for so long been associated with the Royal Exchange, have removed to 33, King William-street, London-bridge.

Medical Coroner.—The Town Council at Oxford have elected Mr. Hussey, Senior Surgeon to the Radcliffe Infirmary, Coroner for the city, in the room of the late Mr. Brunner, solicitor.

Hospital for Incurables, Dublin.—After a keen contest, Dr. Edward Peele has been appointed Physician to this institution, in room of Dr. Charles E. Perceval, deceased. The election took place on Tuesday, April 3.

Hypodermic Injections in Hernia.—Reporting upon three cases communicated to the Société de Chirurgie in which strangulated inguinal hernia was easily reduced after the hypodermic injection of morphia, M. Le Dentu observes that in these cases the strangulation was recent, and although the injections certainly assisted their reduction, it is doubtful how far they would have succeeded had the strangulation been more decided and of longer duration. If the surgeon is called to the case immediately, the injection may be of use by dissipating the pain and spasm; but if some hours have elapsed, it will be always of less value than chloroform, which enables us to at once recognise whether the hernia is reducible or the operation necessary.—*Gaz. des Hôp.*, March 31.

Dislocation of the Humerus with Rupture of the Axillary Artery.—M. Le Dentu related to the Société de Chirurgie the case of a man admitted to the Hôtel-Dieu, who three days before, in falling from a loaded hay-cart, dislocated the left shoulder and ruptured the axillary artery. The whole arm became greatly distended, the effusion extending to the dorsal region, and it was not deemed prudent to reduce the dislocation. Yet expectation was inadmissible, as the patient, with a temperature of 37° C., was getting feeble, and the swelling increasing in size. As almost all similar cases in which ligature of the subclavian had been performed terminated fatally, M. Le Dentu resorted to amputation of the shoulder-joint on the seventh day after the accident. The axillary artery having been found to have undergone great alteration, the subclavian, around which a provisional ligature had been placed, was tied, and the disarticulation completed. The patient died next day. Pus was found in the collection of blood. Opposite the origin of the subscapular artery there was a patch of atheroma, and at this point the axillary artery was completely torn through. The aortic valves were atheromatous, and the kidneys and liver were fatty, the patient being a drinker. M. Panas observed that in all the published cases it has been opposite the origin of the subscapular that rupture has taken place—a fact leading to the belief that the rupture has existed prior to attempts at reduction, when these have been made.—*Gaz. Hebd.*, March 30.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

"Laudator Temporis Acti."—Hutchinson describes Hermann Boerhaave, the eminent physician, thus:—"He was of a robust and athletic constitution of body, so hardened by early severities and wholesome fatigue, that he was insensible of any sharpness of air or inclemency of weather. He was tall, and remarkable for extraordinary strength. There was in his air and motion something rough and artless, but so majestic and great, at the same time, that no man looked upon him without veneration, and a kind of tacit submission to the superiority of his genius. He was always cheerful, and desirous of promoting mirth by a facetious and humorous conversation. He was never soured by calumny and detraction, nor ever thought it necessary to confute them, 'for they are sparks,' said he, 'which, if you do not blow them, will go out of themselves.'"

Salem, Portsmouth.—There has been in practical operation for some years, in Madras, hospital accommodation for the middle classes. In the General Hospital there, six or seven rooms, each capable of holding two cots, have been set apart for officers or gentlemen in civil employment, in or out of the Service, for they are not restricted to gentlemen in her Majesty's employment. The admittance requires no letter or other recommendation. If the physician or surgeon of the hospital thinks the patient a fit subject for admission, he is at once admitted, and attended by either, as the case may be, during his stay. There is no charge for professional attendance, the medical men being officers in her Majesty's service, but once a month the steward receives the amount due for rent of room, ration, etc., which is reasonable enough.

Anglo-Saxon.—About the year 1812 the Royal Military College at Sandhurst inaugurated modern athletic sports, but the example was not followed till about 1840, when Rugby School, Eton College, Harrow School, Shrewsbury Royal School, and the Royal Military Academy, Woolwich, came to the front. Fifteen years later, College meetings had become pretty general, both at Oxford and Cambridge. Kensington Grammar School had founded the first annual series of gatherings held in London, whilst Cheltenham College led the van amongst English public schools. The principal athletic society is, undoubtedly, the "London Athletic Club," which takes the lead in all matters pertaining to athletics throughout the United Kingdom.

An Assistant.—Dr. Autommarchi, of the University of Pisa, who went to St. Helena as physician to Napoleon, made a post-mortem examination of the Emperor's body.

Argus.—It was Dr. Caius, then President of the College of Physicians, who was summoned to appear before the Lord Mayor and others of the Queen's delegates when the difference arose between the physicians and surgeons in Elizabeth's reign, as to whether the latter might administer internal remedies in cases where their manual assistance was required. He pleaded the physicians' cause so ably, that, although the surgeons were supported by the Bishop of London and the Master of the Rolls, it was agreed by the Commissioners that it was unlawful for the surgeons to practise medically in such cases.

The Pernicious Effects of Fuchsine.

It is stated that the workmen exposed to the vapours of fuchsine factories soon become affected by giddiness and headaches, and the colouring matter is so strong as to impregnate, not only their clothes, but to turn the hair and beard, and even the skin, of a dusky red hue.

The Gheel System.

So long ago as 1828, Sir Andrew Halliday proposed to copy the example of Gheel, and to found a lunatic colony on one of the Middlesex heaths for the inmates of St. Luke's Hospital, London; and a second on the Mid-Lothian plains for the insane paupers shut up in the Edinburgh Workhouse.

Proposed Anglo-American Home in Rome.

The want of an English Home in Rome, where invalids, requiring change of air to a southern climate, and unable to incur a large expenditure in seeking it, can be received, has long been felt. It is therefore proposed that an English Home, or Sanitarium, shall be founded in Rome for the numerous visitors and residents of the Anglo-Saxon race, and that it shall be opened in October next. It is to be completely non-sectarian. It will be open to all ministers of religion and all medical men. The payments will be fixed on the most moderate scale. It will be especially devoted to the benefit of the English and Americans, but will be open to invalids of other countries on the recommendation of the Committee. A private hospital will form part of the work, entirely separated from the Home itself, where severe cases of accident and illness will be received and nursed in private rooms at special fixed rates of payments. Trained English nurses will be attached to the Home, and take charge of the cases under medical supervision. Such Homes exist in Mentone, Florence, and Cairo. The proposed institution has the sanction and support of his Excellency Sir Augustus Paget, her Britannic Majesty's Ambassador, and the Hon. G. P. Marsh, United States Minister. It is necessary to raise a considerable sum to hire a suitable building, for which an eligible opportunity now offers to furnish it, but it is fully expected that the institution will ultimately be self-supporting, and the nucleus of extended hospital work. A committee will be immediately formed. The London referee is Dr. W. H. Walshe. Queen Anne-street, Cavendish-square; and contributions to the "Fund for establishing an Anglo-American Home in Rome" will be received by Messrs. Coutts and Co., bankers, London. Dr. Lauchlan Aitken, and other English medical men in Rome, will, we understand, answer any questions as to the proposed institution.

COMMUNICATIONS have been received from—

Dr. E. Symes Thompson, London; Dr. James Dunlop, Glasgow; Mr. W. E. Poole, London; Mr. J. Knowsley Thornton, London; Dr. W. Ainslie Hollis, Brighton; Dr. William Squire, London; Mr. B. R. Wheatley, London; Mr. Warrington Haward, London; Mr. John Chatto, London; Dr. Barlow, London; Dr. Bruce, London; Dr. C. Guisan, Vevey; Dr. Jacob, Leeds; Dr. Sturges, London; Dr. B. Sanderson, London; Messrs. Letts and Co., London; Mr. Fuller, London; Messrs. Young and Postans, London; Dr. Barr, Liverpool; Mr. Becher, Brighton; Messrs. Calvert and Co., Manchester; Mr. T. Naton, London; Mr. A. J. Hawkins, London; Mr. R. Shingleton Smith, Clifton; Mr. F. S. Warren, London; Mr. N. Spottiswoode, London; Mr. Hussey, Oxford; Mr. Hy. A. Kinloch, London; Messrs. Salmon Brothers, London; Mr. J. B. Cullingworth, Manchester; Miss Rose Adams, London.

BOOKS AND PAMPHLETS RECEIVED—

Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S., Medicinal Plants, part 19—Cassell's History of India, part 16—John Parkin, F.R.C.P.E., F.R.C.S., Gout, its Cause, Nature, and Treatment—Albert Robin, La Fièvre Typhoïde—Transactions of the American Neurological Association for 1875—Ch. Robin, Traité du Microscope et des Injections—William Gardner, M.D., Case of Progressive Pernicious Anæmia—Beverley Robinson, M.D., On some Conditions, Physical and Rational, in Effusions of the Pleura—William Turner, M.B., An Introduction to Human Anatomy.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Gazeta Medica da Bahia—Transactions of the Odontological Society of Great Britain, March—Hardwicke's Science Gossip—Monthly Microscopical Journal—Analyst—Richmond and Louisville Medical Journal—Indian Medical Gazette—National Anti-Compulsory Vaccination Reporter—Medical Temperance Journal—Monthly Homœopathic Review—Giornale Internazionale delle Scienze Mediche—Wine and Spirit Weekly Record—Veterinarian—British and Foreign Medico-Chirurgical Review, April—Edinburgh Medical Journal—Students' Journal and Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

April 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

9. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Adjourned Discussion on Animal Vaccination; after which a Clinical Evening.

10. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. T. Holmes, "On Direct Wounds of the Ureter." Dr. James Andrew and Dr. Dyce Duckworth, "On a Case of all but Universal Paralysis in a Child, following Exposure to Heat, with Complete Recovery."

11. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8½ p.m. Discussion on Mr. Lawson's and Dr. Ely McClellan's papers on Cholera.

12. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

13. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. Maunder, "Double Valvular Osteotomy as a Substitute for Excision of the Knee-Joint" (a living subject). Mr. Christopher Heath—1. "A Case of Subperiosteal Resection of the Shaft of the Tibia"; 2. "A Case of Badly United Fracture of the Bones of the Leg, treated by Excision of a Wedge with Linhart's Chisel." Mr. Clement Lucas, "Excision of the Lower Half of the Ulna for a Myeloid Tumour" (a living subject). Dr. Cayley (for Mr. Henry Morris), "Excision of the Lower Ends of the Radius and Ulna for a Myeloid Tumour."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 31, 1877.

BIRTHS.

Births of Boys, 1229; Girls, 1200; Total, 2429.
Average of 10 corresponding years 1867-76, 2376·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1077	975	2052
Average of the ten years 1867-76	798·1	789·8	1587·9
Average corrected to increased population ...	...	...	1699
Deaths of people aged 80 and upwards ...	...	...	80

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	5	5	5	...	...	2	2	1
North... ...	751729	45	11	6	...	17	...	4	...	...
Central ...	334369	2	7	...	...	4	...	...	...	2
East	639111	13	15	6	2	9	1	1	...	3
South... ...	967692	23	15	10	1	18	...	3	1	1
Total	3254260	86	53	27	8	48	1	10	3	7

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·404 in.
Mean temperature	46·4°
Highest point of thermometer	59·4°
Lowest point of thermometer	33·5°
Mean dew-point temperature	41·1°
General direction of wind	Variable.
Whole amount of rain in the week...	0·91 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 31, 1877, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending Mar. 31.	Deaths Registered during the week ending Mar. 31.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2429	2052	59·4	38·5	46·4	8·00	0·91	2·31
Brighton	102264	43·4	47	35	55·0	39·0	46·1	7·84	0·55	1·40
Portsmouth ...	127144	28·3	93	56	56·6	38·3	46·3	7·95	1·00	2·54
Norwich	84023	11·2	59	41	56·0	39·0	45·0	7·22	0·51	1·30
Plymouth	72911	52·3	39	39	58·5	36·0	44·8	7·12	1·85	4·70
Bristol	202950	45·6	140	87	57·8	32·3	44·9	7·17	1·13	2·87
Wolverhampton ...	73389	21·6	49	39	55·6	31·9	42·4	5·78	0·19	0·48
Birmingham ...	377436	44·9	310	277	56·0	37·3	44·8	7·12	0·83	2·11
Leicester	117461	36·7	85	37	59·5	37·8	46·3	7·95	0·27	0·69
Nottingham ...	95025	47·6	70	39	57·3	35·9	44·8	7·12	0·54	1·37
Liverpool	527083	101·2	372	275	55·6	35·7	44·5	6·95	0·24	0·61
Manchester ...	359213	83·7	251	247	59·0	34·0	44·8	7·12	0·58	1·47
Salford	141184	27·3	151	97	56·7	31·4	42·6	5·90	0·59	1·50
Oldham	89796	19·2	73	56	...	...	...	...	...	...
Bradford	179315	24·8	113	86	54·0	35·6	41·5	5·28	2·15	5·46
Leeds	298189	13·8	217	168	57·0	34·0	42·5	5·84	1·40	3·56
Sheffield	282130	14·4	216	173	54·0	33·0	41·9	5·50	0·48	1·22
Hull	140002	38·5	110	79	53·0	32·0	42·3	5·73	0·86	2·18
Sunderland ...	110382	33·4	77	64	57·0	37·0	43·7	6·50	1·34	3·40
Newcastle-on-Tyne	142231	26·5	128	82	...	...	...	...	...	...
Edinburgh	218729	52·2	129	110	53·1	32·3	40·4	4·66	1·15	2·92
Glasgow	555933	92·1	427	328	...	...	...	...	...	...
Dublin	314666	31·3	205	248	58·2	27·8	44·6	7·01	0·26	0·66
Total of 23 Towns in United Kingdm	8144940	38·3	5787	4715	59·5	27·8	44·0	6·67	0·84	2·13

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·40 in. The lowest reading was 28·78 in. on Sunday morning, and the highest 29·95 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ON SYPHILITIC PHAGEDÆNA.

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the Hospital.

GENTLEMEN,—I take advantage of a case which was admitted yesterday, and which we shall presently examine, to make some remarks on the special conditions under which phagedæna may arise in connexion with syphilis, and also upon the treatment which is best suited to these important cases. If we can arrive at anything like a real knowledge of the conditions which favour the commencement and spread of phagedænic action when consequent upon the action of the venereal virus, we shall probably gain at the same time considerable insight into the real nature of other allied forms of inflammation. Syphilitic phagedæna is by very far the most frequent form of phagedæna which comes under the notice of the surgeon, and, what is yet more to the point, it very frequently originates *de novo;* whilst the other forms usually occur as epidemics, and are due to contagion. Hence it follows that, if we wish to discover the cause, we must investigate syphilitic cases.

First let us ask what we mean by phagedæna. This term is applicable to ulceration which spreads rapidly; and we must clearly understand that the degree of rapidity may vary within wide limits in different cases. Thus, of our cases of phagedæna no two are alike in severity. We have some cases in which, after careful examination, it is not easy to say whether the term is applicable or not; whilst we have others in which not only does rapid ulceration take place, but large defined portions of tissue are killed by mortification, and to which the term "sloughing phagedæna" becomes appropriate.

You will understand, then, that phagedæna is a modification of the inflammatory process attended by ulcerative destruction, more or less rapid, of the part involved. How does it get its peculiarities? Is it due to something unusual in the health of the patient, or to some special quality in the virus with which he has been inoculated? To answer these questions we must inquire as to the class of patients who come under our care with phagedænic sores. We meet with this character of sore in all stages of syphilis. It may attack the primary chancre, the secondary eruption, or the tertiary ulcer; and its progress and treatment do not differ very materially in respect to difference in the stage of the specific fever. Our most common cases, as well as our most acute ones, are those in which it attacks primary sores; and of this class I cannot show you a better example than the patient now under care.

He is a healthy man, aged twenty-six, who has, as he assures us, never before suffered from any form of venereal disease. Exactly a month ago he was exposed to the risk of contagion, and within a week afterwards became aware of the existence of irritation about the orifice of the urethra; a fortnight ago the sore had become very painful. He neglected it, and continued at his work, and he states that the friction of the part against his trousers caused him much suffering; finally, he comes to us with the extremity of his glans destroyed by phagedæna. The ulcer shows undermined irregular edges, which look much as if they had been gnawed by a small animal; they are intensely congested, and at parts dusky with ecchymosis. The surface of the sore is covered by a glutinous secretion which it is difficult to wipe off, and shreds of slough hang about it. There is scarcely any enlargement of the glands in the groin, and excepting from what may be attributed to pain and loss of rest, the man is in perfect health. You will suggest that there must have been something very peculiar in the virus with which he has been inoculated to induce such a peculiar result, especially as there appears to be nothing whatever to get hold of as regards his health. But there are facts which militate strongly against such a theory. I have no doubt whatever that the secretion from this man's sore would inoculate another to which it might be applied. But, in the first place, it is improbable that, as a rule, prostitutes suffering from phagedæna should be able to continue their vocation. In the next place, we may remark that if phagedæna were always due to contagion from sores in a similar condition, we should probably have it epidemic; many men would catch it from the same woman, and we should have a group of cases seeking admission at or near the same time. Now, this is not the fact; our cases are almost always single.

We may admit, however, in reference to this point, that instances have occurred in which many men were supposed to have contracted phagedænic sores from the same woman. Undoubtedly, if a woman suffering from a sore more or less phagedænic were to receive men, the risk of propagation of the same type of inflammation would be considerable. My argument is, not that this never happens, but rather that it is not the common cause of phagedænic chancres. For the sake of clearness allow me to repeat: Any syphilitic inflammation may at any stage become phagedænic; and when it has once taken on that peculiar action, then the secretions produced by it will be capable of spreading the disease by contagion. By "the disease" I mean not syphilis, but phagedænic inflammation. This contagion may occur either to the individual originating the disease or to another, and it is the ordinary cause of the persistence of phagedænic action in a sore.

Next let us ask if there are any facts favouring the belief that peculiarity in the health of a recipient is the cause of phagedænic action. The patients who come under care with sores of this kind are usually, as in the present instance, apparently in excellent health; they are, as a rule, young, and not unfrequently they are of fair complexion and somewhat delicate skins; and very commonly it is the first inoculation from which they have suffered. When we meet with phagedæna in the female—which is rare,—almost invariably its subject is a young girl. Another circumstance which bears strong testimony in favour of there being some constitutional peculiarity is the fact that the secondary rash is very commonly peculiar also; it may perhaps not be positively phagedænic, but it almost always ulcerates more or less, and usually takes on the form known as rupia. A third fact bearing in the same direction is, that those who have had a phagedænic chancre once may, if they contract a chancre again years after, manifest the same peculiar tendencies; this I have witnessed in several very remarkable cases. It is not improbable that the varying conditions of primary chancres may be taken as tests of the patient's temperament, and that chancres indurate chiefly in relation with the patient's proclivities as regards the inflammatory process. Without our being able to say, "This man is cachectic," "That man is in vigorous health," it is yet quite true that the one may be liable through his whole life to suppurative inflammations; whilst in the other, scratches will come to nothing, wounds will heal by the first intention, and chancres will indurate with little or no secretion.

Next, I think it extremely probable that the tissue attacked may have something to do with initiating phagedæna; it is more common when the chancre is situated on the glans than when it occurs on the prepuce. It is probable also that local influences brought to bear upon the sore after its commencement take their share in the result. Phagedæna rarely ensues in sores which have been carefully attended to from the first, whilst it is common to find that special conditions have favoured its initiation. Thus, patients with phimosis, which prevents the sore from being cleansed and retains the secretions in contact with it, are very apt to have phagedæna ensue. You will, then, see that our speculations lead us to infer a complicated causation—in part peculiarity in virus, in part peculiarity of temperament in the patient, and in part local irritation of the ulcer. We may test in some degree the correctness of these assumptions by the results of treatment. If the disease be due to local causes only or chiefly, we ought to be able to cure it by local treatment; if, on the other hand, it be due chiefly to the patient's state of health, then we ought to find constitutional measures the most efficient. In the majority of cases, guided chiefly by what I have observed in reference to measures of treatment, I have no doubt that the phagedæna is mainly local. If there be doubt as to the nature of the influence under which an ordinary sore takes on phagedænic action, there can at any rate be little or none as to the cause of its spread. When once this peculiar form of inflammation has begun, it spreads by the contagion of its own secretion; destroy that secretion, or remove it by continual washing, and in all cases, excepting a few in which there is special reason to suspect the state of the constitution, you will arrest the disease. The secretions from a phagedænic sore do not appear to be capable of inoculating the unbroken mucous membrane or skin; but if a patient have multiple chancres, and the contact of the pus be possible, they will all

become phagedænic. If an incision be made into the part, and the surgeon neglect to take special precautions, the wound is almost certain to take on phagedæna. This fact of contagion to different wounds in the body of the same patient is very important, for our opportunities of proof as regards contagion to other persons are both less frequent and less definite. Yet I entertain not the slightest doubt that what is known as hospital phagedæna spreads by contagion and by contagion only, and I suspect that it is not infrequently introduced into hospitals by the admission of venereal cases. You will see that, whether phagedæna occurs in connexion with a syphilitic chancre or with an ordinary wound, it is equally non-specific; it is not a part of the syphilis, but a part of the inflammatory action which the irritating syphilitic virus sets up. So far, indeed, from the phagedænic cases being cases of intense syphilis, the occurrence of phagedæna tends to prevent the development of the specific fever by destroying its germs. Thus, then, it is quite possible that phagedænic action may be initiated by irritation of a wholly different character from the virus of syphilis; but, as I have already stated, we but rarely meet with it in English practice in any other connexion. The two diseases known as cancrum oris and noma are examples of sloughing phagedæna, occurring for the most part in delicate children, and attacking respectively the mouth and the genitals. It is probable that they are produced, like syphilitic phagedæna, partly by local and partly by constitutional influences, and we know that it is essential to direct our treatment in both these directions. I am not aware of any strong facts as regards the production of epidemics of phagedæna from cases of cancrum oris, but we must recollect that the conditions favouring contagion but rarely occur, since these patients are seldom admitted into surgical wards. The circumstance that in these the process is very rapid, and almost wholly one of gangrene, will also tend to diminish the risk of contagion, since the production of living pus-cells and nuclei is probably essential to that result. I should be very sorry to treat a case of noma or cancrum oris under circumstances in which there was any risk of its secretions coming in contact with other open wounds. In the epidemic of hospital gangrene which occurred in this institution six or eight years ago, the evidence was very strong indeed in favour of the spread of the disease by contagion, and contagion only, and the first case occurred in a man who lay next to a patient who had been admitted for syphilitic phagedæna. I have ever since been most particular to prevent cases of phagedænic chancres from being placed in our open wards; we isolate them with the utmost precaution, and should any case approaching to hospital gangrene chance to show itself at any time, we should treat it just as we do erysipelas, and insist upon the most prompt and strict isolation. I would not place the slightest confidence in any kind or degree of ventilation as preventive of the spread of these maladies; you would not ventilate a field to cure it of growing thistles, but you would root up each plant before it had had time to shed its seed. I put aside for the present the question as to whether the germs of these diseases may be conveyed by the atmosphere and absorbed by the lungs, and will take it for admitted that their usual mode of spreading is by direct contagion from wound to wound.

The remedies upon which we rely in the treatment of phagedæna are, as might be expected from what I have said, chiefly local ones. So efficient is the application of strong nitric acid to the sore, that for many years I never met with a single instance in which it was necessary to resort to any other remedy. Latterly, however, I have met with several cases which, for a time at least, resisted its influence; still I believe that it is, upon the whole, the most valuable agent that we possess. You must apply it systematically and with great care: your patient should be under the influence of chloroform; the sore should be thoroughly cleansed, perfectly dried, and well exposed to a good light; then by means of a glass brush or a piece of soft wood the acid must be introduced deliberately into every hollow of the surface, and under every part of the edge. Probably a single careful application will be sufficient; but if, when the sloughs have separated, you should find any spot which still shows the unhealthy secretion of the disease, you must again apply it. The chief objection to the use of the acid is the pain it causes, and of late years I have treated many cases by the less painful method of continuous immersion. If less painful, however, at first, this plan is, I think, in the long run more irksome; you may have to keep your patient in the hip-bath continuously, night and day, for a week or ten days, and although the immersion entirely relieves the pain of the phagedæna, and almost invariably stops its spread, yet one can easily understand that even with the most attentive nurse and with the best facilities as regards the supply of water, the plan has its annoyances. I do not like the actual cautery so well as nitric acid, since you are more liable to miss touching some of the diseased structures. Of milder local applications I believe that opium is the best; you may dust the sore with equal parts of powdered opium and bismuth, using it more or less freely in proportion to the extent of surface; but I should never think of trying opium in any really severe case. As regards internal remedies, you will have to choose between opium, iodide of potassium, and steel; none of them are worthy of any confidence in competition with local measures, but they may be used to help the cure. If the patient is the subject of constitutional syphilis, then iodide of potassium must be given, and in large doses; or perhaps you may cautiously exhibit mercury. Until quite lately I have been in the habit of carefully avoiding mercury in cases of phagedænic chancre, and also in the eruptions which follow sores of this type. Certain cases which I have recently treated have, however, caused me to suspect that I had formed a far too definite opinion on this point. Undoubtedly, mercury will not stop phagedæna; and if the local treatment proper for the latter be neglected, it may seem to make it worse. If, however, the local treatment be carefully carried out, I doubt whether mercury will disagree; and I know that it will cure the resulting eruptions in some cases very satisfactorily. Full doses of iron may perhaps be of advantage in most cases; and the same is possibly true of opium also. Several of my surgical friends have spoken of these drugs as almost specific against phagedæna, but I have not myself seen any facts in support of such an opinion.

At the Metropolitan Free Hospital, where during a period of eight or nine years I had a large venereal practice, I saw many phagedænic chancres, and my plan was invariably to use nitric acid. I do not recollect that I had ever any case which gave unusual trouble—that is, which required the acid more than twice, or at most three times; and a large majority were cured by one application. An Irishman, whom I well remember, formed an exception to this statement. He positively refused to have the sore cauterised, until, in spite of internal treatment by opium and iodides, nearly the whole of his penis had been destroyed. At this hospital I formerly used the acid, but of late we have always preferred the bath; and with both we have had very good results. In private, I have treated some very bad cases; and for the last five or six years have always, in the first instance, used the immersion plan. In one very important case the immersion, although patiently carried out, cleaned the sore at first, but did not prevent recurrence of the unhealthy action, and we were compelled to apply the acid several times, with the result of a final success. In this instance secondary symptoms were developing at the time, and took on the ulcerating rupial form. We were giving large doses of iodide of potassium. Had I to treat the case again, I should certainly venture to try mercury.

In another case, which occurred in the summer of 1869, a gentleman, of fair complexion, came under my care for a second time, who had already received much treatment without success. The acid had been freely employed several times, but his glans was wholly destroyed—the exposed end of the organ was in a gangrenous state. There appeared reason to believe, in this instance, although the disease was in the penis, that it was not of primary origin. At any rate, it was certain that the patient had gone through syphilis some nine years before. At that date he had suffered for long from secondary symptoms, and had had several relapses. Subsequently he had another chancre. In 1868 he had a large ulcer in the left thigh, and after that one in the left groin. No sooner were these well than a sore showed itself on his penis, the result, as he supposed, of a fresh contagion. I advised fresh application of the acid nitrate, and that he should take yet larger doses of the iodide. These measures were carried out by his surgeon, and with temporary success, but ultimately the phagedæna relapsed, and about two months later he came to me again in the condition described, the glans wholly destroyed, and the end of the stump of the penis not merely phagedænic, but gangrenous. In this case I put the patient under chloroform, cut away half an inch of his penis in a state of slough, and applied the actual cautery to the stump most freely. He was afterwards put into a bath, and took iodide

of potassium. We did not succeed, and with a view to more systematic management of the bath I persuaded him to come into the hospital. We had him as in-patient for a fortnight, and used the cautery and the bath, but finding no benefit, and fearing he would lose the entire organ, I advised him to go down to Margate, where my friend Mr. Price was good enough to take charge of him. Under the influence of the sea-air, continuing the iodide, and lastly, and perhaps of most importance, having nitric acid applied repeatedly by Mr. Price, the sore healed soundly. It was a case in which the bath failed definitely. Whether the sea-air really was the cause of the arrest, or not, I do not feel at all certain. Perhaps the cause of the failure of the bath was that the disease was gangrene rather than mere phagedænic ulceration, and thus there was always a layer of dead tissue protecting the surface from the action of the fluid. It is in the superficial erosive cases that you will find the immersion plan so speedily and completely effectual. I suspect, however, that we ought really to credit the sea-air with the cure, or, rather, that it made success with the other remedies possible. I have in several other less severe cases witnessed similar results—that phagedæna, which would not stop under treatment in town, was cured easily at the seaside. Usually they were cases of fresh contagion in the subjects of old taint.

If you resort to the immersion plan it must be done thoroughly. The patient must sit in a hip-bath, the temperature of which is maintained constantly at a comfortable point, and he must be supplied with an irrigator by which a forcible stream of water can be driven on to the sore. It is essential, either by the irrigator or by other means, to remove all secretion from the surface. Not until the sore is washed quite clean will you observe any good results. Sometimes, in the milder cases, a white pellicular coating forms over the sore. This must be peeled off, and may require removal over and over again. The sore is never rapidly phagedænic when this tendency to the diphtheritic type of inflammation shows itself. It is a condition which also often occurs in the milder class of cases of hospital gangrene. Similar pellicles are now and then seen on the tonsils in syphilitic throats.

I shall have to say more respecting some of the facts as to syphilitic phagedæna in a future lecture.

ORIGINAL COMMUNICATIONS.

A PHYSIOLOGICAL PARADOX.

By W. AINSLIE HOLLIS, M.D. Cantab., F.R.C.P.

It is customary at the present day to hear and to read a great deal about the vaso-motor nerves and their inhibitory action on the vascular system; and we are apt to accept the doctrines thus broadly proclaimed without fully sifting the evidence on which they are based. It is, however, the duty of every scientific man to ascertain for himself whether the facts upon which a theory is founded are correctly and clearly interpreted; for truth, like

"The quality of mercy, is not strained."

If, after careful investigation, he find that the facts are warped to fit the theory, or that they have been accepted upon insufficient evidence of their correctness, then it is his duty to sweep away such crudities, even at the risk of demolishing a well-meaning hypothesis, or of injuring the growth of an interesting pet theory.

The doctrine of vaso-motor action, promulgated by Cyon, Bernard, Brown-Séquard, Schiff, and Vulpian, and further developed by Goltz, Owsjannikow, and Brunton, is now generally accepted by physiologists. We shall here give a brief *résumé* of it. When an irritant is applied to the peripheral branches of a sensory nerve, an impression, which we shall call "*a*," is conducted by the nerve through the spinal cord and medulla to a group of ganglion-cells in the latter, named the vaso-motor centre. When "*a*" arrives at this centre, which, by-the-bye, maintains the walls of the blood-vessels of the whole body in a state of tonic semi-contraction, it is split up into two antagonistic forms of energy, "*x*" and "*y*." Of these, "*x*" acts through the vaso-motor nerves, which preside over the bloodvessels of the very spot where the irritant was applied, arresting their action and causing dilatation of the vascular walls. On the other hand, "*y*" stimulates the adjacent ganglionic cells of the "centre" to an increased action, whereby all the other vaso-motor nerves than those above indicated are made to contract the remainder of the bloodvessels of the body, and so to raise the general blood-pressure, as Ludwig first pointed out.

We have now come to our paradox. It is comparatively easy to understand how "*a*," when it arrives at the "centre," might produce an effect on the bloodvessels of the body generally, through the vaso-motor nerves. It is, however, by no means so comprehensible how one and the same impression, conducted by a sensory nerve to the medulla, should there produce in one vaso-motor cell a loss of functional power, and in other adjacent vaso-motor cells an increase of that power. Such a paradox, however, offers only a slight check to the theorising mind of our modern physiologist. We are at once plunged into a host of speculations to account for the anomaly. It will, however, only be necessary to allude to some of the most important of them. First, then, we learn that the sensory impression "*a*," whilst on its way to the medulla, distributes a series of impressions locally to certain small ganglia around the vessels of the part, and connected with the peripheral terminations of the vaso-motor nerves. The action of these ganglia is thereby "inhibited," or, in plain English, "checked," and consequently the vessels presided over by them at once dilate. The existence of such an universal network of peri-vascular ganglia with their connecting fibres as this hypothesis necessitates, is by no means as yet satisfactorily proven. Microscopists differ greatly amongst themselves regarding the ultimate terminations of these nerves.(a) Whatever be the anatomical arrangements, there is still the difficulty of explaining the theory of "nerve inhibition," to which I shall subsequently allude.

Another supposition is that there are two sets of nerve-fibres connected with such changes in vascular calibre, the contractile or vaso-motor, and the dilating or "inhibitory." According to this doctrine the bloodvessels are capable of active dilatation, in the same way that they possess the power of contracting upon their contents.

It is, however, contrary to all our ideas of dynamics to expect that muscular fibres embedded in the walls of a bloodvessel can, under any circumstances, actively enlarge its calibre by their contraction. The longitudinal fibres, or, in other words, those whose long axes lie in the same direction as the long axis of the vessel, and to which this active dilatation is usually assigned by its supporters, can only shorten the length of the vessel. This process would by no means increase its capacity. Dilatation under such circumstances must be passive and due to pressure from within. The above theory has not recently received much support, and it is to be hoped that it may soon be consigned again to that limbo of immature theories whence it ought never to have issued.

We have now arrived at the final and, in some respects, most important attempt at an explanation of our paradox—namely, the inhibitory theory of nervous action. Although motor nerves are mostly considered to increase muscular action when stimulated, there are some which seem to check muscular activity. Of this class is the superior cardiac branch of the vagus. Weber found that galvanism of this nerve slows the heart's contractions, or, if strong, may even arrest its action. The vagus is accordingly said to possess a retarding or inhibitory action on the heart. We grant this reservedly. It is, however, otherwise when our theorists claim an extension of this retarding or inhibitory action of the vagus for the peripheral circulation generally;(b) a claim which cannot, we believe, be substantiated on either anatomical or physiological grounds. Neither will it tally with the well-known observation of Goltz, that a cut sciatic nerve, when irritated, caused dilatation of the vessels of the parts supplied. In order to overcome these difficulties, adverse to the proper working of the inhibitory theory, physiologists have been compelled to revert to the supposition that the vessels are everywhere surrounded by a network of nerve-fibres and ganglia, called vaso-dilator and vaso-constrictor. These centres and their fibres are endowed with antagonistic powers: whilst the vaso-constrictors keep the vessels in a state of tonic semi-contraction, and when irritated diminish their calibre still more,

(a) Lehmann and Eberth observed the presence of nerve-fibres and ganglia to a limited extent only on the aorta of a frog. Beale was more successful (*Philosophical Transactions*, vol. cliii., page 562). The ultimate nerve-fibres of this authority appear as plexuses in another (Klein, *Microscopical Journal*, 1872). Again, the last writer could not perceive the connexion between non-medullated fibrils and the oblong nuclei of the capillaries, as Kessel and Tomsa did (*Cf.* F. Darwin, *Microscopical Journal*, 1874, page 109; and others).

(b) See Fothergill, "The Heart and its Diseases," page 9. 1872.

the vaso-dilators interfere with this action, and allow the vessels to dilate. It seems, however, contrary to all our ideas of that economy of space and energy, and of that simplicity which we find elsewhere exemplified in the mechanism of our bodies, to suppose that two elaborate systems should exist side by side to antagonise uselessly each other's work; when, by exercising a little ingenuity, a single system might have been theoretically constructed, which would accomplish the work of both in accordance with the principle of least action.

Thrice then have we cried "Wo!" unto these edifices of modern theorists; and now, like Jesus the son of Ananus, in Josephus' story, we must be prepared to cry "Wo!" even unto ourselves.

> "A man must serve his time at every trade
> Save censure—critics all are ready made."

Having stated our objections to the current hypotheses explanatory of our paradox, it is incumbent on us to attempt a solution of the problem ourselves. So little is at present known of nerve-energy that we are accustomed to judge of it mostly by its effects on other tissues. This statement is peculiarly applicable to the motor nerves, connected as they are with voluntary muscles. A living muscle is able either to contract or relax. Omitting electro-chemical changes, which do not here concern us, muscles can only manifest their life by this change of shape. In the healthy body, quiescent muscular fibres are in a state midway between extreme contraction and extreme relaxation: this condition is called their "tone." Relaxation beyond this state of semi-contraction is probably impossible in a *healthy* muscular fibre, and, when it takes place, always marks impaired vitality. With the exception of one sensational theory, it is by common assent believed that contraction alone is a vital act; subsequent relaxation being a passive condition of the fibre, and due to a re-establishment of healthy molecular equilibrium.

When a motor nerve after stimulation makes a muscle contract, we suppose that something we shall call "x" has passed along the nerve to the muscle. Now, the force (if Professor Tait will allow us to make use of the word) of a muscle's contraction can be fairly estimated by the amount of work of which it is capable in a given time. Is this force directly supplied by "x," and equivalent to it? Or does "x" act on the muscle in a way similar to the hand of an engine-driver, when he turns on the steam to his machine—that is, regulate the evolution of force, but in nowise supply it? We are at present scarcely in a condition to answer these questions satisfactorily. It seems probable, considering the inherent contractility of muscular fibres, even after removal from all nervous connexion, that "x" acts as a stimulator to muscular contraction, and is not equivalent to the whole of the force. Indeed, Professor Haughton's experiments(c) will prove so much. There exists, however, some relation between "x," and the evolved contractile force "y" of the muscle stimulated, for we find within certain limits that the stronger a motor nerve is stimulated, the more violent is the consequent muscular contraction.(d) The preceding observations on the apparatus of voluntary motion are, to a great extent, applicable to the nerves and muscles of vegetative life. The organic muscular fibres of the arterioles are, as we have before stated, in a state of tonic semi-contraction. This statement is confirmed by the fact that irritation of the vaso-motor nerves can produce still further contraction, whilst their destruction or division results in a vascular dilatation of the area supplied by them. When we stimulate the vaso-motor centre in the medulla by a sensory impression, we produce a general spasm of the muscular walls of the arteries; when we destroy it, we produce a general dilatation of the bloodvessels. Division of the cord, of the brachial plexus, of the lingual or sciatic nerves, is followed by a local dilatation of the bloodvessels. This dilatation is mostly temporary, and the vascular tonus is restored after a while. Such experiments show that a connexion exists between the central nervous system and the peripheral vascular system—a conclusion which might have been arrived at otherwise by observing the pallor of fear or the blushing of shame.

We shall now consider the effect of a local irritant upon this system. If we place a living coal for a short time upon the back of our hand, we at once feel a sensation of heat and pain, subsequently followed by an arterial throbbing at the part. This throbbing is accounted for partly by the generally increased arterial tonus throughout the system, and partly by the local dilatation of the arteries, whereby a large stream of blood is driven through the vessels at the seat of injury. If the burn is somewhat severe, the superficial tissues and vessels beneath the skin may have suffered injury. In this case these vessels, with their contents and surroundings, are killed; and here we can have no possible vascular movements or nervous irritation. Supposing our sensory impression "a" passes up to the cerebrum, and informs us there of the injury our hand has experienced, and in its passage stimulates our vaso-motor centre to action: vaso-motor impressions "z y" are at once distributed in all directions peripherally to contract the bloodvessels. One of them, "y," finds its way towards the part whence "a" started. Here, however, it meets with difficulties to its onward progress; the telegraph wires (to use a simile) are bent and broken, and the posts are torn up. It cannot contract vessels with which it has no vital communication, namely, the dead and shrivelled ones; but before it arrives thus far its advance is impeded and checked. There is a zone of vascular and cellular formation, whose vitality, although not destroyed, is seriously shaken—it is functionally out of gear. The nerves have lost their conducting power for the nonce; the muscles no longer contract; the blood even, although driven from afar with more than usual violence through the lax vessels, partakes of the general commotion, its leucocytes cling to the vascular walls, its serum oozes through the dilated vessels, and forms a watery bed to separate the living tissues from the dead. Have we not here a sufficient explanation of the local dilatation of the arterioles under such circumstances, without speculating on the existence of doubtful structures in the walls of the bloodvessels or elsewhere? Assuredly we have!

It is frequently assumed in such physiological experiments that vitality (whatever it may be), when added to a tissue, insures its functional integrity: that a tissue is either living or dead; and, if alive, that it is capable of fully performing its appointed functions. A greater mistake than this cannot be made. All observation goes to prove that tissues lose their special functions long before they die. Take, for example, the liver. This organ, as is well known, is endowed with numerous functions in the animal economy, of which the production of glycogen, the secretion of bile-acids, bile-pigments, and urea, and the excretion of cholesterin, are the most important. Now, in jaundice, and probably in other diseases involving this organ, these functions are either quite in abeyance, or greatly impaired, as Legg, Brouardel, and others have established. Furthermore, tissues are so intimately connected together structurally that we cannot expect a loss of function in one not to react injuriously on its neighbours. For instance, we cannot annihilate the functions of a motor-nerve and all its myriad branches without seriously involving the living muscular fibres with which it is connected. The sudden division or destruction of such a nerve induces extreme muscular relaxation of the part supplied by it. This loss of tone is, however, subsequently overcome, owing, probably, to the independent contractility of the fibres as soon as they become accustomed to their fresh surroundings. Similarly, the dilatation of the vessels after section of a vaso-motor nerve is temporary; although it is probable that in all these cases of nerve-injury the tone of the muscles is never afterwards equal to that of health. All such examples show that loss of function is more or less independent of loss of vitality; and that the latter quality is something which may gradually fade from the matter it enlivens, removing first, however, those very functions which are its special attributes.

Finally, we must draw attention to a series of experiments which seem to throw some light upon the so-called "inhibitory" action of the vagus and other nerves. M. Onimus has shown (*Comptes-Rendus*, *London Medical Record*, 1877) that the vagus, when so stimulated by the faradic current as to make the intervals between the shocks about to correspond with the cardiac rhythm, increases the force and rapidity of the heart's beats instead of slowing them. Similarly, he obtained dilatation of the capillaries after rhythmically stimulating the vaso-motor nerves; but here, through a want of analogy, the conclusions he founds are, we believe, erroneous. There is no active rhythmical contraction of the bloodvessels at all corresponding to the systole of the heart. Rhythmical stimulation of these nerve-fibres might, and probably would, check the transmission of the natural nerve-energy to the parts, and thus bring about a passive dilatation of the vessels by paralysing the functional activity of their nerves; in the same way that irregular stimulation of an organ endowed with rhythmical movements (as the heart) impairs its innervation. In both

(c) See *British Medical Journal*, 1871, vol. i.
(d) Anstie, "Medical Electricity."

cases we have an irregular and unnatural excitation of the nerve-fibres, which leads to a rapid, though it may be a temporary, loss of function—namely, the conduction of motor impressions. This loss of function in the nerve-fibres would change the surroundings of the vaso-motor muscles—surroundings which cannot be greatly changed consistently with health,—and might lead to a temporary loss of their muscular tone. Such, then, is the explanation we offer of our paradox.

PRACTICE OF PHYSIC IN SMYRNA.

By JAS. McCRAITH, M.D., F.R.C.S.,
Surgeon to the British Seamen's Hospital, Smyrna.

No. I.

HYDROPHOBIA FROM THE SCRATCH OF A CAT.

In your journal for September 5, 1876, are contained some remarks on such a case as the above, but giving no details. On a superficial view, such a case seems to be an impossibility—some gross mistake on the part of the observer; but a little consideration will show that no such impossibility exists, as the following case will prove, and the following reasoning explain:—If the animal affected, or the human being, be observed, it will be seen that there is a peculiar irritation of the fauces—the man constantly "hawking" and endeavouring to get away some irritating secretion from thence; and the dog or cat endeavouring with its paws to get something from the fauces or throat. Of course, in such efforts, the paws will get smeared with the saliva or secretion which contains this terrible poison; and it is evident the claws of the cat or dog in this state are perfectly fit, just as much as the teeth of the animal, to convey the poison into a scratch or wound. I suspect that even a man's nails, under such circumstances, may convey the poison, though there are no facts to show that man's saliva does or does not contain the poison, or that it may be communicated from the human system. Some few experiments (if the late pseudo-humanitarian Act would permit of this) would decide the question. An idea is held by some that the disease does not exist, or is rare, in the East; but this is an error. I have seen perhaps some ten or twelve cases during the last twenty-five years here in Smyrna; four of these were my own cases. In every instance I have known, here or elsewhere, the patient was always bitten (or, in the present case, scratched) on a naked part of the person. I have seen very many cases of people bitten through the clothes, but in no instance was the disease communicated. The people here wear the Greek breeches, the legs being bare, which exposes them to danger. Curious to say, the disease is very common and well known to the people on the coast opposite Rhodes, a locality in which the disease was prevalent in the days of Hippocrates, and stated to be so by him in his time.

I was on that part of the coast some years since, and found this to be the case. The origin of the disease in this part of the country is generally the bite of the wolf. The animal, in a state of rabies, wanders down into the plain and into the villages, and, before it can be destroyed, commits great damage amongst the flocks, attacking and communicating the disease to the shepherds and dogs. Some few years since such an occurrence took place quite close to Smyrna, and a young girl got bitten, and died of the disease.

I would beg to call attention to one symptom observed in this case. As will be seen, the poor little patient was kept for one and a half or two hours under the full effects of chloroform; yet, spite of this, every five minutes a shock as from an electrical battery passed through her entire system. In tetanus—a very analogous disease,—whilst the effects of the chloroform subsist, the clonic spasm quite disappears, and the parts which before, while under the effects of the spasm, were as hard as a board, become completely relaxed, and remain so even for some time after the chloroform has ceased to act. Whilst this terrible poison of hydrophobia attacks, as would appear, the nervous system presiding over organic life, and through it the general system of nerves, though quite under the effects of chloroform, I would beg to call attention to this fact: some better physiologist than I am may possibly draw important inferences therefrom.

On December 14, 1856, I was requested to see A. M., aged nine years, a little girl. I found her complaining of violent epigastric pain. The mother attributed this pain to indigestion from a quantity of sweet chesnuts eaten the day previously by the child. The little patient was very nervous; alarmed at anyone approaching her; had a peculiar frightened expression. The previous day she had complained of pain shooting up the right forearm, and her mother had tied up the arm; this pain was severe, the mother stated, but had now gone; no fever. From the general state and expression of countenance, I had an idea of something serious being the matter, yet I only prescribed a gentle purgative, with regard to the supposed indigestion from the chesnuts eaten the day before; but the peculiar expression struck me as something I had before observed in some patient or other. On leaving the house I suddenly remembered that it was in a case of hydrophobia in a little boy of about the same age whom I had treated some time previously. I immediately returned to the house, and found that the child had taken her medicine with some persuasion on her mother's part. Seeing a glass with some water on a wardrobe close to the bed, I took it and requested my little patient to drink some of the water. Upon being assured that it was water, and not medicine, she took the cup in her hand and carried it to her mouth, but with an expression of great horror the hand was spasmodically jerked away from her mouth.

The disease was now very clearly established. Upon the strictest inquiry it was clear that the child had never been bitten by any dog. She assured us to that effect; but upon examining the hand in which she had complained of pain the previous day, though no signs of a bite appeared, there were traces of a scratch, as from a pin, on the back of the hand and forearm. The child at first did not remember how these scratches were caused, but she insisted that they were "not from a dog." The servants questioned could give no account, but "she certainly had not been bitten by any dog."

The late Drs. Wood and Raffineque were invited to consultation. The scratch on the hand appearing to be certainly the *fons et origo malorum*, upon questioning closely the intelligent little patient, she suddenly remembered that a strange cat had got into the house one day whilst they were at their country house the previous summer, six months since, and, seeming savage, had been pursued by the servants, in order to expel it. In the pursuit the cat had jumped upon her, and had scratched, rather severely, her hand and forearm, which, as usual in this country in the warm months, were uncovered.

The symptoms of hydrophobia were now evident, as follows:—Frightened expression; alarm at the slightest movement in the room; galvanic shocks through all the frame, but most felt at back of neck; constant agitation in the bed; the endeavour to swallow brings on a feeling of suffocation; she begs for something to drink, to get rid of some obstacle in her throat—some foreign body therein,—constantly carrying her hand to the part affected to take away this obstacle; but when the glass of water is given to her, and she puts it to her mouth, with a convulsive movement the hand is jerked away; constant spitting; noise of the saliva in mouth and throat.

It was agreed, as no hopes of saving life existed, at least to endeavour to relieve, as far as possible, the suffering. One of the physicians said, "Any treatment you like, but not the passing of a red-hot iron down both sides of the spine," as he had witnessed such treatment in a similar case a short time previously—of course with no good effect, the disease being, without an exception, always fatal.

Chloroform was administered, and the little patient kept under its influence very nearly two hours. Nearly four ounces of chloroform were exhibited. Before its administration the skin of the hands was cold and the pulse weak. Under its influence the hands became warm, and the pulse fuller and stronger; but every four or five minutes the spasmodic shocks returned, with a low plaintive cry or moan, though the child was profoundly in all other respects under the influence of chloroform. But the pulse began to fail, and the hands to become cold again, so it was judged prudent to stop the exhibition of the anæsthetic. In ten or fifteen minutes the effects of the chloroform passed off, and the patient came to her senses fully. All the symptoms came back, but much milder, especially the feeling of suffocation from the throat; but she complained of the first symptom of pain in the epigastric region. She lived a couple of hours after coming to her senses, after the passing away of the effects of the chloroform, and talked as intelligently as before. She frequently said to me, "Ah, I have suffered a great deal to-day!" And on the Monday, the third day of her disease—the pain of the hand began on Saturday morning—she died.

Smyrna.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

OTITIS INTERNA, FOLLOWED BY THROMBOSIS OF SUPERIOR PETROSAL SINUS AND PYÆMIC DEPOSITS IN LUNGS.

(Under the care of Dr. WILSON FOX.)

[Reported by Mr. J. W. HUNT, M.B., B.S., Physician's Assistant.]

SUSAN M., aged sixteen, was admitted at University College Hospital on December 2, 1876.

Her illness had commenced thirteen days before admission with severe pain in the head, which was followed by the vomiting of matter as "green as grass." There was also considerable epigastric pain and tenderness. A week before admission, patient had a rigor and became delirious, constantly screaming and pressing her hands to her head as if she were in pain there. On being aroused she would answer questions put to her. Diarrhœa set in at the commencement of the illness, and continued for a week. No history could be obtained of any injury to the head, but from childhood patient had suffered from a sanguino-purulent discharge from her left ear. Her mother had suffered in the same way. There was no family history of phthisis. No history of scarlet fever. Catamenia regular. Patient, on admission, was intensely ill and prostrated. Temperature 103·2° Fahr.; pulse 60; respirations 24 per minute. She lay in bed restless and irritable, with the limbs for the most part in a state of flexion—legs drawn up, knees bent, fingers pressed into the palms, elbows bent. Pupils equal, slightly contracted, and acting to light. Marked photophobia. No convulsions; no opisthotonos or other tetamic spasm; no strabismus; no paralysis in any part of the body, and no loss of sensation, but there was distinct hyperæsthesia in different parts. No cutaneous eruption. Patient was in a semi-stupefied condition, but answered sensibly when roused; complained of continuous throbbing frontal headache, and also of epigastric pain and tenderness. No tender spot or tumour could be detected over the surface of the scalp, nor was its temperature apparently elevated above that of the rest of the body. No trace of discharge was visible at any time from either ear. Tongue moist and covered with thick, dirty, moist fur; lips dry and cracked, and, together with teeth, covered with sordes. No vomiting. Bowels, on admission, constipated. Pulse regular, full and soft. No abnormal physical signs were discovered in either lungs or heart, beyond that the breath-sounds were rather harsh. No râles. Urine was of specific gravity 1020, acid, and contained no albumen. For some days patient remained in the condition above described, showing very little change, with the exception that the photophobia much diminished, and the pulse grew quick and irregular, varying from 80 to 160. Temperature remained high, never sinking below 100° Fahr., and rising as high as 103·6°. No evening rise in temperature till towards the close, and then not invariable. Only occasional cough. A week after admission, patient became more comatose, passing her motions and urine in the bed; but still now and then spontaneously, and also on being touched in various parts of the body, complained of her head. There were slight twitchings of the fingers, and shortly before death patient was seen to shiver slightly at times.

On the 12th she had a rigor and an attack of convulsions; no strabismus or paralysis followed this. Patient died rather suddenly on the following morning, eleven days after admission, and twenty-four after the commencement of her illness. Treatment consisted in the application of ice to the shaven head, keeping the bowels open, and the exhibition of chloral internally, together with careful feeding.

Post-mortem examination was made forty hours after death. Rigor mortis well developed. Patient much emaciated; subcutaneous fat almost gone. On opening the skull there was no sign of recent meningitis, but a few old adhesions of the arachnoid. The brain-substance, both cerebrum and cerebellum, was perfectly healthy, and contained no abscess (for which careful examination was made), neither were there any capillary hæmorrhages anywhere to be seen. The left internal ear consisted of two cavities filled with caseous pus, all trace of any definite structure being lost. Dura mater natural, peeled off readily; bone beneath not at all rough. The superior petrosal sinus was filled with a distinct ante-mortem clot about two inches in length, which was white and very firm, semi-organised, and adherent to the walls of the sinus. Towards its centre the clot was breaking down, forming a semi-purulent grumous mass. The clot did not extend into the internal jugular. Other sinuses were normal. In the left lung there was a white patch about the size of a pea, pyramidal in shape, with its base towards the surface of the lung, which might be considered a pyæmic focus not yet broken down into pus. In the substance of this lung there were larger areas of consolidation, very much congested, not yet purulent. The right lung presented marked signs of recent collapse towards its base. There were numerous patches of consolidation, much congested, scattered through its substance. About the middle of this lung the knife entered a cavity, about the size of a walnut, which was surrounded by broken-down lung-tissue, disorganised, with very offensive smell, as if in a state of gangrene. In both lungs many of the bloodvessels were observed to be obstructed by a white fibrinous substance, apparently undergoing softening. At no part could the original embolus be certainly traced. All other organs healthy.

Notes.—In this case the otitis was undoubtedly the exciting cause of the final illness. The diagnosis as to the nature of that illness was by no means clear. The initial rigor might, it is true, have suggested pyæmia; but with the exception of some very slight shivers the night before the patient died, there was no recurrence of this symptom. Moreover, although the temperature rose as high as 103·6°, it was not marked by any *sudden* rise or fall, and there was no excessive sweating. In favour of meningitis were the following features:—The attitude of the patient on admission (flexion of limbs, etc.), the photophobia, the hyperæsthesia, the headache, the pulse at first slow and subsequently rapid. Somewhat against this hypothesis was the *duration* of the illness (twenty-four days), with entire absence of paralysis of cranial nerves, the fact that vomiting only occurred once (viz., at the onset), and that sighing respiration was absent. With respect to the headache, it is worthy of note that, although the patient did complain spontaneously of pain, she said it was always there, and was throbbing in character. There were none of the piercing shrieks often heard in cases of meningitis. By the process of exclusion, and having regard to the old-standing otitis, cerebral abscess was strongly suspected. This suspicion was not confirmed at the post-mortem, and it is very difficult to explain the nervous symptoms observed during life. Cases of thrombosis of cerebral sinuses may be classified according as the thrombosis arises in connexion with inflammatory processes in the neighbourhood, or as associated with marasmic conditions. In the former group, von Dusch points out that the thrombus is generally limited to one sinus, is often considerably softened in the centre, is accompanied by meningitis or brain abscess, and is free from blood extravasations,—in all these respects differing from the latter group. The case under consideration agrees with the features of the first group, except in the absence of meningitis or brain abscess. It affords another illustration, if any were needed, of the extreme difficulty of diagnosing this form of disease. It would have been interesting to know the ophthalmoscopic appearances. In two cases which have come under observation there was extreme fulness of the retinal veins without any evidence of optic neuritis. Both these cases, however, belonged to von Dusch's second group, and the thrombosis was very extensive. The above observation did not suggest any diagnosis; but M. Bouchut has recorded a case in which, having observed a similar condition, he predicted thrombosis of the cerebral sinuses.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

DOUBLE OTITIS—MENINGITIS.

(Under the care of Dr. BARLOW.)

THOMAS Q., aged nineteen months, was brought to Great Ormond-street, as an out-patient, on January 23. He had been ailing for a fortnight, during that time being alternately irritable and drowsy. He had lain often in a "stupid sleep" during part of the day, and had "ground his teeth" at night.

He had been hot at times, and had vomited repeatedly, especially during the night. Some days he had seemed perfectly well, and had walked about and eaten a good meal. Now and then he had been observed to sigh. When he was brought to the out-patient room, his aspect, as well as the foregoing history, suggested, though not very positively, the diagnosis of tubercular meningitis. He lay on his mother's lap with his head retracted and his eyes closed. There was no squint, and the pupils were natural; his pulse was feeble and not rapid, but no intermission was detected; he had no retraction of the belly, and no tâche; there was no optic neuritis. Having ascertained that the child had not suffered from otorrhœa, I gave no further regard to the possibility of ear mischief. After the post-mortem, however, I learnt from his mother that he had frequently put his hand to his left ear, and that he had cried out when his ears were touched. The mother also recalled to memory that about four months before, the child had put his hand to his left ear, and seemed to be in pain for one day; but nothing more was observed. She was quite positive that at no time had there been any mattery discharge. The child was ordered one grain of iodide of potassium every hour, and he seemed after a week had elapsed decidedly brighter; but the improvement did not continue, and on February 6 he had a return of the vomiting, he was obstinately constipated, his head was again retracted, the pupils were equal, but there was occasional want of parallelism, and there was marked retraction of the belly. He now and then cried out in a short fretful way, but there were no shrill screams then or at any time. There was no change in the optic discs. He was a little better on the 9th, but on the 13th he died, *i.e.*, six weeks and two days after the day on which he was taken ill.

At the post-mortem, made by Dr. Lees and myself, there was considerable flattening of the convolutions and softening of brain-substance, with excess of almost clear fluid in the ventricles, which were dilated. The pia mater was greatly injected, but the most careful search failed to detect any grey granulations, and there was no lymph except for the distance of nearly a quarter of an inch round the sheath of the seventh nerve at its superficial origin. There was intense local hyperæmia of the pia mater over the left flocculus cerebelli and a little beyond it, for an extent of what would be covered by a sixpence. The presence of the lymph above referred to suggested the examination of the tympana. The membrana tympani on each side was intact, and the malleus was in contact. In each tympanic cavity there was about a quarter of a drachm of fluid; it had the consistence of exceedingly thin gum-water, and was quite colourless. We failed to find any bare bone or any suppuration in connexion with the temporal. The thoracic and abdominal viscera were healthy. There was no enlargement of lymphatic glands anywhere.

Remarks.—The occurrence of various forms of brain disease, subsequent to otitis and caries of the temporal bone, is well known; but the association of meningitis and otitis *without disease of the temporal* has been specially pointed out by Dr. Gee in a paper in the eighth volume of the *St. Bartholomew's Hospital Reports*. Three groups of cases are recorded—first, where symptoms of otitis precede those of meningitis; second, where symptoms of meningitis precede those of otitis; and third, where the symptoms of otitis are latent throughout. In my case the symptoms of otitis were as nearly as possible latent. It is of interest especially because the only sign of ear disease post-mortem was the "mucous accumulation." It is open to anybody to contend that in this case the meningitis was primary, and the otitis secondary. But idiopathic inflammation of the brain and its membranes is very rare, and double otitis during the first dentition is very common. It is to be noted that the child cut two teeth during his six weeks' illness; but their eruption appeared natural so far as local signs were concerned. There was no proof of any throat mischief. Whatever the cause of the "mucous accumulation," it seems reasonable to believe that on the left side it gave rise to inflammation along the sheath of the seventh nerve. This would have been more conclusive if the lymph could have been traced close up to the meatus internus; but the difficulty of establishing *continuity* of inflammation in ear disease with subsequent brain mischief is well known. Clinically, the case was more like tubercular meningitis than anything else; and post-mortem there was one character especially which the case had in common with that disease—viz., the extreme softening of brain-substance and the effusion into the ventricles.

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Medical Times and Gazette.

SATURDAY, APRIL 14, 1877.

THE ADMISSION OF WOMEN TO THE DEGREES IN MEDICINE OF THE UNIVERSITY OF LONDON.

Those who may have been surprised at the announcement that we made a fortnight ago, of the sudden resolution of the Senate of the University of London to admit women to their examinations for medical degrees, will be interested to learn certain details that have since transpired with respect to the proceedings on such a memorable occasion. It appears that the resolution to admit women was brought forward without previous notice of motion having been given, and that the members of the Senate who were opposed to the measure were completely taken by surprise. We cannot think that those who carried the resolution have much reason to congratulate themselves on this successful *coup*, except with respect to its result, for the cause cannot be in any way benefited or dignified by stratagems; and we are not surprised to hear that already the Senate has disapproved of the principle of its own action. At its meeting on March 28 the following resolution was passed:—"That no motion affecting the constitution or regulations of the University be decided on at any meeting of the Senate, unless notice shall have been previously given on the summons of the meeting, or unless the matter shall be declared urgent." Inasmuch as this resolution was carried against "the previous question," moved by the proposer of the motion for the admission of women, it was manifestly accepted by him as distinctly retrospective in its application—morally. It is not a little remarkable that such a regulation did not exist before in the University of London; and, perhaps, if it had existed the Senate might have been spared the somewhat humiliating steps of first passing a revolutionary measure, and then resolving within a few weeks "never to do the like again."

Meanwhile, the committee appointed to report on the regulations for the admission of women to degrees in medicine have presented their report. They recommend that women candidates shall have gone through the same course of study,

and shall pass the same examinations, as men—the examinations being always separately conducted. They then proceed further to recommend two special modifications—first, with respect to the places, order, and modes of study, and for exemption from the matriculation examination of women candidates who have either begun or finished their medical studies; and, secondly, for accepting foreign instead of English certificates of study. We commend the latter part of this report to the careful consideration, not only of members of the University of London, but of the whole profession, for there is hardly a single interest connected with medicine that it does not affect.

We understand that at this moment a memorial is being actively prepared by some of the medical graduates of the University, praying the Senate to reconsider its resolution. They naturally urge that, as medical members, they feel strongly that their degrees, *and no other*, should be thrown open to women, and to some women under considerably modified regulations.

WATER-SUPPLY.

It is now very generally admitted that the water-supply of many villages and rural parts is not only from its source very impure, but, being contaminated by surface drainage, is quite unfit for drinking purposes. Mr. Brown drew attention, in the House of Commons, on Friday, the 6th inst., to the need for some legislation, by way of amendment of the Public Health Act or otherwise, for the purpose of securing pure water for domestic purposes. It is calculated that upwards of 12,000,000 people reside in this country without any system of water-supply other than that derived from shallow wells, which are almost always, as the Rivers Pollution Commissioners have said, "horribly polluted by sewage and by animal matter." It is notorious that water which is highly polluted may be clear to the eye, palatable to the taste, and free from smell; and out of 142 inquiries instituted by the Local Government Board into the cause of local epidemics between the years 1870-1873, as many as 125 were attributed by the medical inspectors to polluted water. Mr. Brown referred to the outbreak of fever at Marylebone as directly traceable to the milk imported from the Chiltern Grove Farm, where typhoid fever was very prevalent in consequence of the well being polluted with sewage; as also to other instances, in Islington and elsewhere, in which contaminated well-water had been used in washing out the milk-cans, and thus the milk-supply had become also contaminated. Mr. Brown rightly considered a supply of pure water as necessary to health as that a house should not be overcrowded. Directions therefore should, he thought, be given that a house should not be allowed to be occupied by a tenant unless the medical officer of health certified that there was a sufficient quantity of good water within a reasonable distance, and that the local authority be required to make such provision. And in support of his argument he quoted the expression of the Commissioners in speaking of the pollution of drinking-waters, that "it is humiliating to reflect on the vast amount of premature death and misery which is thus carelessly permitted to exist in the midst of a civilised community." With regard to the pollution of rivers, Mr. Brown expressed a hope that a simpler tribunal of appeal would be found than the Court of Chancery, and desired that legislation instead of being permissive should be compulsory. He concluded by moving—"That it is desirable to confer on local authorities power to remedy existing evils with regard to water-supply." Mr. Cowen, in supporting the motion, remarked that the sewage of one village very often formed the drinking-water of the next; in wet weather the villagers get more water than sewage, and in dry weather more sewage than water. The same evil was found to prevail in many of the manufacturing districts. Mr. Sclater-Booth replied at considerable length, though hardly satisfactorily. He acknowledged that no words of his own could exaggerate the importance of a pure and plentiful water-supply, and feared that a good deal remained to be done before the matter could be placed in a perfectly satisfactory condition. But he thought that justice had scarcely been done to the effort lately made in this direction by Parliament and by local authorities. He explained that the report of the Rivers Pollution Commissioners referred to a state of things which existed at the time, but that before it was printed and circulated a great deal had been done to remedy the evil complained of, and much was still being done in the same direction. The new clause in the Public Health Act for compulsory closure of polluted wells had been in operation, with the happiest results. He admitted, however, that the owner was not obliged to supply water from another source, as it did not follow that he was responsible for its polluted state. The contamination of milk by the use of cans washed with polluted water was receiving the attention of the Local Government Board. Compulsory powers were vested in various departments of the Government; he was averse from exercising the full powers unless they were shown to be absolutely necessary. To put the Rivers Pollution Act of 1876 in full force would require further legislation. The local authorities would have to be strengthened when they had to deal with large rivers highly polluted by manufactories. The Act of last session specially applied to the upper parts of rivers whence unpolluted water could be drawn; and he thought it ought not to be difficult to compel the owners or occupiers of mines, who, by their lucrative operations, cut off the supply of water from districts, to replace that supply. The rural sanitary authorities had just the same powers of providing a supply of water as the urban sanitary authorities had. Why, therefore, he asked, should Parliament be committed to a more peremptory action in rural districts? The Bill now before the House of Lords would provide for the proper storage of water; and the Burials Bill, if passed, would prevent the pollution of water arising from neighbouring churchyards. He trusted that credit would be given to the Government and himself for not undervaluing the importance of the subject that had been brought forward, which was receiving their very careful consideration. On a division, Mr. Brown's proposal was lost by a majority of twenty-seven; but it is one the importance of which cannot possibly be exaggerated, and we will try to hope that the discussion provoked by Mr. Brown may be productive of some benefit. It may certainly be useful in drawing attention to powers that exist, but are not fully called into action.

HEALTH OF THE ARMY FOR THE YEAR 1875.

The Seventeenth Annual Report on the Health of the Army for the year 1875 has just been presented to Parliament. This Blue-book, as now compiled, is somewhat less bulky than it used to be, but its issue is still considerably in arrear of the report on the sister service for the same period, and it undoubtedly loses much of its interest from the fact that, in this fast-living epoch, the information contained in its pages refers to a comparatively remote time.

The average annual strength of the non-commissioned officers and men serving in the United Kingdom during the year under notice, calculated from the returns received, was 88,147; the admissions into hospital in this number were 73,279, being at the rate of 831·3 per 1000 of the strength; the average number of men in hospital daily throughout the year was 3568, being at the rate of 40·47 per 1000 of the strength; 783 deaths occurred amongst the men present with their corps, in addition to which 87 deaths occurred amongst

men detached. The death-rate in 1875 is therefore 9·36 per 1000 of the strength. These results show that the admission-rate is 9·4 lower, the constantly-sick-rate 1·88 higher, and the death-rate 0·57 per 1000 of the strength higher than the corresponding rates of the preceding year.

The creation of a number of brigade depôts in 1875 has involved the necessity of a new distribution of the different classes of stations, in which, for the comparison of the vital statistics of the troops, all garrisons in the United Kingdom have hitherto been grouped, and leads to a reconsideration of the principle on which such grouping was based. Heretofore all garrisons were arranged in eight groups—namely, seaports, dockyards and arsenals, camps, large manufacturing towns, London and Windsor, Dublin, and remaining stations. The collocation into groups was a matter of difficulty, as no exclusive characterising features were exhibited by any one of them; thus, some of the dockyards were also seaports, as were also some of the stations in the group of large manufacturing towns, whilst the group of remaining stations, numerically the most important of all, contained some seaports, manufacturing towns, and inland towns. The Report suggests that no grouping of stations can be devised the principle of which will not be open to objection; it is therefore thought to be preferable to take the existing military districts for contrast with each other as regards the health of the troops quartered in them: they afford geographical, topographical, and other differences likely to influence the results, and if these are constant, they may perhaps be useful for comparison with the evidence obtained in similar inquiries regarding the civil population. As regards the prevalence of disease, the highest rate, that of the Eastern District, is 426 per 1000 men in excess of the rate of the lowest, the Chatham District; and with the highest rate of prevalence of disease the highest death-rate is conjoined, in the Eastern—it exceeds the lowest, that of the Chatham District, by 7·97 per 1000 men, or more than double. There is no obvious reason for such dissimilar results in these two districts; both are on the east coast of England, and the difference of a few miles of latitude could not affect the conditions other than insignificantly. The influence of recent tropical service in raising the sick-rate of a district does not, in this instance, account for the unfavourable health results in the Eastern, as compared with those of the Chatham, and little importance belongs to such statistics for so short a time as one year.

The relative liability of soldiers of different ages to suffer from sickness is a matter of more than speculative interest; to determine it, returns have been obtained during the year which show the admissions into hospital, in relation to those attacked, amongst 81,457 of the non-commissioned officers and men serving in the United Kingdom. The results arrived at (taking the admissions into hospital as a basis) are in harmony with the ascertained results relating to the sickness of certain classes of the civil population. The highest rate of sickness is that of the group of ages under twenty, the same which gives the lowest rate of deaths; and the rate of sickness falls in each successive group of ages, whilst the rate of deaths regularly rises, until forty and upwards is reached; in this group (perhaps on account of the disturbing influence of invaliding which takes place at this age) the association of the lowest rate of sickness and the highest rate of deaths is broken, and a largely increased rate of sickness and the highest rate of deaths are found together.

Additional testimony is borne in this Report to the advantageous working of the Contagious Diseases Acts. As one instance, the Principal Medical Officer of the South-Eastern District states—"A general diminution of venereal affections, especially syphilis, has taken place, notably at Canterbury. I am of opinion that these Acts have a very beneficial effect on the health of the troops, and in this I am supported by the statements of most of the medical officers in the command." Whilst the medical officer in charge of the troops at Parkhurst reports that venereal diseases have caused a number of admissions to hospital, attributable, in his opinion, to the fact that the neighbouring town of Newport is without the operation of the Acts.

The proportion of recruits rejected was 19·78 per 1000 less than in the preceding year, the decrease being most marked in the Household Cavalry; as for the year 1874 the Foot Guards show the highest ratio of rejections, and the Cavalry of the Line the lowest. Syphilis, impaired constitution, muscular tenuity, defective vision, diseases of the heart and vessels, loss of teeth, hernia, varicocele, flat feet, and malformation of the chest and spine, were, as in 1874, the chief causes for rejection; and of these the proportions rejected for muscular tenuity, loss of teeth, and varicocele are higher, and for the remainder lower, than in the preceding year.

The reports from the different foreign stations present no particular features of interest, but it is noticeable that, in writing from St. Helena, Surgeon-Major Herbert states that small-pox has not visited that island within the memory of the oldest inhabitant. This officer repeats the opinion previously expressed by him, that the steepness of the hills, and the direct solar and radiated heat, make the climate a very trying one for Europeans, and that these causes tend to induce disorders of the heart and great vessels.

There is, as usual, an Appendix to the Report, which contains a Report on Hygiene for part of the year 1875, by Dr. de Chaumont; a paper on the Prevalence of Ague and Malaria at Tilbury Fort in connexion with the Source of Water-Supply, by Surgeon-Major Faught; a Special Report on Puchunorree, its Climate and Medical Topography, by Surgeon-Major Staples; the Medical Report of the Sunghie-Ujong Field Expedition, by Surgeon J. McNamara; and a paper on the Andaman Islands, by Surgeon-Major Hodder, M.B., etc.

THE WEEK.

TOPICS OF THE DAY.

It is somewhat remarkable that the official inquiry into the outbreak of scurvy in the late Arctic Expedition having now been concluded, the official journals and proceedings of the vessels have been made public in the form of a Blue-book containing nearly 500 pages. Besides the reports of Sir G. Nares and Captain Stephenson, the Blue-book contains the journals of the commanders of the various travelling and sledge parties, with many charts and maps showing the course taken, with rough sketches illustrating various points of interest. The price of this Blue-book—one guinea—is, however, unusually high.

Since the close of the Admiralty inquiry, Fleet Surgeon Thomas Colan, M.D., of the *Alert*, has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets, for his services in connexion with the recent Expedition. Dr. Colan already possesses medals for the Baltic, Chinese, and Ashantee campaigns, and it has been officially stated that the delay in his promotion was not due to any want of recognition of his services, but simply to the fact that there was no vacancy in the superior grade at an earlier date. This may have been the case, but as it would have been perfectly easy to make him a supernumerary Deputy Inspector it is more than probable that the Admiralty authorities awaited the result of the Commission of Inquiry, which completely exonerated him from any responsibility in the non-issue of lime-juice to the sledging parties, before bestowing on him a reward for his services. Dr. Colan's whole career has been a distinguished one; he was awarded the Blanc Gold Medal for his "Journal of the West Coast of Africa," 1872. The high praise he earned by his successful treatment of Commodore Commerell,

when so desperately wounded on the River Prah, will not have been forgotten. And he was especially promoted to the rank of Fleet Surgeon for his services during the Ashantee War. Dr. Colan is reported to be preparing for publication a journal of his professional experiences in the Polar Seas.

In Dorsetshire, as elsewhere, the rapid increase of insanity has lately been brought to notice. Mr. Floyer, M.P., presiding last week at the Dorset Quarter Sessions, mentioned that there were 364 county patients, and that such was the pressure of space in the two asylums that thirty lunatics from Hampshire had to be rejected. The old asylum at Forston, arranged for sixty patients, was originally intended to meet all the requirements of the county; but as a late magistrate, Mr. Gordon, had observed, if lunacy continued to increase as at present, the insane would be in the majority. The sum of £41,000 had been advanced by the Court for the Asylums; and towards this the Committee of Visitors had, from the profits of private patients and by economy in the management, repaid £10,000; but this satisfactory state of affairs, he was afraid, could not, under present circumstances, be continued.

At a meeting of the medical profession in the West of Scotland, which was held at Glasgow last week, it was resolved to petition in favour of Dr. Cameron's Habitual Drunkards Bill.

An inquest was held last week on the body of Mary Ann Nash, aged seventy-one years, who was found to have died of starvation in Bethnal-green. Her husband, a tailor, sixty-five years old, had latterly been too ill to work. Each received from the Cordwainers' Company a pension of £5, which would have been forfeited had they accepted assistance from the parish. The surgeon who made a post-mortem examination stated that he had never seen a worse case in his life, the deceased having been completely starved to death. A request was made by the jury to the Coroner to write to the Cordwainers' Company, urging them to alter their regulations, under which, in the present case, a family had been condemned to starve; and it is to be hoped that some modification will be made in a system, which, however reasonable it may have been a century ago, is clearly out of place in the present day.

The first inquiry which has been held in Ireland under the Artisans and Labourers' Dwellings Improvement Act, 1875, took place at Belfast last week. The Corporation are taking steps to put the Act in force regarding a section of the town which has been for a length of time in a very dilapidated and unhealthy state. The inquiry was conducted by Dr. Roughan, Local Government Board Inspector.

A well-merited sentence of twelve months' imprisonment was inflicted upon a woman at the recent Surrey Sessions for robbing a small-pox patient. It appeared from the evidence that the wife of the prosecutor—a labourer, of Bermondsey—was taken ill with small-pox, and the prisoner, a nurse, was called in to attend upon her. The prisoner was found to be wearing some of the clothing of her patient, upon which the clothing was given to her, and she was paid for her services and discharged. Subsequently it transpired that she had taken away a large quantity of wearing apparel, and pawned it at different pawnbrokers. The Chairman, in passing sentence, said it was a most cruel robbery, aggravated by the fact of the prisoner pawning articles which were infected; and it was stated in Court that one of the pawnbrokers' assistants had caught the disease in consequence.

The *Times of India* reports that nearly 3500 people died of virulent cholera in the Nundy-droog division of Mysore during the latter half of February last; and in the same locality 10,000 cattle were starved to death during the same period. From another source it is reported that the sanitary condition of Madras city continues bad, the death-rate during the last few weeks having been more than double the average.

On Saturday last, Mr. Cubitt Nichols concluded an inquiry respecting a scheme projected by the Commissioners of Sewers, for the improvement of what is described as the Golden-lane area. A great deal of evidence was adduced, and Dr. Sedgwick Saunders, Medical Officer of Health for the City, was examined as to the condition of the locality. Speaking of a survey he had made of the property, he said the houses were generally bad, with two exceptions; their condition was very defective, they were overcrowded, unfit for human habitation, as a rule, and showed an excessive amount of sickness. The diseases incidental to them were of the zymotic class, and the mortality among young children excessive. In sixteen houses there were 265 persons living. As a rule there was no ventilation at the back, and many of the houses were rotten, some of them having been built on the ground level. At the end of a place called Denmark-court there were eight public water-closets, the court itself being a *cul de sac*. The tenants were of a very dirty class, the houses dilapidated, and the same character of diseases prevailed. Dr. Saunders added that he was quite sure the neighbourhood in question could not be satisfactorily dealt with in any other mode than that indicated by the scheme under consideration. In the interests of sanitation it is unsatisfactory to be obliged to record that a large amount of local opposition has been brought to bear against the present scheme, a deputation to oppose it having attended from St. Luke's district, accompanied by the vestry clerk and the surveyor of the parish. Mr. Nichols has, however, intimated his intention of making a personal survey of the various localities referred to, before presenting his report, and he will thus be in a position to estimate at its just value the evidence for and against which the inquiry has elicited.

It would appear that the question of the Richmond water-supply is not yet satisfactorily settled. The inconvenience caused by the scarcity of water in the town has been felt more or less severely up to the present time. Notwithstanding the efforts made by the Water Committee of the Vestry since the cutting off of the supply by the Southwark and Vauxhall Company, complaints are still being made by a considerable section of the inhabitants of the inadequate allowance afforded to them. A few days since the Water Company offered to give a supply in bulk, pumping it into the Vestry reservoir as a temporary means of meeting the difficulty and appeasing the alarm naturally felt at the probability of a short allowance during the approaching hot weather. The Vestry, however, do not seem inclined to accept the offer, as the works at the great artesian boring are going on satisfactorily, and they assert that there is in the reservoir at the present time a store of above a quarter of a million gallons. Having regard to the temporary nature of the supply at present, the Committee have obtained permission from the Thames Conservancy to take any quantity of water they may desire from the river. Temporary works are to be erected to insure adequate filtration, but there is a strong feeling in the town against so tainted a source of supply. The water at present provided has been pronounced by competent medical authorities to be of fair quality, and disease is not prevalent. The great well has been sunk through the London and plastic clay into the sand, where water has been reached. The engineers propose to go 250 feet deeper—150 feet into the chalk strata.

A remarkable proof of the efficacy of vaccination is shown by a report just issued by Dr. A. T. Brett, Medical Officer of the Watford Rural Sanitary Authority. Small-pox attacked a family, nine in number, residing at Bushey; three of these were vaccinated, and six unvaccinated. All six of the unvaccinated persons took the disease, and four died; while the three that had been vaccinated escaped altogether—one of the three

being a child at the breast fed by its mother within two hours of her death.

The attention of the City Commissioners of Sewers having been directed to the great want of a proper inquest-room within the City of London, the Medical Officer of Health has made inquiries, and on a report from that gentleman the Commissioners have determined to provide the required accommodation at as early a date as possible.

THE TREATMENT OF SYPHILIS WITH SUBCUTANEOUS INJECTIONS OF CORROSIVE SUBLIMATE.

In the *Berliner Klin. Woehenschrift*, No. 45, 1876, Professor G. Lewin, of Berlin, makes a most excellent statistical answer to objections that have been offered to his method of introducing mercury into the system subcutaneously. Since 1865—that is to say, for the last eleven years—all cases of constitutional syphilis, with very few exceptions, have been treated by his method. The number of cases in each year has amounted to from 1200 to 1300, and each patient on the average has received twenty-five injections, so that altogether about 14,000 patients have been treated. Out of this vast number only about twenty patients suffered from abscesses at the seat of injection. During the same period of eleven years, Professor Lewin has personally treated about 1500 patients at the Charité Hospital, and a similar number of private patients, with sublimate injections, and in only one or two cases did abscesses occur. All the abscesses terminated favourably, without any serious inflammatory symptoms or anything in the shape of gangrene; and none of the patients were obliged to keep their beds on account of them. These facts prove that if proper precautions be taken in injecting the sublimate, and the instructions which Professor Lewin has given in his work on the subject (of which, by-the-bye, there is an English translation) be accurately followed, the objections which have been made to the subcutaneous use of corrosive sublimate on the score of abscesses practically disappear. As a proof of the special value of his method in the treatment of syphilis, Dr. Lewin further brings forward the following facts:—1. From 1855 to 1865 the average stay in hospital of his syphilitic patients was ten weeks; since 1865 it has only been four weeks. 2. Under the old methods of treatment (mercury and sarsaparilla internally), nearly 80 per cent. of the cases relapsed; since 1865 the number has fallen to 40 per cent., or just to half. 3. The *quality* of the relapses since the introduction of sublimate injections at the Charité Hospital has become much milder, as is proved by the complete disappearance from the wards of the severest forms of general specific eruptions, as also by the rarity of visceral syphilis in the wards under the care of other members of the staff. The importance of these facts will be best estimated by remembering that there is but a single Lock Hospital in Berlin, and that this is under Professor Lewin's care; so that his statements apply to the whole lower class of the syphilitic population of that city. In agreement with other experienced syphilologists, Professor Lewin insists that the mercurial treatment to be effectual shall be continued, with periodical intervals of suspension, for at least a year.

THE HEALTH OF LONDON.

The annual death-rate from all causes in London, which had been equal to 26·6 and 30·3 in the two preceding weeks, declined to 28·4 in the week ending April 7. To the seven principal diseases of the zymotic class 253 deaths were referred, against 201 and 243 in the two preceding weeks. The increase last week seems to have been due to whooping-cough, for the 69 fatal cases of that disease show a considerable increase upon the numbers of late; the mortality was, proportionately, largest in North London, where 10 deaths were referred to that disease in Islington, 8 in St. Pancras, and 5 in Marylebone. The deaths from small-pox, which had been 76 and 86 in the two previous weeks, were 78 last week, of which 37 were certified as unvaccinated, 15 as vaccinated, and 26 were "not stated" as to vaccination. The 78 included 44 which were recorded in the Metropolitan Asylums Hospitals, and 6 in the Highgate Small-pox Hospital; the remaining 28 cases occurred in private dwellings. The fatal cases showed a decline in North and East London, whereas they had increased in West and South London. The Metropolitan Asylum District Hospitals contained 956 small-pox patients on Saturday last, including 35 convalescents at Limehouse, against 938 and 988 at the end of the two preceding weeks. The number of new cases admitted during the week was 209, against 228 in the previous week. The deaths referred to diseases of the respiratory organs, which in the six preceding weeks had steadily increased from 303 to 645, declined to 554 last week, but exceeded the corrected weekly average by 172; 366 resulted from bronchitis and 131 from pneumonia.

A CONTRIBUTION TO THE DIAGNOSIS OF OVARIAN DISEASE.

A short essay lately published by Professor Guido Baccelli, of Rome, deals with the percussion of the ilium as an aid to the diagnosis (1) of simple ovaritis, (2) of a commencing ovarian tumour, and (3) of the side of origin (right or left) of a large ovarian tumour whose early stages are unknown. Percussion of the diaphysis of the ilium, according to the author, gives rise to acute pain in simple ovaritis unaccompanied by diffuse peritoneal inflammation. An ovarian tumour gives rise to marked dulness on the side on which it is situated, while there is clear tympanic resonance on the side of the healthy ovary. Thus, if the left ovary be enlarged, there is dulness over the left ilium, and resonance over the right; and *viee versâ*. The rules to be adopted in percussing are as follows:—The patient must lie on her side, with the legs drawn up, and the thigh which is uppermost adducted and pressed towards the abdomen, so as to place that part of the diaphysis of the ilium which lies below the centre of the insertion of the gluteus medius muscle in the position best adapted for percussion. The exact point of the external surface of the ilium to be percussed is a little below the centre of a straight line drawn from the posterior-superior border of the iliac crest to the upper edge of the acetabulum. Taking the average length of this line as ten centimetres, the point to be percussed lies between five and six centimetres below the posterior edge of the crista ilii. It is necessary to percuss forcibly, and it is better to use a pleximeter and a hammer than the fingers only. The two sides must of course be percussed at identical spots. The practical value of this method is illustrated in the essay before us by two or three striking cases, in which it was most successfully applied to clinch a doubtful diagnosis; and we are assured by Professor Baccelli that these are not the only ones in which it has stood him in good stead.

MEETING OF THE METROPOLITAN ASYLUMS BOARD.

The first meeting of the Metropolitan Asylums Board was held on Saturday last at Spring-gardens, Dr. Brewer, who had been re-elected as chairman, presiding. Letters were read from the vestries and medical officers of health of the metropolis, upon the subject of a Board being formed with power to treat all cases of fever and small-pox, whether of the pauper or non-pauper classes. A circular had been issued to these local authorities, asking for opinions on these subjects, and also inquiring if it was advisable that the powers of the Sanitary Acts should be conferred upon such proposed Board. Some of the vestries considered that the proposed Board for the treatment of the non-pauper class should not be under a department of the Poor-law, but under the Sanitary Acts. St. Pancras reported against the powers of the Sanitary Acts being conferred upon the proposed Board, considering that the

local authorities should be left in the exercise of these powers. The majority of the vestries were in favour of such central authority being formed, but some—the Limehouse and the Poplar Boards—objected. Colonel Radcliffe presented the report of the Hampstead Asylum, showing that during the past fortnight 135 cases had been admitted, 116 had been discharged recovered, and 29 had died; leaving 269 under treatment. With regard to Limehouse, Mr. Barringer reported that no patients had of late been sent, and of 83 who were there a fortnight ago, 48 had been discharged.

CUMBERLAND AND WESTMORELAND LUNATIC ASYLUM.

A PERUSAL of the Fifteenth Annual Report of the Cumberland and Westmoreland Lunatic Asylum for the year 1876 shows that—first, the institution is conducted in a very careful manner; secondly, these counties form no exception to the general rule that insanity is apparently rapidly increasing all over the country, though it is to be remembered that the reality of the increase is by no means yet proved. Thus, in addition to 421 patients in the asylum at Garlands, twenty-two cases belonging to the two counties are boarded out for want of accommodation. Dr. J. A. Campbell, the Medical Superintendent, in his very careful report, throws out some hints as to the reason for the present overcrowded state of the building. He says—"Fifteen of the patients admitted were Irish, and several had but recently come to this country. I firmly believe if the patients were as comfortably kept in the Irish district asylums as they are in the English county asylums, the asylums on the west coast of England would not require such frequent enlargements. The Whitehaven Union also, which probably contains the largest mining population of any union in this county, sent fewer patients into the Asylum during the past year than it has sent for two years previously; and I consider this partly, if not altogether, due to the reduction in wages which has taken place. A sudden great rise of wages to a class with no thought for the future, and no tastes beyond physical ones, seems simply in many to give means for expenditure in excesses which increase insanity." The weekly cost for maintenance at Garlands during the quarter of 1876 was at the rate of 10s. 6d. per head.

OUR CANAL POPULATION.

SOME revolting revelations, disclosing the unhealthy and immoral practice of overcrowding in canal-boats, transpired before the Cheshire Coroner, at Runcorn, on Monday last. An inquest was held on an infant, five weeks old, found dead in a boat's cabin. The child had been overlain, and the mother stated that three children, her husband, and herself slept in what was called "the cabin"—a hole measuring three feet and a half in width, and about three feet in height. Another witness deposed that this cabin was much larger than many; she had borne ten children in her cabin, six of whom, with herself and husband, had lived in it. These boats are known as "narrow boats," trading between London and Liverpool, and are constructed to go through narrow canals. There is no window in the cabin, and it was stated to be the practice to shut the only aperture at night, thus excluding air. Dr. McDougall considered it wonderful that even the parents themselves lived. A juryman said he knew a case of six in family, one of whom had small-pox, all living and sleeping in the same cabin. The jury returned a verdict of "Found dead," expressed their disgust at the prevailing practice, and hoped that the Legislature would do something to terminate so disgraceful a system.

LATTER-DAY MIRACLES.

A REMARKABLE story, illustrating a supposed tenacity of life, has lately been made public. It is hardly necessary to say that America is the scene of this last wonder. The *Chicago Inter-Ocean*, dated March 15, says:—"About three weeks ago, Jonas Nelson, a lumberman, while working in the woods on the Upper Mississippi, was crushed beneath a falling tree, and, after suffering several days, died. His comrades placed his body in a rude pine box, and forwarded it to his friends. It was over a week before the body arrived at its destination; at the same time the weather was quite cold. The remains were taken to the residence of John Peterson, where for two or three days they were visited by friends. Finally, one who had not yet seen the body called, and, after examining it for some moments, exclaimed, 'Why, Jonas is not dead!' Those who heard him were astounded at this remark, which seemed incredible, but efforts were made to resuscitate the body by placing it in bed and imparting warmth to it. After a time, colour began to show itself in the cheeks, and, shortly after, his eyes opened. A bystander asked the reviving man, 'Nelson, are you cold?' Without moving, but fixing his eyes on the questioner, he answered, 'Yes.' The exertions to restore him were redoubled, and his condition since has been gradually improving. These are facts—that a man who has been apparently dead for two weeks, and must have been frozen in transit to this city, has come back alive."

MEDICAL SOCIETY OF LONDON.

AT a meeting of the Council, held on Monday, the 9th inst., Mr. Francis Mason, F.R.C.S., Surgeon and Lecturer on Anatomy at St. Thomas's Hospital, was unanimously elected Lettsomian Professor during the next session. Mr. Mason will probably select as the subject of his lectures "The Surgery of the Face, Mouth, and Throat."

MEDICAL PARLIAMENTARY AFFAIRS.

Public Health.—The consolidation clauses proposed by Sir M. H. Beach, for amending the Irish Public Health Act, were introduced and read a second time on Thursday, April 5, without debate.

Water-Supply.—On Friday, Mr. Brown called the attention of the Government to the state of the water-supply, a notice of which will be found elsewhere in our columns.

Factories and Workshops.—The Factories and Workshops Law Consolidation Bill was introduced by Mr. Cross, and read a first time.

Sanitary Condition of Portsmouth.—The Governmental inquiry into the sanitary condition of Portsmouth, conducted by Dr. Thorne, showed, Mr. Sclater-Booth said, that there had been no actual spread of scarlet fever in Portsmouth in consequence of the practice of tailors making clothes in their own homes. Dr. Thorne, in his report, recommended the authorities to provide further accommodation for the isolation of patients in the early stages of the disease. Mr. Sclater-Booth did not at present see the necessity for taking any further steps in the matter.

Cattle Plague.—Some of the details connected with the recent outbreak of cattle plague at Willesden were given by Lord Sandon on Tuesday in the House of Commons. The Middlesex local authority have stopped all movements of cattle within the county, and have prohibited the holding of any fairs or markets. Lord Sandon contradicted the report of an outbreak of the disease at Kirklington, in Oxfordshire. On Thursday, Lord Sandon moved for a Select Committee to inquire into the causes of the recent outbreak of cattle plague, and the measures taken for its repression; as also into the effect which the importation of live stock has upon the introduction of disease into this country, and how far such importation is essential to the food-supply of the country. In the report of the Committee of Supply the vote to complete the sum of £33,719 for the Privy Council Office and subordinate departments was challenged by Mr. J. Barclay, who said that a large portion of the very many statistics issued by the department were of no value whatever. He doubted whether the inspection of foreign cattle had been sufficiently strict, and hoped that in future the department would be administered with more vigour. Viscount Sandon alluded to the death of Dr. Williams, who had worked very hard for the department, and invited suggestions for the better management of the department. Mr. Barclay concluded by asking for a report from the Veterinary Department, in order that it might be ascertained how cattle plague was introduced into this country. This request being agreed to, the vote was passed.

Medical Service in India.—Dr. Playfair referred to paragraph 25 of the Indian Code of the British Medical Department, which requires that an executive medical officer shall have served as a surgeon for three years with a European regiment in India before qualifying for an administrative appointment. Mr. Hardy replied that the law in question was not made general until the issue of the Warrant in 1876. In 1867 it was necesary to pass over sixty or seventy officers to obtain the requisite number for India who had the qualifying service. Certain medical administrative officers now hold appointments who have not complied with paragraph 25; some of those passed over in 1867 were promoted to administrative appointments at home and in the colonies. The effect of this was that it gave some men long tropical service, and others an undue amount of home service. One system of promotion—viz., by selection—was therefore established last year with the obligation of three years' Indian service. This does not set aside the condition of paragraph 16, which prescribes ability and merit as qualifications as opposed to seniority. Other grounds for non-selection are ill-health, inability to perform tropical service, etc.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

LYMPHOGENIC DIATHESIS.

Preamble—Principles of Study and of Teaching—Importance and Application of Physiological Analysis—Basis for Pathogenic Analysis—Necessity for General Study.

History of a Patient suffering from Multiple Glandular Tumours—Superficial Tumours—Diagnosis of Deep Tumours—Nosological Diagnosis—Exclusion of Ordinary Diatheses—Conclusion—Spontaneous and Diffuse Glandular Hyperplasia.

GENTLEMEN,—In resuming to-day my lectures on Clinical Medicine, I have to remind you of the principles upon which my method of study and teaching is based. These principles are two in number, but the second is so entirely the necessary consequence, the logical sequel, of the first, that in very truth they can hardly be separated.

Physiological and pathogenic analysis, applied to the interpretation of morbid phenomena, is the fundamental principle. Gentlemen, there is not a single act of normal organic life which is the result of one distinct and indivisible condition; all those phenomena which appear to you the direct and immediate effects of a single process, are in reality the final expression of a series of separate operations, which are, however, closely united by an unalterable interdependence. Take, for example, so apparently simple a case as the expansion of the chest during inspiration: what complex conditions must be successively attained for the final accomplishment of that movement! A peculiar state of the blood, itself the result of many causes, must set in action the automatism of the respiratory centre in the medulla; this centre must be in a condition to respond to the impression received; the motor nerves, the agents for transmitting the impression from the medulla, must be able to conduct the motor impulse to the muscles; these muscles, the instruments of execution, must possess intact the property of contractility, which enables them to respond to the transmitted impression; finally, all this being supposed to be perfect, there must moreover be no obstacle, either within or without the chest which can hinder the accomplishment of the duly organised movement. Then only does the expansion of the chest present itself to us with its normal characters. Do you wish for another instance? Look at the urinary secretion, and consider with me the numerous and varied physiological acts which a normal state of that secretion involves; the integrity of digestion, of assimilation, and of interstitial combustion; the regularity of the heart's action, and of the pulmonal circulation, both arterial and venous; the normal constitution of the kidneys; the integrity of the excretory apparatus and the nervous organisation which controls its action;—all you have, probably with some omissions, the series of mutually dependent conditions which insure this result: the emission of normal urine. I could multiply these instances, but what would be the use? There is no physiological act which is not susceptible of a similar analysis, or which can escape such a scrutiny.

You see, then, that it would be an utter mistake simply to treat functions synthetically, and to regard their component parts as simple and elementary facts. This error, too common in medicine, is not committed in physiology, and the astonishing advance of that science is wholly due to a rigorous analysis, pushed sometimes even to subtilty, and to the attentive study of the various conditions upon which the regular accomplishment of the functional processes is dependent.

Then, gentlemen, morbid phenomena or symptoms, whether they result from structural lesions or not, are, in the end, only disorders of function. These disorders express the functional behaviour of the organism in a state of disease, as the normal acts represent its functional behaviour in a state of health; whence it results that every physiological act has its counterpart in pathology, and the necessity for an analytical examination is not less imperious in the latter case than in the former. The reason is discovered by the simplest logic.

If the normal act—a disturbance of which is expressed by a pathological phenomenon—only needs a single operation for its accomplishment, it is clear that the symptom would always have the same significance—it would constantly denote the perversion of one and the same physiological condition. But, since it is not so,—since the normal act depends upon the regular and consecutive execution of several operations,—there are necessarily as many forms of the symptom as there are distinct operations; for each of these intermediate processes may be alone disturbed, and may in its turn ultimately give rise to disorder of function.

This being so, there is but one way of arriving at the correct interpretation of a symptom:—(1) To ascertain every possible origin or pathogenic condition of the phenomenon; (2) to determine the differential characters presented, according to the varying conditions which give rise to it; and finally, to deduce from these characters the source of the symptom itself.

To arrive at the first stage in this inquiry, you can be guided only by physiological and pathogenic analysis, which, indeed, involves the whole range of medical science. To attain the second, you have observation of morbid actions and experimental pathology, which in many instances confirms the facts of pathogeny. In this way, gentlemen, and this only, can a scientific semeiology be founded, not less helpful in diagnosis and prognosis than in therapeutics—a result, you will agree, which is specially desirable on this account: that semeiology, the science of signs, is the most solid basis for clinical work.

Although incomplete, I hope these considerations will give you an idea of the necessity and importance of my first principle. I now come to the second, its indispensable complement, without which any method is incomplete, remains unfruitful, and leads to error. Since observation must be followed up by an interpretation of the signs and symptoms, laying under contribution every branch of medical science, the clinical student, needless to say, ought to be in possession of adequate and just ideas; and to fulfil this most important condition, he must widen as far as possible the circle of his studies, and make good use of the publications of all countries. Research and progress do not belong exclusively to one nation. Far from that being the case, history teaches that the home of the sciences is being continually changed. When any people, worn out by long and difficult labours, breaks down and comes to a stand, another rises by its side to take up the work already commenced, and follow it out with new vigour. To limit one's views, then, to one's own immediate neighbourhood, and to neglect writings from more distant sources, is to be disarmed—annihilated.

By thus limiting the sources of information, there is speedily brought about, owing to the want of comparison, a self-sufficiency engendering passiveness, and ending in ignorance, the fruitful source of all that is contemptible. What does it matter as to the country whence the publications issue, if they do but contribute to a common end, the advancement of science and art? Do you inquire the source of a piece of gold or silver? No; you simply employ means to be assured as to its precise value. Well then, gentlemen, individual publications are the wealth and currency of science; and if you do not wish to be impoverished, you must receive all, being free to accord to each its real, which is not always its nominal value.

Since our national misfortunes, of which one of the greatest causes was ignorance, some men, influenced perhaps by a not

unworthy sentiment, unmindful of the inevitable result, have proposed to break off all scientific relations with hostile countries—a strange mistake, a singular revenge, which would fall upon us equally with the learned men of Germany. Do not make such a blunder, gentlemen ; do not suffer yourselves to be led astray by a blind sentimentalism. "Hold and gain" (*conserver et acquérir*) is, in my judgment, the motto of science ; and if I mistake not it is also that of politics, and in that region I see no room for questions of sentiment.

The artificial barriers which for a long time separated workers, just as the territories themselves were separated, have at last fallen. Do you desire to raise them again ? Above political frontiers, of which it knows nothing, science constitutes a kingdom of its own (*état unique*), of which the limits are those of the civilised world itself. The sun never sets upon that domain. Do you seek to narrow the boundaries of that kingdom ? Do you wish by premeditated isolation to compromise the progress already made ? No ! To be always and everywhere gathering is our duty as well as our interest. A cosmopolitan science is my principle.

Do not look upon that word—pretentious as it may be in its appearance—either as a hyperbole or a metaphor; it is an expression of the absolute fact. A few examples will be sufficient to convince you of this.

To study the anatomy of the marrow of bone, to understand its relation with hæmatopoiesis and the leukæmic alterations in the blood, consult the best works on the subject, appeal to France, to England, to Germany,—you will not attain your end if you are unaware of the memoirs by Bizzozero of Pavia.

Do you wish to ascertain the state of that department of science which treats of the primordial cell and cellular theories, —collect together the most justly renowned publications on subject, give to their study untiring zeal, and at the end of all you will be imperfectly informed if you have omitted the Italian memoir of A. Visconti upon automotor corpuscles.

Make yourselves thoroughly masters of the innumerable researches to which glycogenesis has given rise. You will know little of the question, or rather you will know it amiss, if you neglect the English writings of Pavy.

Set yourselves to study typhoid fever. Press into your service both the older works and the writings of our own day. Your knowledge will remain imperfect if you overlook the researches made in Bohemia and Saxony by Hamernjk and Wagner on the gastric and extra-intestinal lesions of the disease.

Seek to learn the history of epidemic cerebro-spinal meningitis. I defy you to know it thoroughly if you omit the observations made by the American physicians.

France, England, and America have produced invaluable publications upon the subject of medical electricity. For all that you will not be well informed on the subject if you are ignorant of Remak and Benedikt.

Three years ago, two English physicians, Day and Wilmot, proposed to treat diabetes by the administration of peroxide of hydrogen, dissolved either in water or in ether, in which latter case the compound takes the name of ozonic ether. Well, in England, where that mode of treatment was first suggested, you will only find, in reference to it, contradictory statements, which do not help you to come to any conclusion, and the only observations which can throw light on the value of that remedy are some made specially upon the subject during the following year by physicians at Copenhagen.

Regard this, then, as certain. No province in the empire of science is unprofitable ; each is fruitful in its own sphere. Not one can be relinquished without danger. Just as a knowledge of the writings of others is imperfect, so the gravest errors as to men and things are formulated with imperturbable assurance. That this is so is proved by the event ; and there are, unhappily, printed proofs of the danger of these rash attempts. After all, the principle which I am defending is not special to medicine,—it is of the order of things. Who would dare to pretend to undertake the solution of a question, without being in possession of all the data of the problem at the outset ?

To sum up : physiological analysis, world-wide study,—such is the method which, for twelve years, I have proposed, applied, and defended. I have had the satisfaction of seeing it followed with a readiness which is a proof of its superiority ; but I have no wish to hide from you that it meets with an unforeseen obstacle in its course. Like everything which interferes with routine, the method has its opponents, who declare it to be incompatible with clinical observation and judgment. "These wise physicians," say they, "are deeply learned, but they are not clinical workers." The objection is a grave one. I do not wish to suspect motives, still less to ask if, by chance, it takes its origin from sheer weakness, well known to our fabulist. No; I take the reproach seriously, and admit that these opponents, in perfect good faith, have sincere misgivings with reference to the constant admixture of physiology and science with clinical work. This being so, I will respectfully call their attention to the fact that there is no more sense in neglecting contemporary writings than those of our predecessors; that it is perhaps dangerous to substitute for general science the medicine of a parish or a district; and that in no sphere is ignorance a condition of success. Then I will ask them if they really believe it useful to restrict clinical work to the empirical observation of phenomena, and to divorce them from their causes. Afterwards, I will remind them that the analytical method and general studies are the surest means towards the advance of semeiology, which, in its turn, is the most powerful weapon of the clinical worker. And lastly, for fear of their suspecting this conclusion to be an interested one, I will repeat to them this expression of Boerhaave—"I should prefer a physician who, ignorant of all else, knew symptomatology, to one who, knowing everything beside, was ignorant of that."

I trust these honoured critics will be satisfied with this answer, and that, being better informed, they will feel emancipated from their painful anxiety on behalf of the interests of clinical medicine, which for myself, as for them and for all of us, are the grand aim of our effort and study.

I come now to our patients.

There is lying in St. Jerome ward a man, aged thirty-eight, whose external aspect is unlike that of the ordinary occupants of the wards of a hospital. In fact, only taking into account the expression of his features, the hue of his complexion, and the liveliness of his appearance, it is difficult to realise that that man is labouring under a hopelessly fatal malady, whose duration may be variable, but against whose issue nothing can avail.

The earliest indication of this disease dates back nine or ten years; it made its appearance at that time in the form of a tumour in the right axilla, at the outer border of the pectoralis major, and it then seemed that the lesion was about to become general at the very outset. A similar swelling appeared in the corresponding region of the other side, but by a most curious anomaly the process, instead of spreading, died out on the spot ; the secondary tumour receded until it disappeared altogether, and for nine years the mischief was limited to the original tumour in the right axilla. The generalisation was none the less inevitable because it was postponed, and from the month of January in the present year it has made up for its check at the outset by the rapidity of its diffusion. The patient now (December 9, 1871) is in the following condition : —The original axillary tumour has reached the size of a man's fist; it is evidently formed by a conglomeration of several lymphatic glands, each of them enlarged; behind this superficial mass is a layer of deep tumours which fill the axilla, but these remain isolated, independent of each other, each being a single swollen lymphatic gland. There is no large tumour in the left axilla ; there is simply a number of glands decidedly enlarged, and which are continuous, behind the pectoral muscles and the clavicle, with a chain of similar tumours in the neck, extending from the great cornu of the hyoid bone to the insertion of the sterno-mastoid, beyond which the finger cannot follow it. The chain of cervical glands exists on both sides, but the glands are larger on the left than on the right, so that in that respect a kind of balance is struck between the axillary and cervical regions. The inguinal glands on both sides are implicated, but not in the same way. On the right they are affected singly, and present a development which is inconsiderable as compared with that of the cervical glands ; on the left, the crural glands, properly so called—those which lie below the crural arch—remain equally distinct, and the enlargement is moderate in extent ; but above Poupart's ligament the glands are again massed together into a tumour nearly one-half the size of that in the axilla, which extends into the abdomen as far as the fingers can follow it. There is no marked enlargement of the glands in the popliteal spaces, above the inner condyle of the humeri, or in the mastoid and occipital regions.

From this examination we arrive at our first conclusion without any difficulty. Our patient is affected with multiple glandular tumours, and the fact that there is no local irritation to account for their diffusion points to a lesion in itself

susceptible of generalisation; in other words, a malignant process, in the sense that contemporary histologists attach to that term.

In this predicament, gentlemen, we have a double diagnosis to make; and do not forget that there is the same need in every case of the kind—a topographical diagnosis, or question of seat; a nosological diagnosis, or question of nature. This is the double problem to be solved. The first is, without doubt, the more important—at least, from a practical point of view. Seeing the patient's actual condition, and how he still presents all the appearances of health, you are quite certain that, whatever be the *nature* of his tumours, he is in no immediate danger. It is quite otherwise with regard to the question of *seat*, for, according to the answer you get to that question, you may be led to modify the prognosis entirely, and to recognise the imminence of formidable complications. It is advisable, therefore, to inquire first of all as to the actual topography of these morbid products, and to seek to discover whether the deep glands which escape examination are implicated as well as the corresponding superficial ones.

In the absence of information derived from direct palpation, a strong presumption tends to establish the existence of internal tumours. The plain fact that the glandular system at the periphery is involved in the greatest part of its extent, renders at once the participation of the deep glands exceedingly probable. Besides, if you examine the patient's lower extremities you will see that the trunks and principal branches of the two saphenous veins present an unnatural fulness, which can only be caused by some obstacle to the flow of blood in the deeper parts. Further, as the enlargement of the crural glands, properly so-called, is slighter than that of the rest, it is not possible to attribute that obstacle to compression of the femoral veins themselves, and we are thus led to surmise that the obstruction is in the external iliac veins, and that the ileo-pelvic glands, which run in a chain along the internal borders of the iliac fossæ, are themselves, too, increased in volume, and that on both sides, although direct examination only reveals an inguino-iliac tumour on the left. For the rest, we have only to deal with a partial obstruction, a very slight compression, for the complementary veins are far from being developed to their greatest extent, and, moreover, there is no trace of œdema of the limbs.

The abdomen of the patient is markedly prominent, and for all that there is no ascites; that is a point upon which percussion and palpation leave not the slightest doubt. It is true that the spleen is increased in size, inasmuch as it measures four inches and three-quarters to five inches (twelve to thirteen centimetres) vertically; and it is also true that the liver, slightly pushed down, passes about the breadth of two fingers beyond the edge of the ribs, in the line of the nipple. But these phenomena, which it is important not to overlook, will not account for the general prominence of the abdomen, the maximum of which corresponds to the umbilical and hypogastric regions. I am thus driven to the conclusion that the retro-peritoneal and mesenteric glands are enlarged: but as there is neither ascites nor œdema of the lower limbs, I think these glands remain up to the present time isolated, and do not form a conglomerated mass like that in the axilla—in which case, indeed, it would scarcely be possible for both the mesenteric veins and the vena cava to escape compression, and you would have either peritoneal effusion, or œdema of the limbs. Yet though the flow of the blood in the portal system is not sufficiently interfered with to produce ascites, it is nevertheless not entirely free: on each side of the median line in the hypogastric region, along two lines which correspond pretty closely to the external borders of the recti muscles, you can see two venous trunks, the volume of each of which is at least equal to that of a good-sized quill; in these vessels the blood circulates from above downwards, as one may satisfy oneself by metodical pressure, and by watching the manner in which the vein refills when the pressure is removed. With these characters, these veins belong, without doubt, to the complementary network which makes its appearance in the abdominal wall in cases of portal obstruction; their presence reveals, then, some impediment in that vascular territory, at the same time that the very moderate development of the complementary veins shows that the permeability of the normal vessels is not seriously compromised.

Generally there is no need of these indirect signs in order to determine the condition of the mesenteric glands; by means of deep palpation while the patient is lying with the knees strongly flexed, and taking a full breath with the mouth kept open, the suspected glands can be reached, and their swollen condition clearly made out. Here that resource is not open to us; the resistance of the abdominal wall is so great that it is impossible to depress it sufficiently to reach the deeper parts: we must, therefore, be content with presumptions and indirect proofs furnished by the signs of slight pressure within the abdomen.

Of all questions bearing on topographical diagnosis, the most important in a case of this kind is that which relates to the intra-thoracic glands, on account of the more or less rapid asphyxia produced by their enlargement. Now, in our patient, the chains of cervical glands reach as low as it is possible to follow them, and it would be an altogether gratuitous assumption to suppose that they suddenly cease at that point. Even in the way of hypothesis, however, the assertion is impossible here, for when the patient is made to cough, tumours are seen to emerge from behind the clavicles and sterno-mastoids, which, in a state of rest, escape from view and are beyond reach. This proves, too, that the glandular chain extends further than was at first made out by direct examination, and consequently every presumption is in favour of a prolongation into the thorax. We must now seek for confirmation of this opinion by exploring the chest and considering the disorders of function.

In front, percussion gives negative results on the left side, but on the right, going from the clavicle to the nipple, almost complete dulness is found along the edge of the sternum, with loss of elasticity under the finger. We have witnessed that dulness increasing, so to speak, under our very eyes. Fifteen days ago it only extended beyond the sternum to a distance of one inch and a half to two inches (four to five centimetres). Gradually it reached the extent that we meet with to-day, advancing with lessening intensity even as far as the boundary of the anterior wall of the thorax. This dulness cannot be attributed to condensation and impermeability of the lung itself, for in that case vocal fremitus would be considerably increased, whereas it is diminished, and there would also be, over the whole area of dulness, bronchial breathing and bronchophony, which are entirely absent. All that is revealed by auscultation over that part is a marked diminution of the respiratory murmur. In the presence of these phenomena I do not hesitate to attribute the dulness to the presence of glands occupying the circumference of the right superior bronchus, and diminishing the size of the column of air without giving rise to marked narrowing of the passage.

Behind and on the right the thoracic resonance is greatly diminished over the lower half of the chest; but this loss of resonance, which is accompanied by diminished vocal vibration and respiratory murmur, is due to the remains of an intense pleurisy from which the patient suffered in the month of August last, and for which my learned colleague and friend Desnos performed thoracentesis, giving exit to seven pints (four litres) of limpid and straw-coloured fluid. Over the whole left side posteriorly percussion shows slightly diminished resonance, and auscultation proves the existence, from the base upwards, to the extent of two or three fingers'-breadths at the most, of subcrepitant râles of medium size and dry tone, which have persisted without change from the time of the patient's admission into the hospital. These various physical signs cannot be attributed to any recognised alteration of the pulmonary tissue itself, and I am more disposed to refer them to the enlargement of some of the glands scattered through the substance of the lung. Amongst other things, rhonchi so persistent are due to a slight stasis with œdematous transudation into the alveoli, resulting from pressure upon the broncho-pulmonary veins.

To recapitulate, side by side with the hypertrophy of the superficial glands occurs that of the deep pelvic, mesenteric, and intra-thoracic glands; the peribronchial glands on the right are certainly affected, and the intra-pulmonary glands on the left most probably. To this add an enlarged spleen, and a slightly enlarged liver, and you have the whole topographical diagnosis.

The nosological diagnosis must be considered with reference to a series of contingencies that I proceed to pass in review, although all of them have not, by any means, an equal probability. In every case of the kind, the first question to be decided is that of scrofula; the scrofulous diathesis may give rise to lymphatic tumours equally diffused; indeed, it produces similar manifestations more frequently than any other diathesis. That question must be answered by an inquiry into the character of the tumours themselves, and into the

personal condition of the patient. The tumours are movable, and non-adherent either superficially or deeply; they are painless, they almost everywhere remain isolated, and the intervening tissues preserve their natural suppleness. Where several glands are massed together, they are united by a species of true amalgamation. It is impossible to discover the least vestige of inflammation of the tissues surrounding either these masses, or the isolated tumours; the skin covering the swellings is quite intact; even the oldest of them has never exhibited any ulceration or tendency to ulcerate. With this combination of characters, the tumours we are dealing with are entirely shut off from strumous adenitis, so far as these local phenomena enable us to form an opinion. Then again, the examination of the patient is not less conclusive. Of pretty good constitution, he has not been subject in his childhood either to impetiginous eruptions, or ophthalmia, or rebellious attacks of coryza; he has never had glandular swellings, nor any affection of the bones or joints; and unless we invent an an entirely new sorofula on his behalf, we must conclude that his present malady cannot be referred to this diathosis.

The hypothesis of a tubercular origin is still less tenable; it would involve the existence, in a man of thirty-eight, of tuberculosis of the glands without lesion of the lungs—a thing certainly possible, inasmuch as I have myself seen an example (recorded in my "Clinique de la Charité"), but, after all, it is an extremely rare case; and when it does occur, as soon as ever the glandular alteration has become general, a state of profound cachexia supervenes, with intestinal symptoms (diarrhœa, pain) which here are entirely wanting. Frequently also sub-acute or chronic peritonitis is observed, one of the forms, in short, of tubercular peritonitis, of which there is not a trace in our patient. You may exert as much pressure upon his abdomen as the resistance of its walls will permit, without causing any pain, and the gastro-intestinal functions are so far perfect. Moreover, I cannot allow you to forget that if the absence of peritonitis does not exclude tuberculosis, the presence of that inflammation would not be sufficient evidence of that diathesis. The man of fifty-six years of age, whose history is reported by Bohn, of Königsberg, had lymphatic tumours like those of our patient. He died from a sub-acute quasi-indolent peritonitis, and that inflammation was due to the formation of products similar to those in the glands. There were no tubercles anywhere.

Syphilis, notwithstanding the variability, the not unfrequent strangeness of its symptoms, never produces glandular tumours so diffuse without some other manifestation of infection; and, besides, our information leads us to reject that possibility.

As to cancer, I only name it by way of reminder; I know of no form which presents a similar topography.

The glandular lesions, then, from which our patient is suffering are independent of every ordinary diathesis; they are at the same time spontaneous and diffuse, and hence can only be referred to a glandular hyperplasia; in other words, these tumours are formed by an excessive development, in size and number, of the elements which constitute the normal structure of these organs.

It is advisable, then, to inquire into the clinical significance of this condition, and to determine its relations with certain alterations of the blood, notably with leucocythæmia. That will be the subject at our next meeting.

Salicylic Acid.—Dr. Wheeler, relating his own case, in which he had found salicylic acid of great utility to him in an attack of iritis, probably rheumatic, and to which he had frequently been liable before, observes that the insolubility of the acid renders its administration in the liquid form difficult. He finds the best formula is ten parts of acid and eight of borax to 100 of water, which make a clear solution of six grains to the drachm.—*Boston Med. and Surg. Jour.*, February 22.

Action for Damages against the Paris Assistance Publique.—A young girl was admitted into the Hôpital des Enfants Malades for an affection for which the physician ordered a vapour bath. This was so carelessly administered by the sister in charge that the child became badly burned and died in consequence. The father of the girl brought an action for 10,000 fr. damages against the Assistance Publique, and after the cause had been argued by counsel on both sides, the tribunal cast M. Nervaux, the Director of the Assistance Publique, in 1000 fr. damages together with all the expenses. —*Lyon Méd.*, April 8.

AN AMERICAN VIEW OF OVARIOTOMY AT THE SAMARITAN HOSPITAL, LONDON.

In one of the numbers, in November last, of our contemporary the *Boston Medical and Surgical Journal*, in their "London Letter," there appeared an admirable account of an ovariotomy performed by Mr. Spencer Wells at the Samaritan Hospital. The letter is anonymous, but is understood to be from the pen of Dr. Storer, of Boston—the joint-editor with Dr. Priestley of Simpson's works. We cannot spare the space to print the whole of it, but we give the most important and larger part, because it is most interesting and instructive to "see ourselves as others see us," and also because the letter gives a more full and detailed report of the most recent method of Mr. Spencer Wells in performing ovariotomy than we have seen elsewhere. It will have a special interest, too, since Mr. Wells's last report of his successes before the Royal Medical and Chirurgical Society; and, further, it will, we think, strike most of our readers as a remarkable example of the great amount of information an intelligent man well acquainted with his subject can gain from a single visit to one of our hospitals. After describing the precautions taken to avoid possibility of infection by visitors, the employment of bichloride of methylene as an anæsthetic, and very briefly the operation up to the removal of the tumour, the writer proceeds as follows:—

"All coagula having been carefully removed from the peritoneal surface and pelvic cavity, the clamp was adjusted crosswise externally, and the wound was closed by seven stitches, the pedicle emerging between the last and the last but one. These sutures, like the ligature already described, were of Chinese silk, uncarbolised. They were passed through both the integument and the peritoneum, without, however, taking up the whole thickness of the abdominal wall, and during their tying the loose pouch of the abdomen was bunched up, as it were, by the hand of an assistant. The threads were provided with a needle at each extremity, the second of which was held by the operator's lips while the first was being passed, thus preventing twisting and other entanglement and permitting greater speed.

"The wound having been closed, bits of lymph were carefully placed under the clamp and between the sutures; the extremity of the pedicle outside the clamp was touched with solid perchloride of iron; the abdomen was covered with cotton-wool, over which were strapped broad bands of adhesive plaster; a binder of flannel was placed outside this; and the entire operation was completed in just half an hour from its commencement.

"Nothing could have exceeded the adroitness and celerity, yet absolute thoroughness and perfect neatness, of the whole procedure. There were two female nurses and two assistant-surgeons, besides the gentleman in charge of the anæsthetic. They were all constantly occupied, and each, knowing exactly what to do, at what moment and how, never came for a moment into the others' way; so that there were six busy pairs of hands, every one at its special work. The operation, from beginning to end, was as if done by the most perfect yet sentient mechanism, and was an apt illustration of the consummate skill that only such unequalled practical experience as that of Mr. Wells could produce.

"As to Mr. Wells's percentage of recoveries—in nowise, I believe, depending upon chance,—there is even more to be said. I may hereafter, in another communication, refer to the general subject, having, as is tolerably well known at home, decided views of my own as to the essential points in ovariotomy, so that I will just now confine myself to what was shown at the operation of to-day. There are many questions of interest, as, for instance, whether ovariotomy succeeds better with American or English patients, for the races differ greatly as regards nervous excitability, tolerance of shock, etc.,—but then it must be remembered that Mr. Wells's successive series now represent patients from almost every part of the globe; and as to whether operators are more fortunate in city or in country air. The great bulk of Mr. Wells's sections are made in the very heart of crowded London. What, then, are his secrets? To discover some of them we have but to glance again at what I have just written.

"1. He permits no inoculation with scpticæmia by the visitors who are present, no matter if they be intimate friends. They cannot touch the patient's person, much less her mucous membrane by a vaginal examination; and by their written certificate they are put upon their honour that they have not within a week been even within a suspicious atmosphere.

"2. Similarly, precautions are taken against the chance induction of simple peritonitis. By permitting no examination, whether external or internal, by visitors, a deal of unnecessary stirring up of the patient's pelvic and abdominal viscera is avoided. At such times it is but a sorry compliment to a professional friend to ask him to verify the diagnosis, while abstinence from such manipulation may to the patient make the difference between life and death.

"3. The patient, having been anæsthetised previous to their entrance, sees no stranger. Visitors would instinctively retire at the close of an operation, but they are too often ushered into the room prematurely, thus causing much unnecessary nervous excitement, which most certainly cannot increase the chance of recovery.

"4. Celerity in this operation, provided time enough be allowed for the completion of every requisite stage, and the closure of all points of hæmorrhage, means not *éclat* for the operator so much as safety for the patient, by preventing undue exposure of her viscera and peritoneum to atmospheric irritation and chill. To insure this, skilled assistants are required, who are not only generally, but specially, versed in every possible detail of the operation.

"5. Every minute precaution, if wise, counts towards the result; so that to confine the patient's extremities beforehand leaves the assistants free for other duties, and preserves the operator from stoppage in his work; saves his mind from annoyance, and his thoughts from being turned from the point of the moment. In the same way, perfect neatness and cleanliness, everything being in its place, and that place a matter not of chance but of prevision, helps the result. Napkins soaked with ascitic and ovarian fluid, sticky sponges, puddles of coagula, and instruments coated with half-dried blood, may seem the necessary adjuncts of such an operation, but their absence goes far to keep the operator's hands facile, his mind cheerful, his speed great, and to cause his whole work to be better done.

"6. Other things being equal, the shorter the incision the better, for manifold reasons. To disintegrate the morbid mass from within its substance by the hand passed into the cavity of a cyst is far more judicious than to pull and to twist and otherwise forcibly undertake to deliver it, whether by hand, by forceps, or by both combined. The adjacent viscera are less disturbed in position and less liable to be bruised, the peritoneum receives infinitely greater protection, and there is less traction upon the pelvic ligaments.

"To the other steps of the operation I need not refer, covering as they do ground that is now much more common to surgeons. I used myself to attach great importance to passing the sutures through the peritoneum, as Mr. Wells did in the case now reported, but I have had recoveries when, to decide this question, no suture whatever was used; either the external lips of the wound were simply brought together by adhesive straps, or its internal edges by deep outside pressure of a similar character. And so with regard to the treatment of the pedicle. In this instance it was brought outside, and a styptic antiseptant applied. Recoveries have so constantly followed not merely this method, especially known as Mr. Wells's, but deep tying, whether with silk, catgut, or wire, deep acupressure, the actual cautery, and even other procedures, the comparative merits of which have not been decided, and of which one seems best on one occasion, and another on another, that I do not now discuss them. My aim has been to point out certain general principles, hardly as yet appreciated, which must underlie all constant success; and I am quite sure that in Boston, where the performance of this operation of ovariotomy, perhaps *the* great triumph of modern surgery, was, not many years ago, in Mr. Wells's own presence, pronounced 'a mere matter of taste,' my remarks will be appreciated and their justness coincided in."

Society of Arts, Chemical Section.—The lecture on April 19, at eight o'clock, will be given by Charles W. Vincent, F.R.S.E., F.C.S., on "Spontaneous Combustion in Factories and Ships."

FROM ABROAD.

Dr. Holden's "Resonator."

In the *New York Medical Record* for January 20, Dr. Holden describes what he terms "A Discovery in Physical Diagnosis." He says—

"In pursuance of investigations shortly to be published, with instruments designed for the earliest possiblo detection of disease of the lungs, a simple phenomenon has been noticed which cannot but prove of value in cases of uncertainty or obscure disease. I have been unable to find any record of a similar suggestion, and present it with cases, trusting that it may facilitate the early detection of phthisis, and thus increase the prospect of cure by medication.

"A soft rubber tube, $\frac{5}{8}$ inch in internal diameter, and two feet long, with simple end-pieces of thin metal, and of a diameter of $\frac{3}{4}$ inch, will, when blown into with a little force, produce a rushing noise at the extremity. The same sound is produced by forced inspiration. This is the instrument required. If the patient be made to respire through this, the ear of the physician being applied to the chest, and particularly at the supra-scapular space, this rushing sound is transmitted with clear resonant volume. Disease, however slight, exaggerates the sound, alters the pitch, or changes it in proportion to the solidity of the conducting tissues. Obliging the patient to hold the extremity of the tube away from the listener prevents the distracting his attention from the transmitted to the real sound, as does also the closing of the free ear with the hand. A singularly magnified character is given to the respiratory murmurs, and the stethoscope is unnecessary. In thin persons so great is the exaggeration of the natural sounds that, as with the stethoscope, comparison of the two sides may at times be requisite to prevent misinterpretation; but in local consolidations and small cavities it has proved invaluable. A few cases only are presented, and the device, for want of a more appropriate name, termed a 'resonator,' is submitted to the profession, in the hope that it will do more than is claimed for it."

In a subsequent communication (February 3) Dr. Holden corrects his description somewhat:—

"Upon careful measurement of a piece of the tubing unstretched, I find it but $\frac{1}{2}$ inch in diameter, the rubber being $\frac{1}{16}$ inch in thickness. The distant end-piece is $1\frac{1}{4}$ inch in diameter, and about $\frac{1}{16}$ inch thick; but a point which is of vital importance is that the mouthpiece, while of the same external diameter, in order to stretch the tube and produce narrowing, is itself narrowed inside to $\frac{1}{16}$ inch. This I now find essential to my results. The following are the exact dimensions of the tube used:—Material, soft rubber, $\frac{1}{16}$ inch in thickness, internal diameter $\frac{1}{2}$ inch, length $17\frac{3}{4}$ inches; distal end-piece of thin brass, $\frac{3}{4}$ inch internal diameter, $\frac{1}{4}$ inch in thickness, and $1\frac{1}{2}$ inch long; proximal end, or mouthpiece, of wood or metal, same external diameter and same internal *at its extremities*, but narrowed in its middle to $\frac{1}{16}$ inch, and $1\frac{7}{8}$ inch long. The mouthpiece of a trumpet would doubtless be better."

Dr. Holden furnishes some brief notes of the application of his "resonator" in five cases, and terminates his paper with the following estimate of its utility:—"It intensifies the sounds of vesicular dilatation, whether in a normal or morbid state. It intensifies the tubular sounds, which, to the unassisted ear, are sometimes partially drowned by the neighbouring healthy murmurs; and it exaggerates to painful hoarseness the evidences of air in cavities. Further experience will define more clearly the amount of assistance it will render in a disease which is manageable only in proportion to the promptness of its early detection."

Near-Sightedness in Public Schools.

Dr. Agnew, addressing some interesting observations upon this subject to the New York Medico-Legal Society (*New York Medical Record*, January 20), said that his attention had long been directed to the condition of health of school-children, and as to how far defects in this are attributable to hereditary or domestic influences, and how far to the school-life itself. Near-sightedness in schools has especially occupied his attention since the publication by Dr. Cohn, some years since, of the results of a series of investigations he had made at Breslau. This observer found that among the children in the villages surrounding Breslau the amount of near-sightedness was very

small, not exceeding 2 per cent. In Breslau itself he found that near-sightedness increased in all the schools as they rose in grade, until the enormous ratio of 60 or 70 per cent. was reached in the University. Observers in other parts of Europe have since then arrived at pretty nearly the same results. By many it was supposed that the superior dietary, the mode of education, and the better sanitary condition of their school-rooms and homes, would protect American scholars from the above deterioration; but Dr. Agnew, desirous of testing the matter by figures, obtained returns from New York as a great metropolis, from Brooklyn as a city which is somewhat more proviucial, and from Cincinnati, where probably less strain was likely to be brought upon the eyes than at either New York or Brooklyn. On examination of the returns it was found that the results strikingly corresponded with those obtained at Breslau—near-sightedness increasing from the lowest to the highest schools of these three cities, as it did there. Dr. Agnew does not come to the conclusion that the schools are solely responsible for this condition of the eyes, believing that heredity and conditions of the habits and homes of the scholars have also their influence, though in what degree it is not possible to specify.

Altogether 1479 were examined—viz., 630 in Cincinnati, 549 in New York, and 300 in Brooklyn. In Cincinnati 209 were children of the district schools, and in these near-sightedness prevailed in 10 per cent., the eyes being emmetropic or natural in 83 per cent. Of 210 children belonging to the intermediate schools, their eyes were natural in 80 per cent., and near-sighted in 14 per cent. In the normal high schools the eyes of 210 students were examined, and of these 78 per cent. were emmetropic, and 16 per cent. near-sighted. At New York the eyes of 549 students in New York College were examined. In the introductory classes 57 per cent. were normal, and 29 per cent. near-sighted. In the freshman class 42 per cent. had natural eyes, and 40 per cent. were near-sighted. In the sophomore class no material difference from the preceding classes was observed; but in the junior class 37 per cent. had normal eyes, and 56 per cent. were near-sighted. In the senior class 50 per cent. had normal eyes, and 37 per cent. were near-sighted. At Brooklyn 300 students of the Polytechnic Institute were examined. In the academic department there were 56 per cent. with natural eyes, and 10 per cent. short-sighted; and in the collegiate department 53 per cent. with normal eyes, and 28 per cent. near-sighted.

"Summarised, it is found by these tables that of the students examined at Cincinnati there were 10 per cent. near-sighted in the district schools, 14 per cent. in the intermediate schools, and 16 per cent. in normal high schools. Of the students of New York College, 29 per cent. of the introductory class were near-sighted, 40 per cent. of the freshman class, 35 per cent. of the sophomores, 53 per cent. of the junior, and 37 per cent. of the senior class. Of the students of the Polytechnic Institute at Brooklyn, near-sightedness was found in 10 per cent. of the eyes in the academic department, and in 28 per cent. in the collegiate department.

"Now, if we find in a first-class organ like the eye, examined in early life and all through childhood, and also during middle life, that the effect of the use of the organ is to produce or aggravate a diseased condition, may we not, from what we see in this transparent organ, justly infer that during the same period of life damage is being done to other organs of the body which are not transparent, and in which morbid conditions cannot be so easily determined? This thought has made me feel a very great interest in these investigations. I believe that, before we conclude these examinations, certain results will be formulated by which parents at home will be able to apply the principles of hygiene much better than now to the care of their children, the school-boys be placed under better instruction in the schools, and the school-teachers much better qualified than now for the management of the scholars placed under their care. It seems to me that the very etymology of the word 'education' enforces the idea that the child is to grow better and stronger up through his school-life, and that by the proper regulation of his diet and management at home, by properly lighted school-rooms and properly constructed desks, and a better regulation of his hours of study, he should represent a much higher type when he has reached the age of twenty-five than when he is just taken in hand with the view of giving him book-knowledge. We certainly should not damage the eyes in the process of education; and I believe that the damage done to the eyes is to be taken as an index of that which is done to other organs of the body."

Hygiene of the Eyes in Children.

Dr. Galezowski receutly read a paper at the Société Médicale d'Emulation (*Union Méd.*, April 7), entitled "Some Considerations concerning the Hygiene of Sight in Children," of which the following is an abstract:—

With respect to children in early infancy the following rules should be observed:—1. The bed of the infant should be so placed that on waking it does not have its face towards the light. It is after sleep that the eyes are most sensitive and delicate, and if the light strikes them at that time it often induces contractions of the internal muscles which may become permanent. In fact, according to Cuignet, the photophobia which in young infants accompanies either hypermetropia or inflammatory affections of the eyes is one of the principal causes of convergent strabismus. 2. When the infant is taken out in the air it should have its face protected from the sun by a blue or green veil, and not—contrary to the usual practice—by a white one. The light which traverses a white veil is very dazzling, and greatly tires the eyes. 3. The nurse of the infant should accustom herself to carry it sometimes on one arm and sometimes on another, for the child is constantly trying to look at its nurse, and may insensibly acquire the habit of looking only to the left or to the right, whence may arise strabismus. 4. In choosing nurses we should reject those who have bad eyes or who squint. The disposition to imitation is carried in infants, even of the earliest age, to such a height that they may sometimes be seen almost uninterruptedly winking, because their nurses, having bad eyes, are obliged to keep them half-closed in the light of day.

The importance of observing the hygiene of the eyes is much more important with regard to children going to school or entering upon appreuticeship; and in order that their vision be not prematurely damaged, it is necessary that the occupations which they are called to should be carried on under the best hygienic conditions, and especially that the school-rooms and workshops be properly lighted. Every child on entering a school should have its eyes minutely examined by a medical officer or oculist attached to the school, or by one employed by the parents, a certificate being furnished in which is stated the refractive power of the eyes, the sharpness of vision, and all other particulars necessary for a knowledge of the exact state of the eye in each student. The eyelids should also be very carefully examined, in order that any child suffering from contagious granular ophthalmia may be refused admission. An exact knowledge of the sharpness of vision of each child is indispensable, in order that arrangements may be made in conformity with individual aptitude and range of vision. Thus, it is usual in classes to place children according to their merit, at the top or bottom—a practice indeed proper enough in the pedagogic point of view; but it may happen that those who are myopic get placed too far off from the black-board, so as to have to strain their eyes very injuriously In order to see better, such children make immense efforts, winking and nearly closing the eyelids, and inducing spasmodic and involuntary contractions of the accommodation muscles, which, according to the accurate observations of Dobrowalski, contribute to the development of progressive myopia. The most effectual means of preventing this is to suppress the efforts at accommodation and to facilitate children seeing at both long and short distances. Here arises the question as to whether myopic children should employ glasses; and the answer is, that they should do so if the myopia is very considerable, and should not wear them when the myopia is but slight, and capable of being obviated by placing the subjects of it near the objects of their study. So that the place of a child in its class is really a hygienic question to be seriously considered. When the myopia exceeds $\frac{1}{12}$, glasses should be employed, and even when it is below $\frac{1}{3}$, precautions have to be taken with respect to reading and writing, and against the progressive development of the affection. The researches of Cohn and others have shown that school-work, especially with insufficient light, contributes to the development of progressive myopia and the increase of posterior staphyloma; and without going so far as these German observers, who admit the progression of myopic lesions, such as staphylomatous aud atrophic lesions of the choroid, it may be said that the employment of the eyes in insufficient light is one of the aggravating causes of an already existing myopia. A useful precaution to take is to substitute for long tables and benches (as has been done in many schools iu England) those of a length only sufficient for two or four children. They should also be more or less high,

according to whether they are intended for myopic pupils or others. Very high desks also are exceedingly convenient for those having excessively short sight, and who are always obliged to hold their heads low while at work. By this means they are able to place the objects of study at a suitable distance from the eye, without inducing congestions of the eye or head. When the myopia exceeds $\frac{1}{6}$, feeble concave glasses should be employed, as they enable the children to work without fatigue.

In regard to the illumination of school-rooms, daylight should always come from the left side in relation to the students, and never from the right or the front. This direction of the light is especially favourable for writing, as the hand does not then project its shadow on the copy-book. Benches should not be placed opposite windows, for too much light is very prejudicial; nor should the classes ever be ranged towards the south, working being very fatiguing with the sun on the windows. Photographers and painters so well understand the inconvenience of this, that they always choose their studios with a northern or eastern aspect. The solution of the question of lighting school-rooms in the evening is a matter of difficulty, as it is one of urgency, great complaints having been made by the friends of children since gas has come so much into use. But the fatigue and congestion of the eyes are really produced by a deficiency in the amount of illumination, for gas in itself is nowise prejudicial, being in fact a somewhat whiter light than that of Carcel's lamps, and therefore more favourable to the sight. It induces fatigue of the eyes, however, whenever it becomes vacillating, but this may be remedied by appropriate burners. Gas should not be placed at a greater height than are ordinary lamps, otherwise the light becomes insufficient, and the children are then obliged to make excessive efforts in order to read fine print. The beautiful "sunlights" adopted in so many public places in England and Belgium diffuse so large a quantity of light that work can be carried on as in daylight. Their adaptation to schools would be of great advantage by enabling the children to work without fatigue.

REVIEWS.

Lithotomy and Extraction of Stone from the Bladder, Urethra, and Prostate of the Male, and from the Bladder of the Female. By W. Poulett Harris, M.D., Surgeon-Major H.M. Bengal Medical Service. London: J. and A. Churchill. 1876.

This work treats only of lithotomy, as the author, following, as he says, "the general custom of surgeons in India," has never practised lithotrity. It seems curious that in India—in some parts of which stone in the bladder is of so very common occurrence—lithotrity should not be practised; for surely out of the many cases that are seen there must be some which would be appropriate for that operation!

Dr. Harris has had a large experience of lithotomy, his cases numbering as many as 365. The book, however, is chiefly a compilation (with due acknowledgments) from well-known authors, and contains nothing new or original.

The Influence of Climate in the Prevention and Treatment of Pulmonary Consumption. By Dr. Charles Theodore Williams. London: Smith, Elder, and Co. Pp. 151.

As an empirical record of the effect of certain climates on cases of phthisis treated by Dr. Williams and his son, these lectures have a certain value. We confess to a conviction that some typical cases, with records of the symptoms as well as the signs, and full details as to *how* various climates seemed to benefit the said cases, would have been more useful to us than these elaborate percentages. In all discussions on the therapeutic influences of climate, we are painfully conscious of the want of a *rationale* explicable to others for the recommendations which are so confidently given. This want was forcibly illustrated at a recent meeting of a learned society, where a dry mountain-air was recommended for exophthalmic goître, and it was stated that Norwood had proved exceedingly beneficial. When another distinguished climatic specialist claimed great improvement in the same disease from sea-air, we were utterly bewildered as to the ground on which the selection was made.

With respect to the climatic treatment of cases of phthisis, Dr. Theodore Williams makes an elaborate comparison of Torquay, Bournemouth, Ventnor, and Hastings, and finds that the last named of these stations has yielded the best results in his father's practice and his own. This is attributed to the fact of Hastings being more "blowy."

The conclusions of the volume are, on the whole, in support of the now generally accepted preference for bracing and stimulant surroundings rather than sedative ones.

Archives of Dermatology. January, 1877. (Quarterly.) New York: Putnams.

Our American brethren are certainly in advance of us in the possession of a periodical journal for the record of facts, new and old, on diseases of the skin, and on syphilis in general. The plan of this journal seems to be excellent—there are, first, original papers, then brief clinical commentaries, then the reports of the meetings of the New York Dermatological Society, and finally (which we take to be most valuable), digests of recent literature. Whatever may be said against specialism, it is a great advantage to find a classified analytical summary of everything of importance published on these subjects. This applies especially to a vast subject like syphilis, the study of which within the last few years has expanded from that of a mere surgical disease to that of a large field of modern pathology.

We will only make one suggestion to Dr. Bulkley (the editor of this journal), and to his fellow-workers, viz., that the histology of skin diseases should be a little more cultivated. In all dermatological discourses and discussions, one cannot but feel the need for this solid basis. With this proviso we heartily commend the *Archives of Dermatology* to English medical readers.

GENERAL CORRESPONDENCE.

HOME HOSPITALS FOR THE WELL-TO-DO.

Letter from Mr. H. C. Burdett.

[To the Editor of the Medical Times and Gazette.]

Sir,—My letter in the *Standard* of Friday has called forth so large a measure of public support, that I have already received more than one offer to co-operate in providing the necessary capital.

As, however, I recognise that this is not only a great public question, but one which necessarily involves important professional considerations in addition, I am desirous, before proceeding further, to elicit, as far as possible, the views of the members of the medical profession throughout the country. Will you therefore kindly allow me space to request any medical gentlemen interested in the establishment of Home Hospitals for the Well-to-do, to be good enough to favour me, as early as possible, with his views on the subject.

I am, &c., Henry C. Burdett.

Seamen's Hospital, Greenwich, S.E.

ANIMAL VACCINATION AND ITS DIFFICULTIES.

Letter from Dr. H. A. Martin.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has just been called to a *critique* in a late number of your journal on some dire threatenings from Dr. J. Garth Wilkinson, of possible—nay, in his estimation, very probable and imminent—peril in the event of the adoption of animal vaccination, from the production thereby, in the human family, of diseases hitherto happily confined to the animal creation.

This surely is history repeating itself. Such threatenings and fearful forebodings saluted Jenner as soon as he had announced his beneficent innovation in practice; and very soon these were supplemented by stories of transmission not only of animal diseases, but of moral and physiognomical peculiarities also. Gilray's admirable etching, to which you allude (No. 519, Bohn's folio edition of Gilray's works), was first published in 1802, within four years after Jenner's first public announcement, for already had the absurdities of the "Anti-Vaccine Society" reached such a point as to demand so complete and satirical a reproof. I have caused a "negative" to be taken of the etching, and a copy of the photograph has been the appropriate and generally the only reply that I have made to attacks similar to that of Dr. Wilkinson.

As I think it very important that *true* animal vaccinatio

(transmission of *original* spontaneous cow-pox through a series of young bovine animals, as contradistinguished from retro-vaccination and variolation of kine) should have a fair chance and trial in England, and as I know, too, that assertions and forebodings, however absurd and absolutely without foundation, in fact are very potent indeed in preventing such fair trials of new methods, I wish to offer your readers the results of six and a half years' daily experience in the vaccination of animals, during which time over 600 young heifers have been vaccinated by myself or under my immediate supervision, and virus therefrom, in the various forms of "points," tubes, and crusts, for the vaccination of far over 1,000,000 of the people, has been issued to over 9000 physicians of all sorts, and schools in the United States and Canada, the West Indies, Peru, and other South American countries; and, lately, England. There have been serious forebodings here too, but they have all been anonymous ("Veal," "Senex," "Inquirer," etc.), and so very evidently malicious in intent, and so very clearly absurd and empty, that I have taken no notice of them, as the results from the constant use of the animal virus in every city, town, and hamlet of the country were the best possible answers and comments.

What you say on this subject is most undoubtedly and exactly true—(1) that young bovine animals are quite exempt from the hoof-and-mouth disease. When that disease prevailed in the cattle-market town of Brighton, in this neighbourhood, many barns were filled with adult animals with the disease; mingled with these were a few calves and young heifers who had never calved. In no single instance was it observed that the latter were attacked. Experiments made, and frequently repeated, of the inoculation of physicians and medical students with fluid directly from the vesicles of the disease, resulted generally in nothing. When any effect was observed, it was of the most trifling and doubtful description. (2.) If an animal (old or young) labour under hoof-and-mouth, or any other constitutional disease, it would be utterly impossible to induce anything like, or approaching, the development of a single cow-pox vesicle on that animal. (3.) If it were possible to induce cow-pox in such an animal, no sane person would think of selecting such a vaccinifer. Even if physicians are the incarnate fiends which some of Dr. Wilkinson's anti-vaccine *confrères* endeavour to make them appear, a due regard to personal interest and reputation would lead to a rejection of subjects so evidently unfit for profitable use as animals suffering from rinderpest or any of their peculiar and most plainly manifested diseases. Physicians have before now, and in the best faith and with due knowledge of their profession too, selected human vaccinifers who subsequently developed congenital syphilis, and were thus the means of infecting with the most dreaded of all contaminations a series of vaccinees; but there could be no excuse for the selection of a diseased animal as a vaccinifer.

One of the first things to be learned by a vaccinator of animals, if he would achieve even moderate success, is that he cannot be too careful in the selection of his animals, not merely with a view to the avoidance of danger of communicating their diseases to human patients, but because the most trifling ailment, as diarrhœa, or even a wound, or bruise, or any trifling cutaneous inflammation, or eruption, or irritation from parasitic insects or vegetations, will prevent such a development of the vesicles of cow-pox as would be profitable to the operator, and, indeed, generally any appearance, however imperfect, of the vesicle. In one instance I vaccinated most carefully, but without any effect, a fine eight-months-old heifer, whose skin was in perfect condition, but one of whose nascent horns had been accidentally broken, and had bled profusely. She was vaccinated again without success before the wound was healed; a third time, and successfully, after the injury had been entirely repaired.

Several times in my early experience my vaccinations failed from the presence of bruises or wounds, often far from severe, in my quadrupedal patients. If such cases do not now trouble me, it is because I never touch an animal whose skin is not perfectly free from lesion, whether traumatic or morbid. The number of bovine animals vaccinated in this country since I introduced true animal vaccination in September, 1870, must amount to several thousands. I am in a position peculiarly favourable to know at once of any disaster, of any annoyance, however slight, resulting from the use of animal virus.

There is a clique of physicians, and not a small nor feeble one, which would rejoice in nothing more than in doing me an ill turn, and they know very well that nothing would gall me, or gratify them, more than an authentic narrative of ill results of true animal vaccination. They have not yet been able to obtain one such narrative. They have even attempted falsehoods of this kind, but, as their woful experience assures them, all such have been investigated and exploded with little addition to their credit, and these fictions have been abandoned. With all these facilities and reasons for knowing of evil results of animal vaccination, I have good ground for belief that if even one such case transpired I should be made aware of it; and I now declare that I know of no case in which (with one exception) any animal disease except cow-pox has been transmitted to man, not one case in which erysipelas has followed or in any way complicated vaccination with true animal virus, nor one case (in nearly seven years' experience) in which variolous disease in any form or degree has appeared in a patient after fourteen days subsequent to successful vaccination or revaccination with the heifer-transmitted cow-pox virus. I say this with all the candour proper to so important a subject, and without any mental reservation whatever. But I have made one exception: I have known one animal disease transmitted to man by animal vaccination, and one only, beside that which it is the intent of the operation to transmit. What is it?

The disease is a cutaneous affection resembling herpes circinatus, and produced, like that, by the intradermic evolution of a species of tricophyton, very probably the same precisely which produces herpes circinatus, herpes tonsurans, or sycosis, as its spores happen to fall on hairless, hairy, or bearded parts of the skin. As this possible complication of animal vaccination is always found on a part of the cutaneous surface (the upper arm) destitute of hair, it may be called a variety of herpes circinatus. The affection is of trifling importance, and capable of immediate and certain remedy by the simplest means; but as, if not fully understood, it is quite capable of doing serious harm to the reputation of animal vaccination, I think it very proper to call the attention of the profession to the fact of its existence, and to give such an account of it as may enable anyone to recognise it at once. My attention was not called to it till some two years and a half after I began with animal vaccination. A friend from a city some fifteen miles distant asked me if he could have his three children revaccinated with virus from my stables, by applying to his family physician, and so be saved the trouble of bringing them to me. I told him, Yes, if his physician was an honourable man, all he had to do was to request him to vaccinate them with my virus, which he could easily obtain. In about a month he brought the three children to me. On the vaccination arm of each, near the vaccinal cicatrices, were two or three light brown furfuraceous circular spots, from the size of a silver threepenny-piece to, in one instance, that of a shilling. The gentleman informed me that he had particularly requested his physician to get Dr. Martin's virus, that he had done so, and—*Voila!* I told him that the thing was entirely new to me, that I did not doubt that it would prove to be easily remedied, and that he might be assured that my virus had not been used in the case. Strict inquiry was made, and it was found that the professional gentleman had, for the sake of an economy of 2½d. for each vaccination, procured virus of "Dr. Martin's stock" from a firm of dealers in Boston, who were utterly ignorant of everything connected with vaccine lymph. These honourable merchants were in the habit of buying all sorts of cheap refuse calves, which were kept in a filthy shed, employing a medical student to vaccinate them with virus obtained from me, and selling the product as "virus of Dr. Martin's stock." When their vaccinations failed —a frequent occurrence,—they surreptitiously obtained more of my virus and started up again; and so they continue. All this you may perhaps think hardly worth mention; it is mentioned at all only because a danger from which true animal vaccination has wofully suffered here, and which will be very likely to prevent its proper development in England, is that *ignorami*, within and outside the profession, will rush in, rob the scientific and conscientious physician of the fruits of his study and labour, and injure most essentially the reputation of the new method. It is very much to be hoped that the English profession will only encourage the labours of physicians worthy of confidence, who may undertake this very laborious and very far from agreeable speciality; or, better still, that the Government may establish stables for the propagation of true animal virus, under the charge of such a man as Robert Ceely, for free distribution to all who now obtain the Jennerian virus from your admirable "National Vaccine Institution." I have since seen several—perhaps fifty—cases

of this form of disease; in almost every instance from the use of the virus produced by incompetent men, but in a few instances at one time it infested a few vaccinations made with virus from my stables. I had at that time a herd of over ninety young animals in three different farms. I found no trace of the disease on any of these, but, after a good deal of anxious labour, it was found that all the cases arose from virus from the cattle at one of these places, and at last the *fons et origo mali* was found. A poor, wretched, ill-fed, and neglected "dry" milch-cow had been among the cattle in the stable immediately before I had taken possession of it. Spores from this animal were floating in the air; now and then one or more of these would fall on a "point" not yet dried, and so become fixed and incorporated with the virus thereon. Such is the way in which the disease is always transmitted. Even the slight and local disease in animals which produces these spores is quite enough to prevent a successful vaccination. The spores are derived from the atmosphere in which they are floating, and not with the fluid lymph as it is taken from the vesicles in the animal. Trifling as is the ailment, it is of course desirable to avoid it, and it can always be avoided with absolute certainty by using none but properly selected animals, and keeping them in stables kept as all stables ought to be kept.

It is not necessary to say much more. The history of one of these cases of bovine herpes circinatus is precisely the same as of that form of the disease with which physicians are familiar. It is generally not till shortly after the vaccine crust has fallen that one or more (very seldom more than one) of the patches is noticed, at a short distance from the site of one of the vesicles, never on that site nor less than half an inch from its centre. If the case is properly treated at once, that is the end of it; but if neglected or improperly treated, in some ten to fourteen days after the appearance of the first patch or patches others appear. Slight itchiness is generally spoken of. I at first treated these cases by rubbing these spots with a strongly alkaline soap, or common soft soap, or *sapo viridis*, and then rubbing into them the oil of cade; and repeating this a few times at intervals of a day or two made an end of the matter. I soon found that this treatment was needlessly elaborate, and that if a bit of rag is moistened with the ordinary refined petroleum in domestic use, and then rubbed thoroughly into the patches on alternate days three or four times, no further treatment is needed. I have not seen a case of the disease for over two years, and I am inclined to think that even the least scrupulous of my rivals has found it, on the whole, profitable and economical to take a little more pains in the selection of animals and of the places where they are kept, and in the care and management of both.

I am, &c., HENRY AUSTIN MARTIN, M.D.

27, Dudley-street, Boston Highlands, U.S.A., March 27.

[The foregoing letter, which we have received from Dr. Martin since last writing on the subject, gives more distinctly and clearly, as well as more characteristically, his views and practice as regards animal vaccination.—ED. *Med. Times and Gaz.*]

EXTRACTION OF FOREIGN BODIES FROM THE ŒSOPHAGUS IN CHILDREN.—In allusion to a case in which there had been some difficulty in extracting a coin swallowed by a child, Dr. Thouvenin states that in such cases he adopts a very simple measure with great success. It consists in laying the child flat on his belly on a table, with his head, supported by an assistant, projecting beyond it. The finger is then introduced into the mouth in order to depress the tongue, and the coin slides out along the finger of the operator.—*Bull. de Thérap.*, March 15.

FRACTURE OF THE CLAVICLE IN CHILDREN.—In Prof. Hamilton's Clinic there was an example of the incomplete or "green-stick" variety of fracture of the clavicle occurring in a child at the junction of the outer and middle third, the position ordinarily occupied by fracture in the adult. It was therefore exceptional in the child, in whom the fracture almost uniformly occurs at the middle portion of the bone. Prof. Hamilton stated that provisional callus, which is only an exception in the adult, is in the child the rule. In this case there was a node-like swelling observed the next day. The bone was considerably bent, but would be eventually restored to its proper figure, the callus disappearing. Dressing the part was only required as a warning against accidents that might render the fracture complete.—*New York Med. Record*, January 13.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 23.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

INOCULATION OF VACCINIA FROM THE HORSE.

MR. MORRANT BAKER exhibited for Mr. Langton a young man apparently suffering from vaccinia produced by inoculation from the horse. He had been engaged in washing the legs of a horse with cracked heels, and about a week after presented himself at the hospital with well-marked groups of vesicles, apparently identical with those of vaccinia, on the backs of both wrists. At that time the vesicles were quite characteristic, though since, through the course of time, these had altered somewhat, having now become dark in the centre. Jenner, as he quoted from that author's work, seems to have been acquainted with the form of vesicle produced by inoculation from a greasy horse.

The PRESIDENT had seen such cases but very rarely.

Dr. SOUTHEY had never seen such a case in the skin department of St. Bartholomew's. The man's axillary glands were enlarged.

Dr. DYCE DUCKWORTH said the vesicles were quite characteristic when first seen. It was curious that ordinary vaccinia did not protect from this.

Dr. GREENHOW remarked on the fever which accompanies vaccinia direct from the heifer.

EXCISION OF LINGUAL EPITHELIOMA BY DR. PAQUELIN'S THERMO-CAUTÈRE.

Mr. BARWELL read notes of this case. He remarked that experience in the use of a new and ingenious instrument which appeared to be valuable induced him to bring before the Society the following case:—He found a rough nodular excrescence about the size of a cherry-stone on the edge of the tongue opposite the right second molar tooth; the substance of the organ was hardly indurated at all or enlarged. The tumour had been stained brown by the application of nitrate of silver. It was diagnosed as an epithelioma (a diagnosis which had since been verified by the microscope), and its removal advised. It appeared unnecessary to amputate the whole tongue, although safety demanded the excision of a considerable extent round the tumour. Dr. Paquelin's knife, which was shown at the meeting, consists of a hollow platinum blade, half-blunt, and about one inch and a half long, into which the vapour of benzoline being pumped and there burning, kept the metal glowing. Mr. Barwell thought that the instrument was, with a little previous practice, easily manageable; and he described certain arrangements which would leave both hands of the operator free.

CANCER SUPERVENING ON ICHTHYOSIS LINGUÆ.

Mr. GEORGE BROWN read a paper on a case of cancer supervening on ichthyosis linguæ, in which the diseased portion was removed. Rapid recurrence of the disease took place, and the tongue was excised, recovery following. The patient, a man aged fifty-five, first consulted Mr. Brown in April, 1876. At that time the dorsum of the tongue was covered with white ichthyotic patches; and about an inch and three-quarters from its tip, and immediately to the left of the raphe, there was a hard lump about the size of a hazel-nut, having down its centre a small fissure. The patient stated that he had observed the white condition of the tongue for more than twelve years, but the lump had not existed for more than five months. A mixture of iodide of potassium and arsenical solution was prescribed, which the patient took for about two months, but without any benefit. As he resided a long distance in the country, Mr. Brown had not an opportunity of seeing him again until the end of June, when the tumour was found to have increased considerably in size, and the fissure had become converted into an ulcerated surface three lines long and one and a half broad. Mr. Brown now recommended an operation; and, after consultation with Mr. Hird, it was decided to endeavour to save the tongue by removing the tumour only. On July 17 the tumour was cut out by means of a scalpel, and the cut surface well cauterised with the actual cautery. The portion removed measured two inches in length, and one inch in breadth. The patient made a good recovery, and in five weeks the wound had entirely healed. However, the relief was only temporary,

as the disease recurred in two months, giving rise to much pain and difficulty of mastication and swallowing. By the third week in November it was found that two distinct cancerous nodules about the size of a horse-bean had developed in the substance of the tongue. The patient having consented to another operation, Mr. Brown removed the whole of the tongue as far back as the circumvallate papillæ by means of the wire écraseur. The operation was attended with considerable difficulty, in consequence of the disease extending so far back towards the root of the tongue. The little hæmorrhage which took place was readily controlled by the application of solution of perchloride of iron. The patient made an excellent recovery. In thirteen days he was able to walk out; and within a month the wound in the floor of the mouth had entirely healed. There were now two enlarged glands to be felt in the neck. Remarking on the physiological aspect of the case, Mr. Brown said that, although nearly the whole of the tongue had been removed, the patient could articulate almost every word with sufficient distinctness to be well understood. He transacted his business —that of a hotel-keeper—as before the operation; and he had even ventured to address a public meeting. Taste was scarcely impaired. Not only did he readily distinguish the simple tastes—sweet, sour, salt, and bitter,—but he could judge of the nature and qualities of wines and spirits. The mastication of solid food and deglutition were performed with difficulty, and it was in these particulars that he really felt the loss of the organ. As to the causation of the disease, there was no history of syphilis or of hereditary predisposition to cancer. The patient believed that it was caused through excessive smoking, as he smoked from a quarter to half a pound of tobacco weekly for a considerable time before the tongue became affected. In conclusion, Mr. Brown said that this case showed that it was useless to temporise or adopt any half-measures with this disease. When ichthyosis linguæ had developed into cancer, the sooner the disease was removed the better; and there was danger of removing too little rather than too much of the organ. The patient was then exhibited, and examined by the members present.

Case of Recurrent Cancer of the Tongue treated by Ligature of the Lingual Artery.

Mr. Warrington Haward read notes of this case. A man, aged fifty-four, had suffered for nine months from cancer of the tongue, which had invaded the left side of the organ. The root of the tongue, the epiglottis, and the floor of the mouth, were free from disease. The greater part of the tongue was removed by the écraseur, and the stump healed well; but at the end of a month a fresh growth appeared at the left side of the root of the tongue and rapidly increased, the submaxillary lymphatics also becoming affected. The left lingual artery was now tied, after which the growth rapidly sloughed and diminished. Six weeks after the operation the new growth had entirely disappeared and the tongue was very nearly healed. The patient was attacked, however, with erysipelas, followed by suppuration, and subsequently by symptoms of pyæmia, from which he died three months after the ligature of the artery. The case was related as an example of the effects of ligature of the lingual artery upon a cancerous growth of the tongue. The recurrent growth had attained the size of half a walnut, and was rapidly increasing when the artery was tied. From that time the tumour ceased to grow, immediately became pale, and soon began to slough; gradual separation of the growth took place, and eventually the part healed. It was important to remember, however, that a great part of the tongue had been removed, so that the anastomosis between the arteries of the two sides would be greatly diminished. The case confirmed the opinion of Demarquay, Moore, and others, that deligation of the lingual arteries might be usefully undertaken for the starving of cancerous growths of the tongue.

(*To be continued.*)

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 27.

Charles West, M.D., F.R.C.P., President, in the Chair.

On Morphœa Alba or Leuce.

Mr. G. Gaskoin read a paper as above (with cases), in which he referred to the threefold division of leuce as recorded by Hensler —*i.e.*, into morphœa alba, leuce, and tyria: it is declared to be superfluous; the same morbid process reigns in all, and they are all three distinguished by a red areola. The morphœa alba has never been considered otherwise than as a surface lesion, and the idea thus entertained of it is accounted for perhaps by a vice of origin—the term being first introduced in early translations from the Arabic, serving then as equiva- for alphos, which we now account to be psoriasis; at the present day it has supplanted the leuce. The consequence of this has been that many important cases are disinherited of their name and position, and are recorded as anomalous. Two such are gathered from the experience of Sir Benjamin Brodie —one superficial, and the other deep. They were regarded by that eminent surgeon as cases of cutaneous gangrene, but, in accordance with the classification of Alibert, they might be grouped with leuce tyria. Cases were laid before the Society, which resolve many points in the natural history of leuce; among others, that curious exfoliation of the epidermis which has been likened to the shedding of a serpent's skin (*à Tyro serpente*), showing that this may occur in the most chronic and superficial cases, being little more than an accident in the disease, and no true test of its severity. The position is controverted that leuce is to be distinguished from lepra and elephantiasis by "absence of roughness, erosion, and pruritus." It is proved that, agreeably to the definition of Swediaur, it may be attended by crusts, occasionally of ponderous character, but still with a notable difference from those of psoriasis. The cases were illustrated by drawings.

Sir Joseph Fayrer said morphœa was not uncommon in India, where it was supposed to indicate approaching leprosy. His view was, however, that the two maladies were distinct.

Dr. Tilbury Fox said most dermatologists were agreed that there was no necessary connexion between morphœa and leprosy. The former rather approached in character to scleroderma. He regretted the revival of the old term leuce, the value of which was indefinite. Atrophy might occur in morphœa, but sloughing was rare. He had seen one case. In morphœa there was a distinct and characteristic deposit. He did not think anæsthesia a marked symptom of morphœa.

Dr. Thin thought Mr. Hutchinson had proved the identity of morphœa with scleroderma. Confusion arose from attempts to include everything under one name. Thus, one man might call a disease morphœa, and another scleroderma.

Mr. Hutchinson said that in such cases it was very important to have the patients themselves before the Society. If Mr. Gaskoin would bring his patients he would bring some, and they could be compared. He agreed with Dr. Thin that it was not possible to separate morphœa from scleroderma. He thought morphœa might, however, be separated from leprosy. Morphœa was a neurosis, but never symmetrical. Morphœa might get well, though the skin did not quite recover from its atrophy. A patient seen by Addison twenty years ago was still alive, and showed little indication of disease. He also regretted the revival of these old terms. He was surprised to hear that morphœa was common in India. There was none in Norway. It occurred, however, in all countries without regard to leprosy or its causes. It was not hereditary and not symmetrical.

Dr. Ewart said that, though not common in India, morphœa was still sometimes met with there. He believed it distinct from leprosy.

Dr. Tilbury Fox and Mr. Morrant Baker had both seen cases of symmetrical morphœa.

Mr. Gaskoin said he could not bring before the Society the patients referred to.

Indiarubber Tube removed from the Right Bronchus.

Dr. Howse said this was a case where an indiarubber tube was removed by him from the right bronchus of a man. The tube had only been in use nine weeks. Tracheotomy had been performed for syphilitic disease ten years before.

Mr. Morrant Baker said the case confirmed what he said as to the care required with regard to these tubes. Nevertheless, they were useful. At Mr. Napier's suggestion, a strip of canvas had been introduced between the layers of the indiarubber, so as to destroy the extensibility of the tube if the patient tried to drag it out. The accident was probably due to the manufacture.

Mr. Napier remarked on the importance of care, especially as to the regulation of heat in manufacturing indiarubber instruments.

Mr. Howard Marsh spoke of the great value of these tubes.

In this Dr. Howse coincided, but thought them better adapted for hospital than for private use.

Lupus Marginatus.

Mr. Jonathan Hutchinson showed a case of lupus marginatus. The subject of the disease for which this name was proposed was a fair-complexioned boy of eight, who had suffered from his skin disease from infancy. He had numerous patches on his face and left upper extremity, all of which were accurately mapped out and very conspicuous. The middle of the patch consisted of a thin, supple, delicate cicatrix, around which was a narrow margin of new growth. This margin was slightly raised, a little rough, and of a red-brown tint. In most places it was scarcely more than a line in width, and neither erythema nor swelling were visible in the adjacent skin. The whole disease was on the smallest possible scale. The scar left decided it as essentially lupus, and the fact that the margin was the only conspicuous point seemed to justify the appended adjective.

NEW INVENTIONS AND IMPROVEMENTS.

PROBYN'S "TASTELESS PILLS."

We have received from Messrs. Probyn and Co., of Grosvenor-street and Pall-mall East, the book of formulæ of their "tasteless pills," together with samples of some of them. Nothing can be neater and better than the manner in which they are coated, and it will be a boon to many to be able to obtain pills so well disguised as these are. The little book of formulæ will be useful to the practitioner, and in it almost every conceivable combination will be found. Among the most noteworthy are the phosphorus pills, of which there are no less than fifteen varieties, including combinations with nux vomica, quinine, iron, and strychnia in various doses. They are already widely prescribed, and are found to be reliable preparations.

OBITUARY.

WILLIAM CARR, F.R.C.S.

Mr. Carr was born at Leeds in 1814. He received his medical education at York as pupil of the late Mr. Needham, and at the School of Medicine in that city. Having passed the then usual examinations in 1837, he became assistant, and soon afterwards partner, of the late Mr. Barnett, of Blackheath. This connexion proved a most happy one to both, and led to an intimacy and affectionate regard such as is seldom met with between partners, and which was interrupted only by the death of Mr. Barnett in 1873.

Possessed of unusual medical abilities, untiring energy, and of a frank and genial manner, the index of a most manly and unselfish character, Mr. Carr acquired the large and successful practice in which he was actively engaged almost down to the day of his death. In 1862 he received the appointment of medical attendant to H.R.H. Prince Arthur (then living at the Ranger's House, Blackheath); this post he continued to hold until the Prince finally left the neighbourhood, eight or nine years afterwards.

But though immersed in practice, and an active member of various medical societies, Mr. Carr's energy was inexhaustible; no movement could arise, local, professional, or even natural, which he approved, into which he did not throw himself with characteristic ardour. When the volunteer movement arose, the first meeting to inaugurate the Third Kent Rifles was held at his house, and no one set a better example of regular attendance at early drill than himself. To the last he attended every field day of his corps as surgeon to the battalion. In 1865, when the cases (now almost forgotten) of Gibson and Daly were exciting the public indignation against the state of the metropolitan workhouse infirmaries, Mr. Carr was appointed by Mr. Farnall (the Inspector of the Poor-law Board who conducted the inquiry) as his medical assessor. Shortly afterwards he was associated with Mr. Ernest Hart and the late Dr. Anstie as one of the *Lancet* Commission for inquiry into the state of infirmaries. It was greatly due to the astonishing revelations made by those gentlemen, in their able and laborious report, that the present amelioration of the lot of the aged and sick poor of the London workhouses was made.

As local treasurer and general promoter of public and local charities, too numerous to mention here, Mr. Carr was equally unwearied, and, let us add, no one ever surpassed his success, in the often disagreeable task of procuring subscriptions. Liberal to a fault himself, who could resist his good-humoured solicitations? But the medical profession is especially indebted to him for his labours in promoting the cause of the Royal Medical Benevolent College at Epsom: nor were they confined to raising in an unprecedented manner the number of its subscribers, and in an unfailing attendance at its council-meetings. In connexion with the College, he not only obtained free scholarships at the chief London hospitals, which liberally responded to his appeal, but at the time of his death had far advanced in raising a sum of £7000 as a fund for the support of the scholars during their studies and for giving them a start in life. In the furtherance of this scheme he not only himself contributed in a manner which may well be called princely, but, by the infinite correspondence and labour it entailed, we fear he greatly shortened his useful and well-spent life. To his sorrowing family, and many friends, both far and wide, his loss is simply irreparable.

GEORGE MORLEY HARRISON, M.R.C.S., L.S.A.

The subject of this brief memoir was born at Chester on April 15, 1823, and was principally educated at the Wesleyan Preparatory School, Woodhouse-grove, Leeds, of which establishment his grandfather was governor. He was apprenticed to his uncle, the late Mr. Morley, of Leeds, a surgeon in extensive practice. His medical studies were pursued, first at the Leeds School of Medicine, where he obtained several distinctions, and subsequently in the metropolis at Guy's Hospital, obtaining the Membership of the Royal College of Surgeons in 1845. In 1849 he commenced his career in Manchester, and practised most successfully as a prescribing surgeon. About the year 1851 he was elected Honorary Surgeon to the Ardwick and Ancoats Dispensary, which office, after filling with the greatest assiduity, he relinquished in a few years, when he was unanimously elected Consulting Surgeon. In 1856 he commenced to lecture on Forsenic Medicine at the Chatham-street School of Medicine and Surgery, and continued his lectures after its incorporation with the Pine-street School as the Manchester Royal School of Medicine and Surgery, and again at Owens College when the Medical School became amalgamated with that institution. This position he resigned in the year 1876. In 1873 he was elected President of the Manchester Medico-Ethical Society, and at the expiration of his year of office was again chosen for 1874. Of late years, his thorough practical knowledge, combined with his sound treatment of disease, brought him frequently into requisition as a consultant, in which capacity his uniform consideration and general kindness endeared him alike to patient and colleague. As a practitioner having a widely scattered practice, his time was too fully occupied to allow much leisure for writing, so that, beyond a few lectures to the working-classes on sanitary and other cognate subjects, he never appeared in print. By his untimely death his patients have lost a kind and sympathetic friend, in addition to a valued adviser; whilst only those who had the privilege of knowing him intimately can realise to the full extent the loss they have sustained.

Royal Institution.—James Dewar, F.R.S.E., Jacksonian Professor of Natural Experimental Philosophy in the University of Cambridge, has been elected Fullerian Professor of Chemistry, in the room of Dr. Gladstone, resigned.

The Temperature of New-born Children.—Prof. Parrot recently mentioned, among the singularities observed in an infant the subject of *ramollissement* of the brain, that the temperature taken in the rectum remained for two days lower than that taken in the axilla. This led M. Réné to pursue a series of observations in the Hospital at Nancy, in order to ascertain whether this fact is so exceptional as supposed. He found that in six infants born prematurely the temperature was lower in the rectum than in the axilla in 103 out of 140 trials—*i.e.*, in five-sevenths,—and in 7 infants born at full time and healthy it was lower in 122 out of 145 trials—*i.e.*, four-fifths. M. Réné was unable to ascertain the exact period when the rectal temperature attained and constantly surpassed the axillary temperature; but the difference between the two was extremely variable.—*Gaz. des Hôp.*, April 7.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 9th inst., and when eligible will be admitted to the pass examination :—

Ballance, Charles A., student of St. Thomas's Hospital.
Bassett, H. Thurstan, of the Birmingham School.
Bowman, H. Torrington, of the Newcastle School.
Bredin, Richard, of the Liverpool School.
Butcher, E. Marsden, of the Newcastle School.
Elliot, John P., of the Newcastle School.
Garrett, Henry E., of the Charing-cross Hospital.
Hagyard, Robert, of the Leeds School.
Jones, Griffith J., of the Liverpool School.
Marsh, William A., of the Manchester School.
Oglesby, Joseph W., of the Leeds School.
Payne, Henry, of the Manchester School.
Peck, Francis S., of the Bristol School.
Pope, Thomas H., of the Edinburgh School.
Porritt, Norman, of the Leeds School.
Pownall, Arthur E., of the Manchester School.
Rees, John, of University College Hospital.
Rice, George, of the Liverpool School.
Rich, Arthur C., of the Liverpool School.
Staley, John G., of the Manchester School.
Suckling, Cornelius W., of the Birmingham School.
Whitehouse, John, of the Birmingham School.

The following gentlemen passed on the 10th inst., viz. :—

Barton, George H., student of the Leeds School.
Boulter, Walter E., of the Manchester School.
Challinor, Samuel McM., of the Manchester School.
Chronnell, James, of the Manchester School.
Dale, Frederic, of the Cambridge School.
Grinling, John C., of the Birmingham School.
Hayle, Thomas H., of the Manchester School.
Houlgrave, Augustine, of the Liverpool School.
Meeson, Alfred, of the Liverpool School.
Mellor, Thomas, of the Manchester School.
Pidcock, George D., B.A. Cantab., of the Cambridge School.
Ransohoff, Joseph, M.D. Ohio, of the Ohio School.
Smith, Arthur L., B.A. and M.D. Laval Univ., of Guy's Hospital.
Triggs, Herbert W. G., of the Edinburgh and Middlesex Hospitals.
Withers, Oliver, of the Manchester School.
Withington, George H., of the Manchester School.
Wolrige, Herbert E. R., of the Bristol School.
Wood, James, of the Manchester School.

The following gentlemen passed on the 11th inst., viz. :—

Adolphus, Theodore F. P., student of King's College Hospital.
Alban, Evan, of St. Bartholomew's Hospital.
Austen, Henry H., of Guy's Hospital.
Benington, Robert C., of St. Thomas's Hospital.
Dodd, John R., of the Newcastle School.
Falla, Walter, of University College Hospital.
Hebb, Frederick T., of King's College Hospital.
Kirsopp, Thomas, of St. Bartholomew's Hospital.
Lilley, James H., B.A. Cantab., of University College Hospital.
McDonnell, Denis, of King's College Hospital.
Miller, Herbert P., of University College Hospital.
Morrison, James T. J., of Guy's Hospital.
Newsholme, Arthur, of St. Thomas's Hospital.
Pearless, Edward M., of St. Bartholomew's Hospital.
Pemberton, Robert, of Guy's Hospital.
Savill, Thomas D., of St. Thomas's Hospital.
Squance, Thomas C., of the Newcastle School.

The following were the questions on Anatomy and Physiology submitted to the 187 candidates at the written examination on the 6th inst., when they were required to answer four (including one of the first two) out of the six questions, viz :— 1. Describe the minute structure of a very large and a very small artery. What endowments do their component tissues respectively confer upon arteries? 2. How long would a man be likely to survive when entirely deprived of food and water? What would be the relative loss of weight before death ensues; the condition of the temperature; the symptoms; and appearances after death? 3. Describe the astragalus, and mention in order the tendons in contact with it. 4. Describe the attachment of the muscles to the metacarpal bone and phalanges of the index finger. 5. Describe the origin, course, and relations of the gluteal artery; name its branches and their anastomoses. 6. Describe the course and relations of the duodenum.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 5 :—

Brown, John, 155, Marylebone-road.
Hicks, Frederick John, University College, W.C.
Leahy, Albert Wm. Denis, Oxford-street, W.
Middleton, Chas. Frederick, Russell-road, Finsbury-park.
Smith, Ferdinand Clarence, Brentford.
Taylor, Harold Gilbertson, Queen's-road, Birmingham.
Wheler, John Mordaunt, Matlock Bridge.

The following gentlemen also on the same day passed their primary professional examinations :—

Otway, Charles John Carrol, Guy's Hospital.
Reid, William Gladstone, King's College, W.C.
Rigden, Brian, University College, W.C.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CROCKER, HENRY RADCLIFFE, M.D. Lond.—Assistant-Physician, East London Hospital for Children, Shadwell, *vice* Ralph Winnington Leftwich, M.D., resigned.

DONKIN, HORATIO B., M.A. Oxon., M.B., M.R.C.P. Lond., M.R.C.S. Eng.—Physician, East London Hospital for Children, Shadwell, *vice* John Magrath, M.D., resigned.

GOODSALL, F. W. W., M.R.C.S., L.S.A. Lond.—Resident Surgeon, Farringdon Dispensary.

WARNER, FRANCIS, M.D. Lond.—Assistant-Physician, East London Hospital for Children, Shadwell, *vice* Ralph Winnington Leftwich, M.D., resigned.

WORSLEY-BENISON, H. W. S., F.L.S.—Lecturer on Botany at the Westminster Hospital, *vice* E. M. Holmes, resigned.

BIRTHS.

LITTLEJOHN.—On April 2, at 24, Royal-circus, Edinburgh, the wife of H. Duncan Littlejohn, M.D. Edin., of a daughter.

ROPER.—On April 9, at Granville-park, Blackheath, the wife of Arthur Roper, M.R.C.S. Eng., of a son.

TURNBULL.—On April 7, at Kelso, N.B., the wife of G. H. Turnbull, M.D., of a son.

WEBB.—On April 2, at Gibraltar, the wife of Surgeon-Major R. Webb, M.R.C.S. Eng., of a son.

MARRIAGES.

COCHRAN—EDGE.—On April 6, at St. Stephen's Church, Dublin, Andrew Wm. Cochran, Esq., Bengal Civil Service, to Letitia Katherine Jane, daughter of Samuel Edge, M.D., of Raglan House, Clyde-road, Dublin.

FULLER—AYLWARD.—On April 7, at St. Thomas's Church, Salisbury, Charles Chinner Fuller, F.R.C.S., to Gertrude Mary, third daughter of W. P. Aylward, Esq., of Salisbury.

GILL—HANMER.—On April 7, at Wallasey parish church, Cheshire, Henry Clifford Gill, M.R.C.S. Eng., of Bootham, York, to Ella Amanda, widow of R. Hanmer, of Alderley Edge.

PHILPOT—NEEDHAM.—On April 5, at St. Michael's, Chester-square, J. Henry Philpot, M.D., of Burton-street, Eaton-square, to Isaline, elder daughter of Joseph Needham, Esq., of Croydon.

WALKER—KELSO.—On April 4, at St. Bartholomew's, Sydenham, John Moore Walker, M.B., of Eastbourne, to Marie Amy Adelaide, youngest daughter of the late Captain Kelso, 72nd Highlanders.

WELCHMAN—HANDS.—On April 7, at St. Matthew's, Denmark-hill, Lambeth, Edward William, only son of Edward Welchman, L.R.C.P. Lond., M.R.C.S. Eng., of Southam, to Ellen, only surviving daughter of William Hands, of Ilmington, Warwickshire.

WIGHT—FINDON.—On April 5, at St. Luke's Church, New Kentish Town, George Wight, M.B., of Liverpool-road, Holloway, to Jane Eliza, eldest daughter of Henry Findon, of Hillmarten-road, Holloway.

WISE—LOW.—On April 3, at St. Jude's, South Kensington, James F. N. Wise, M.D., late Bengal Staff, to Agnes Foulis, only daughter of the late Colonel Low, Madras Cavalry.

DEATHS.

COLEMAN, HENRY WILLIAM ALEXANDER, M.D. San Marcos, Peru, College San Fernando, Lima, M.R.C.S.E., L.S.A.E., of Lutterworth, Leicestershire, House-Surgeon and student of Guy's Hospital, London; Physician Extraordinary to the late Don Ramon Castella, President of Peru; author of a work on Yellow Fever; founder and Manager for six years of the British Hospital, Iquiqui, Peru; on March 26.

CRUMPE, FRANCIS, M.D., at Tralee, on April 1.

HAWKINS, HENRY BAILLIE, M.R.C.S. Eng., at Hunslet, Leeds, on April 4, aged 29.

HAY, MARY, wife of W. H. Hay, M.D., at East-street, Bridport, on April 4,

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be registered in medicine and surgery under the Medical Act; unmarried. Applications, with testimonials, to John Binks, Hon. Secretary, on or before April 16.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. Candidates must be registered to practise both in Medicine and Surgery. Must be unmarried, and free from the care of a family. Applications to Mr. H. Howells, Secretary, 58, King-street, Carmarthen, on or before May 2.

EAST RIDING ASYLUM, BEVERLEY.—Assistant Medical Officer. Candidates must be under thirty years of age, and have at least one registered qualification. Applications, with testimonials, to the Medical Superintendent, not later than April 20.

GLOUCESTER COUNTY INFIRMARY.—House-Surgeon. Candidates must have registered medical and surgical qualifications. Testimonials and statement of qualifications to Dr. Batten, Gloucester, on or before April 21.

Macclesfield General Infirmary.—Senior House-Surgeon. Candidates must be doubly qualified, or graduates in medicine of any university in Great Britain or Ireland, with surgical qualifications, and duly registered. Applications and testimonials to Mr. Cooper, Clerk, at the Infirmary, on on before April 14.

Royal Free Hospital, Gray's-inn-road.—Junior Resident Medical Officer. Candidates must be possessed of a medical or surgical qualification from one of the examining boards of the United Kingdom. Applications and testimonials to the Secretary, on or before April 18.

Teignmouth, Dawlish, and Newton Infirmary.—House-Surgeon. Candidates must possess registered qualifications. Testimonials, addressed to the Chairman of Committee, to be sent in on or before April 26.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Birmingham (Parish of).—Mr. Jolly, Assistant Medical Officer of the Workhouse, has resigned; salary £150 per annum.

Daventry Union.—Dr. Samuel L. Popham has resigned the Workhouse and First and Second Districts. Workhouse—salary £30 per annum. First District—area 21,620; population 7143; salary £90 per annum. Second District—area 6694; population 1897; salary £50 per annum.

Woodbridge Union.—Mr. W. Dunlop has resigned the First and Second Districts. First District—area 6893; population 1451; salary £36 per annum. Second District—area 12,684; population 1681; salary £32 per annum.

APPOINTMENTS.

Chelmsford Union.—Mr. John Betts, M.R.C.S. Eng., L.S.A. Lond., to the Tenth District.

Crediton Union.—Mr. T. G. B. Hutton, L.R.C.S. Ire., L.M. and L.R.C.P. Edin., to the Bow and Colebrooke Districts.

Southmolton Union.—Mr. Thomas Sanders, F.R.C.S. Eng., L.S.A. Lond., to the Seventh District.

Tiverton Union.—Mr. Richard Bryden, M.R.C.S. and L.A.C. Lond., to the Kentisbeer District.

Isle of Wight Union.—Mr. John Bates Hoffmeister, M.R.C.S. Eng., L.R.C.P. and L.M. Edin., to the Godshill District.

The Jacksonian Prize.—We understand that at a meeting of the Council of the Royal College of Surgeons, yesterday (the 12th inst.), this prize was awarded to Mr. William Harrison Cripps, F.R.C.S., Surgeon to the Great Northern Hospital, and Demonstrator of Anatomy at St. Bartholomew's Hospital, for his essay on the "Treatment of Cancer of the Rectum, particularly as regards the possibility of curing or relieving the patient by excision of the affected part." This is the second consecutive occasion on which the prize has been carried off by a St. Bartholomew's man; the last recipient of it being Mr. H. T. Butlin, F.R.C.S. We believe Mr. Cripps is a nephew of the late Sir William Lawrence, Bart.

A New Convalescent Hospital, Brighton.—The proposal of the Committee of the London Hospital, Whitechapel-road, to establish a convalescent branch of their institution at Brighton, was again brought before the Town Council last week. It was stated that a deputation of the latter had had an interview with the Committee, and urged the abandonment of the project; but the Committee were unwilling to forego their purchase. They were convinced that any fears as to the institution injuring the town were groundless. Moreover, the property they had acquired—formerly the residence of Lord Leconfield—was so well adapted for their purposes that they felt, under all the circumstances, they could not give it up. A resolution expressive of regret at the decision of the Committee of the Hospital was placed on the minutes.

Gingivitis in Pregnancy.—M. Pinard states that, having occasion to examine a great number of pregnant women at a midwifery clinic, he finds an inflamed state of the gums to be a very common occurrence among them, coming on generally about the fourth month. It usually disappears a month or two after delivery, but is often prolonged over a longer period in nursing-women. It is met with also, but less frequently, in civil practice, and although the robust are not quite exempt from it, yet it is most frequently observed in women whose general health is bad. The best application consists of a solution of chloral in equal parts of tincture of cochlearia, which is applied every or every other day by means of a pencil. It causes little pain, and gives rise to a small eschar, which disappears in a day or so.—*Gaz. des Hôp.*, March 17.

Preservation of Vaccine Lymph.—Dr. Roncati, in the *Gaz. Med. Lombardia*, March 24, again calls attention to the superiority of his mode of preserving vaccine virus, which retains its active properties for weeks and months after having been collected in capillary tubes. The tube when filled is placed in a quill, and surrounded by very fine dried sand (such as is used for drying writing), and then sealed up. The tubes are deposited in a small phial, which is also filled with the sand, corked, and sealed. The tubes employed should not be excessively small, as the virus is then apt to dry. When it does so, it can be moistened with a little saliva. The phials containing the tubes may be stored away in little tin, wooden, or glass boxes. Dr. Roncati says that the sand is a very superior conservative agent to glycerine, and he attributes much of its efficacy to the equable temperature it usually maintains.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

G. Danvers S.—The epitaph was by William Wadd, a London surgeon, and as follows:—

"Here lies in repose, after great deeds of blood,
An hospital surgeon thorough;
Who *bled* for his *own* and his *country's* good,
At Saint Thomas's Hospital, Borough.

F.R.C.S., Southampton, and Mr. Williams.—There will be three vacancies declared in the Council in July next, one caused by the death of Sir William Fergusson, and two by the retirement in the prescribed order of the gentlemen named, who will, however, offer themselves for re-election.

Scientific, Deal.—Though the invention of the barometer is due to the mathematician Torricelli, yet in England Sir Christopher Wren was the first to suggest that the varying weight of the atmosphere was the true cause of the variation in the height of the mercury. This was a theory opposed to that of the disciples of Descartes, who ascribed the variation to the influence of the moon.

Phœbe.—The late Mrs. Nassau Senior was a sister of Mr. Thomas Hughes, Q.C. She held the office, first, of Assistant-Inspector, and then of Inspector of Workhouses and Workhouse Schools for nearly two years. She was the first woman who ever received a high-salaried official appointment under Government. We believe Mr. Sclater-Booth has not yet appointed her successor as Inspector of Workhouse Schools.

New South Wales.—Advices to February 19 state that her Majesty's ships *Wolverine*, *Sappho*, and *Conflict* had been released from quarantine as free from small-pox, the infected seamen having recovered. The neighbourhood in which the first death from small-pox occurred, and which had been under quarantine, had also been released. Captain Balfour, of the *Brisbane*, steamer, from Hong-Kong, which had introduced the disease into the colony, was fined £100, with the alternative of three months' imprisonment, the maximum penalty for such a breach of the regulations. An influential meeting had been held at Sydney to petition the Government to prevent further pollution of the harbour by allowing the sewage to flow into it.

Ex-Examiner, U. Lond.—The following members of the Board of Examiners of the College of Surgeons have obtained the Jacksonian Prize, viz.:—Mr. J. Birkett, Vice-President of the College, of Guy's Hospital, for his essay on "Diseases of the Mammary Glands in the Male and Female," awarded in 1848; Mr. J. W. Hulke, F.R.S., of the Middlesex Hospital, in 1859, for his essay on "The Morbid Changes of the Retina, as seen in the Eye of the Living Person and after Removal from the Body, together with the Symptoms associated with the several Morbid Conditions"; Mr. John Wood, F.R.S., of King's College, for his essay on "The Best Method of effecting the Radical Cure of Inguinal Hernia," awarded in 1861; and Mr. Christopher Heath, for his essay on "Injuries and Diseases of the Jaws, including those of the Antrum," awarded in 1867. Curiously enough, with the exception of Mr. Birkett, no member of the Board is at present on the Council.

Cremation at Milan.

An Italian paper, the *Pungolo*, reports a recent experiment in cremation on the body of a man, aged sixty-five years, at the cemetery at Milan. Two well-known Italian professors invented the apparatus used, which consisted of an interior brickwork vaulted chamber, with an outside covering of iron plates. Surrounding this is a second vaulted chamber or case of the same material, the interval between the two being two centimetres. This arrangement prevents all loss of caloric, and assists in keeping the outside of the urn cool during the combustion. In the centre of the inner chamber is placed the grating on which the body lies in a wooden case. In the present instance the case containing the corpse was put into the chamber by the aid of some simple mechanism, and in the space of two hours and a half was reduced completely to ashes.

Factory Working Hours—India.

There seems to be great need of a Factory Act in India, to place some restrictions on the working hours in the cotton and other textile factories established there. A correspondent to a contemporary writes:—"The mills are run from daylight to dusk the entire week through, the actual working-hours extending in some cases to from seventy-six to eighty per week. Nominally an hour for dinner is given at noon, and this is the only stoppage for meals or rest in the day; but the writer distinctly asserts that this hour is frequently curtailed to fifteen minutes. Very young children are employed in these factories—some under eight years of age; while many of the girls of twelve or fourteen years of age are already married and are mothers of families. In addition to their long hours of work, some of these poor creatures have a distance of several miles to walk to and from their work. The attention of the Indian Government ought to be called to this deplorable state of things, and legislative remedies provided."

COMMUNICATIONS have been received from—

Mr. J. Fisher Smith, London; Mrs. Coleman, Lutterworth; Dr. Lory Marsh, London; Dr. Henry A. Martin, Boston, U.S.A.; Dr. Miller, Blackheath; Dr. Jas. Gunning, Oude: Dr. Sutherland, London; The Registrar of the Apothecaries' Hall, London; Dr. O. Sturges, London; Mr. J. W. Groves, London; The Secretary of the Royal Institution, London; Dr. Sparks, Mentone; Mr. Hy. Worsley, Manchester; Mr. Wm. Williams, North Wales; Mr. H. Foster, London; Mr. Jas. Dewar, Kirkcaldy; Mr. H. Burdett, Greenwich; Messrs. Salt and Son, Birmingham; The Secretary of the Statistical Society, London; The Secretary of the Harveian Society, London; Mr. W. Douglas Hemming, London; Mr. Edward Ledwich, Dublin; Mr. S. Theobald, Leicester; Mr. S. J. Henderson, Ormskirk; Mr. George Gaskoin, London; Dr. Bruce, London; Mr. John Chatto, London; Mr. W. E. Poole, London; The Secretary of the Pathological Society, London; Dr. J. Dudgeon, Broomhill, Glasgow; Dr. Clifford Allbutt, Leeds; Mr. Jonathan Hutchinson, London; Mr. B. R. Wheatley, London; Mr. T. M. Stone, London; Dr. Barlow, London; Dr. Brinsley Nicholson, Brighton; Dr. Semple, London.

BOOKS AND PAMPHLETS RECEIVED—

Dr. L Hermann, The Vivisection Question Popularly Discussed—Rachel Williams and Alice Fisher, Hints for Hospital Nurses—Henry Smith, Sir William Fergusson, Bart.: A Biographical Sketch—Henry Lawson, M.D., Sciatica, Lumbago, and Brachialgia: their Cure by Hypodermic Injection of Morphia—Jonathan Hutchinson. F.R.C.S., Illustrations of Clinical Surgery, fasciculus vii.—Edward Hereford on Alleged Defects in the Office of Coroner.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Richmond and Louisville Medical Journal—Popular Science Review, April—Journal of Anatomy and Physiology, April—Journal of Psychological Medicine and Mental Pathology—Dublin Journal of Medical Science—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Sanitarian.

APPOINTMENTS FOR THE WEEK.

April 14. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Royal Institution, 3 p.m. Mr. E. Dannreuther, "On Chopin." (With many Illustrations on the Pianoforte.)

16. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. A Clinical Discussion. Cases by Dr. Crisp, Dr. Purcell, Mr. Francis Mason, and Mr. William Adams.

17. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Klein—1. Specimens illustrating the Minute Anatomy of Scarlatina; 2. Specimens illustrating an Experimental and Anatomical Inquiry into the so-called Pig-Typhoid. Dr. Braidwood—Contribution to the intimate Pathology of Contagion. Mr. Barker—Unusually large Vesical Calculi. Dr. Felix Simon—Aneurism of the Thoracic Aorta. (Microscopical Specimens on view at 8 o'clock.)

Royal Institution, 3 p.m. Prof. Gladstone, "On the Chemistry of the Heavenly Bodies."

Statistical Society, 7¾ p.m. Mr. F. Martin, "Births, Marriages, and Deaths, and the Comparative Growth of Population, in the Principal States of Europe."

18. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

19. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.

Harveian Society, 8 p.m. Mr. Herbert Page, "On the Thermometer and Clinical Exactness."

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

Society of Arts (Chemical Section), 8 p.m. Mr. C. W. Vincent, "On Spontaneous Combustion in Factories and Ships."

20. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. F. Pollock, "On Spinoza."

Royal Microscopical Society, 8 p.m. Mr. C. H. Golding-Bird, "On Double Staining with Indigo-Carmine and Carmine."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 7, 1877.

BIRTHS.

Births of Boys, 1279; Girls, 1246; Total, 2525.
Average of 10 corresponding years 1867-76, 2347·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	944	978	1922
Average of the ten years 1867-76	793·4	726·3	1519·7
Average corrected to increased population ...	...	...	1626
Deaths of people aged 80 and upwards ...	...	...	89

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	4	1	...	6	...	3	1	1
North	751729	39	6	3	1	24	...	...	1	3
Central ...	334369	1	11	1	...	3	...	3	1	1
East	639111	9	9	3	1	19	...	6	1	2
South	967692	25	20	8	2	17	3	7	1	2
Total	3254260	78	50	16	4	69	3	19	5	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·382 in.
Mean temperature	47·8°
Highest point of thermometer	66·0°
Lowest point of thermometer	38·2°
Mean dew-point temperature	42·6°
General direction of wind	Variable.
Whole amount of rain in the week...	0·85 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 7, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending April 7.	Deaths Registered during the week ending April 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2625	1922	66·0	38·2	52·1	11·17	0·85	2·16
Brighton	102264	43·4	46	33	59·0	41·3	48·6	9·23	0·55	1·40
Portsmouth ...	127144	28·3	85	42	58·6	41·5	47·7	8·72	0·78	1·98
Norwich	84023	11·2	57	30	63·5	37·0	47·3	8·50	0·47	1·19
Plymouth	72911	52·3	37	40	58·5	40·0	47·8	8·78	1·14	2·90
Bristol	202950	45·6	147	85	57·2	38·2	46·9	8·28	1·30	3·30
Wolverhampton ...	73389	21·6	52	32	56·3	34·1	44·1	6·73	1·09	1·77
Birmingham ...	377436	44·9	328	232	58·0	38·0	46·1	7·84	1·21	3·07
Leicester	117461	36·7	96	30	59·8	38·2	47·4	8·55	1·05	2·67
Nottingham ...	95025	47·6	73	67	59·0	34·8	46·1	7·84	0·58	1·47
Liverpool	527083	101·2	367	281	54·2	37·3	45·1	7·28	1·20	2·05
Manchester ...	359213	83·7	287	218	...	...	...	...	...	...
Salford	141184	27·3	142	73	58·4	34·6	44·6	7·01	0·80	2·03
Oldham	89796	19·2	85	68	...	...	...	...	...	...
Bradford	179315	24·8	139	90	54·4	35·6	44·4	6·89	0·75	1·90
Leeds	298189	13·8	259	156	57·0	35·0	45·2	7·33	0·79	2·01
Sheffield	282130	14·4	216	169	56·0	37·0	45·1	7·28	0·96	2·44
Hull	140002	38·5	83	71	59·0	32·0	46·1	7·84	0·87	2·21
Sunderland ...	110382	33·4	82	58	61·0	36·0	46·0	7·78	0·89	2·26
Newcastle-on-Tyne	142231	26·5	122	88	...	...	...	...	...	...
Edinburgh	218729	52·2	152	113	57·8	31·0	44·3	6·84	0·99	2·51
Glasgow	555933	92·1	367	311	...	...	...	...	...	...
Dublin	314666	31·3	147	191	59·6	29·0	45·1	7·28	0·94	2·39
Total of 23 Towns in United Kingdm	8144940	38·3	5894	4400	66·0	29·0	46·3	7·95	0·91	2·31

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·38 in. The lowest reading was 28·82 in. on Wednesday afternoon, and the highest 29·50 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ABSTRACT OF

THE CROONIAN LECTURES

ON THE

DIFFERENCE BETWEEN THE SEXES IN REGARD TO THE ASPECT AND TREATMENT OF DISEASE.

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Lecture II. part, and Lecture III.

Notwithstanding these instances of hysteria in men under the influence of mental excitement, I am anxious to impress upon you that in general we ought to view the hysterical symptoms rather as a sequel of these irritations, depressants, and perturbations, than that these latter are a part of hysteria or produced by it. My own observations lead me to the belief I have already expressed, that hysteria *per se* is very rarely a primary disorder. It is true that in women it occurs very rapidly, so as to appear as if it were a cause rather than an effect; but, upon close investigation, there will be found, very nearly always, that there has been a preparation for it. In man the attack generally results from mental trouble, shock, or anxiety. In woman these causes also act powerfully; but, as they are more open to the conditions already alluded to, we find that in them bodily ailments are potent factors in bringing on hysteria.

In woman the emotions are more powerful and less under command than in man. Emotional excitement and shock act much more violently on their ganglionic system, producing, if severe, complete, though perhaps temporary, sedation or paralysis: witness sudden death from abrupt news in a few, and amenorrhœa not infrequently. If not severe enough for this result, then it excites the ganglia and their corresponding organs, and we find over-action often as the result. All this is well known to every practitioner of medicine, and nothing is more marked than the rapid sympathy of the uterus with emotional excitement. Yet we cannot rightly call this hysterical in its first effect; only when it has continued, and there is, with the various disturbances, the tendency to emotional ecstasy and convulsiform paroxysms, should it be called by that name. At first it is a normal physiological effect, a part of the human, but more frequently of the feminine, constitution; the more marked but still normal exemplar of the emotional influence.

It is not difficult to understand also how women are much more obnoxious than men to sources of irritation. Besides the general non-sexual causes, she has added to her an organ—the uterus—which, as I have before said, a few minutes' consideration will show to be very different from a simple mass of contractile fibre. For, first, it is almost entirely supplied by the sympathetic system. It is not by pain, but by its reflex irritations, that it exemplifies its disturbances. It is, as we all know by everyday practice, in active sympathy with the central ganglionic system. It is liable to frequent periodic congestion, denuding itself of its mucous membrane each time, more or less. By this means its nerves are more exposed to irritation, being deprived of their ordinary protection. As a matter of fact, it is liable to abrasions at its lower portion, which, by friction against the posterior vaginal wall in walking, etc., and by the disturbance during coitus, permit a reflex excitement to be thrown back to the centres, which in its turn produces disturbance in the vaso-motor nerves, and thereby engorgements in the whole organ. The organ is, besides its other functions, an erectile one; one of its essential functions—namely, the maturation of the ovum—cannot be carried on without a high sensitiveness to nervous excitement, and, as a result, a readiness rapidly to develope embryonic cells. Although, for this to be effected in the completest manner, it requires the stimulus of the impregnated ovum, there can be little doubt that all excitants act in the same way in a minor degree. This quickness to respond, this nervous vitality, it is which makes its errors so impressive on the general sympathetic system. But when conception has occurred, and the growth of the uterus has proceeded, it is more than probable that its nervous structures and ganglia also grow; at any rate, we find its susceptibility increased and reflex phenomena more marked.

An organ having these qualities must necessarily render its possessor more liable to disturbances of the sympathetic system; and, when it is considered how closely the organ is mixed up with the moral nature, the influence of its diseases and derangements cannot be difficult to value; and, as a matter of everyday experience, we find that these troubles ensue more quickly in affections of the uterus and its appendages than in those of any other organ.

I apologise for somewhat repeating previous remarks. I take it that this is the chain of events in the causation of hysteria. An irritation exists, for example, on the surface of the os uteri. The first effect is to produce an enlarged and hyperæmic condition of the organ, uterine tenesmus; with an increased flow of secretion, a kind of catarrh. After a certain time the ganglia become irritable beyond the normal action, which increases the effect of the original cause; and after a time the influence extends up to the centres, and then we have other organs, notably the digestive, affected and disturbed in action. Then the heart is annoyed; and thus we have palpitations, easily accelerated action, etc. In other words, all the organs supplied by the sympathetic are sooner or later influenced; and, in consequence of the disarrangement of the organs of assimilation, we early find a failure of the health, independently of the neuroses; and generally a condition of anæmia, from the menorrhagia common to this reflexly engorged womb.

The reflex phenomena and their effects are somewhat apt to be overlooked in the male, although evident enough. Take an ulcer of the lower rectum, watch the tenesmus, the secretion of mucus, which first occurs. Then, the intestines above being irritated, a diarrhœa comes on, which is a natural result of any irritation of the lower bowel. After a time, backache ensues, and then the bladder sympathises. Sooner or later, dyspeptic symptoms show themselves, with loss of bodily strength and health. When the system has arrived at this point, we find then a liability to an excitable condition of the emotional system; and perhaps, though but rarely, paroxysms of a convulsiform kind, which we then call hysteria.

But sometimes the ganglionic system is primarily wrong, or becomes so in consequence of derangements of the cerebro-spinal centres. We probably shall all agree as to the practical importance of distinguishing this difference of origin; because, if we admit that eccentric irritations produce this miserable train of symptoms, then it must also be admitted that it is our duty to try to cure them as early as possible before these effects arise, particularly in men and women of sensitive type; while, in cases of centric origin, we have rather to contend with the error of the general system, the disturbance of the mind or cerebro-spinal organ. But, as I have stated before, these are the rarer cases.

But besides this, woman is doubtless endued with a more mobile nervous system; and this with less power of regulating its motions. This is not specially because of the uterus, neither specially in consequence of her ovaries; but because she is, in possessing these organs, so made.

Yet men vary much among themselves in regard to their mental sensitiveness and response to irritations; nearly, if not quite, as much as men differ from women. But their mode of bringing up, their more invigorating pursuits, their rougher contact with the world, acting on each, besides the influence of a similar kind derived by descent, tend to render their nervous system more under control. Yet, sooner or later, ill-health, overwork, watching, anxieties, long-continued pain, failure in his pursuit, and many other things, singly or in combination, will bring man into a state so similar to that of woman under the same circumstances, that it must be acknowledged that it is only in degree that the sexes differ.

And this being admitted, must we not come to the conclusion that we should, in studying these phenomena, rather take the more marked instance first, and then apply the knowledge thus gained to the minor? In other words, we must argue from the woman to the man, rather than in the opposite direction; not considering these nervous and emotional aberrations as a thing added to the woman, and not a natural part of her constitution, with which man had nothing in common.

I alluded before to the term "hysterical vomiting" as an evidence that it was a refuge for ignorance or indolence. Why *should* we call it "hysterical" in the way in which this term is generally understood. If "hysterical" mean uterine, then, in a large number of cases where we have sympathetic vomiting, I should be disposed to agree with the term; because we actually do find it to depend on some prior disturbance of the uterus and

appendages in the majority of cases. But this would not be the whole case; irritations of other organs may readily give rise to reflex vomiting; and if with this there be already over-sensitiveness to reflex irritation, and some disturbance of the emotions, many—may I not say most of us?—would be apt to make use of the word "hysterical"; and, when that word is pronounced, the patient is plied with all anti-hysterical remedies, instead of the cause being sought out and the cure applied to it The stomachs of some women are peculiarly sensitive to uterine irritation; even the ordinary digital examination, examination with sound, coitus, simple menstruation, retro-flexion, and many other circumstances, imitate in their effects the well-known influence of the uterine excitement resulting from pregnancy. Why should we call these vomitings "hysterical"? Irritations and congestions of the ovary will also set up vomitings. In these, as in many cases, the cause may be slight; and many are apt to think them not worth notice, and then cloud their indolence under indefinite and vague terms, which still further influence their mind against searching for the cause.

I am aware that some who have not watched the effect of these disturbances in uterus and ovaries, nor the effects of proper treatment, still go about to deny the possibility of the effects attributed to them. Perhaps too much attention to local conditions led some of the pioneers of modern obstetrics to overlook the more general state of the health, and to attribute defects in the constitution of the patient to the local disease, whereas the patient was suffering from both; or the general health, by the long standing of the local complaint, was so affected as to cause the greater ailment. But yet this does not alter facts, which are as patent as possible to an unbiased observer; at any rate, quite as clear as the facts about other diseases concerning which no doubt arises. I mean, that if a woman vomit incessantly for weeks with a retroflexed uterus, and, the moment it is replaced, the vomiting cease; and then, should it again fall back, vomiting again begins, to cease on replacement,—what can be more positive? Again, if a woman complain of great distress in walking, an intense backache, so that she can walk only a few yards; and, with severe menorrhagia and leucorrhœa, have an engorged womb, with large patent os uteri abraded all over; with vomiting every day; and, after the abraded surface has been covered over with a light touch of nitrate of silver or other similar styptic, twice or three times, the patient be able to walk with but slight distress half a mile or so, and the vomiting cease, the uterus at the same time becoming more healthy,—I say we have here as clear a thing as anything in medicine. But this is not special to the uterus only. I need scarcely multiply instances: irritation of the fauces, larynx, conjunctiva, afford familiar examples. Only, in the case of the uterus we do not have so much of pain in the parts principally supplied with spinal sensitive nerves, but rather engorgements, excessive secretion, tenesmus, and reflex irritations to the vital organs.

The remarks I have made regarding functional reflex disturbances I would also apply to the reflex pains found in over-sentient persons, male and female. A pain cannot exist without a cause, either in the part primarily, or by reflex irritation, or from centric disturbance. To call it "hysterical," when we fail to find the cause, is self-blinding. That man or woman can conjure up a pain I cannot as yet believe; but, no doubt, when a slight pain gives rise to constant distress, fear, and apprehensions—then, if the patient be also depressed and sensitive, the mind, constantly noticing it, becomes morbidly sensitive to its presence; but the pain is an entity notwithstanding.

From a consideration of the quickness with which irritations excite all the reflex sensibilities in woman, we derive a lesson of much importance in practice, applicable in principle to both sexes, but specially so to woman; namely, that we must not carry out our otherwise proper endeavours to cure too frequently, nor employ remedies so severe as that we may set up more irritation than we are endeavouring to relieve.

It is easy to over-treat women; many of the older obstetricians fell into this error, which some have since acknowledged. Neither should we unnecessarily increase their apprehensions regarding themselves by our remarks or actions, lest we find that, whilst curing the local trouble, we call up another spirit, not so easily put to rest. Our rule should be "the minimum of treatment consistent with efficiency."

In the female there is one condition having no exact parallel in the male, yet having a very interesting bearing on pathology, and in close connexion with the subject of reflex irritation. I allude to the *effusions of serum* generally, but blood sometimes, more or less pure, which occur into the cellular tissue about the uterus, and notably in the broad ligaments. Like many of the ailments of women, they are to be observed seldom otherwise than clinically. It is true that in some cases, where a large amount of effusion has been poured out, this has caused death at once, or has softened down, and the patient become worn out by suppuration; but generally the cases have recovered. But the evidence from clinical observation is clear enough. Many conditions give rise to it: cold applied to the lower parts, notably effective at the menstrual epoch; coitus; passing the sound, though but rarely; and other irritations applied to the uterus. Generally it is attended with marked derangement of the abdominal viscera; and this is so prominent in some cases, that the attention is first called to the liver and præcordium. A case I saw recently was attended three or four days for a "bilious" attack, the patient being quite yellow; and it was not till three or four days had elapsed that attention was directed to a swelling above the pubes. The young lady had sat on a cold stone at the time she was menstruating, which function was suddenly arrested. In the course of three or four days more the swelling had arrived as high as the umbilicus, and then subsided without suppuration. Now, the origin of these swellings is not difficult to explain, if we consider their causation. A sound touches the os uteri and canal; it merely passes in and out without abrading. It can but be by mechanical contact. This, we conclude, irritates the nerves; engorgement ensues, a blood-stasis, then exudation through the walls of serum; and if too intense, rupture and effusion of blood. The act of coitus does the same. So cold acts through the nerves of the feet or lower body.

I occupied the last lecture in discussing those complaints which seemed to depend chiefly on disturbances of the ganglionic system, directly or indirectly. There is one other disease which seems to be dependent on a similar state.

In some kind of mutual relationship with the conditions we last considered we find some other diseases, such as *exophthalmic goître or Graves's disease*, which recent observations have led to the belief that they arise from disturbances of the sympathetic nerves. And here we find, as we have already done, where the sympathetic is troubled, that women are more prone to its disturbances.

Now, in exophthalmic goître or Graves's disease, we find, as you are already aware, that females are affected largely in excess of males. Accompanied, as it is very commonly, with anæmia and disturbances of the menstrual function, we can recognise in it a depression and perhaps irritation of the sympathetic system.

But it is not only in exophthalmic goître that the excess is so much on the side of females. In simple *bronchocele* we find the same, and also in the other forms, occurring chiefly in the young and during pregnancy; while in compound bronchocele, 105 females to 15 males took place out of 120 cases.

I have thus very briefly touched upon the affections in which the sympathetic or ganglionic system is affected. We must now consider those in which the cerebro-spinal system is principally involved.

With regard to *insanity*, the difference between the sexes in number is not very marked; but the relative frequency in the sexes varies in different countries.

As to the causes of this difference in the two sexes, I cannot do better than quote the words of Dr. Jarvis:—"In as far as men, from their habits, their position, and their exposures, are more frequently intemperate; in so far as they have more of the sexual passion and less delicacy of sensibility, and are therefore more given to masturbation and sensuality; in as far as they are more involved in business, more interested in property and in politics, in schemes of aggrandisement and in pursuit of knowledge, and are therefore more frequently bankrupt, or disappointed, or overwrought with labour and anxiety; in as far as they are employed with machinery, and with powder, or more frequently travel and go over dangerous places, or are involved in strife and bodily quarrels, and therefore meet with accidents, falls, blows on the head, etc., than women, there are more male than female lunatics. But, in as far as females have more sensibility and stronger affections, and more active sympathies, and therefore suffer more intensely from grief, and loss, and sickness of friends, and more from a cause almost peculiar to themselves, in the want of domestic sympathy, and in the ill-treatment of intemperate and unkind husbands or children, or other kindred; in as far

as females are more sedentary, and are therefore more frequently dyspeptic, or suffer secondary irritation from the sympathy with the reproductive system, and therefore more ill-health; and inasmuch as they are more timid, and are therefore more exposed to fright,—females are more liable to insanity than males."

Dr. Meyer, of Berlin, shows how deeply the sympathetic system is involved in the disturbance, if we may consider that menstrual anomalies are indications of such. Out of 6000 insane women and girls, there were 1138 (or 18·97 per cent.) without, while there were 4862 (or 81·03 per cent.) with, menstrual derangements. The excess of menstrual disturbances was more notable in the better class than in the poor, in the proportion of 94·87 per cent. in the former, to 67·02 per cent. in the latter.

It would be difficult to estimate how far functional irregularities acted directly or indirectly, or how far the mental disturbance produced effect directly on the functions, or indirectly by interference with appetite, digestion, or exposure, etc. In either case, no doubt, there is a general tendeucy in the majority to derangements both of cerebro-spinal and ganglionic systems, and each plays to a variable but appreciable extent, in the several cases, into the hands of the other. The *diseases of the brain*, except those I have mentioned, occur very nearly equally in the two sexes. As is well known, woman in the pregnant state is exposed, not rarely, to attacks of *eclampsia*. How far this bears any relation to epileptiform convulsions in the male, it is difficult to say. It was, in the female, formerly supposed to be owing to the uræmic state; but it has not so simple a pathology. As this uræmia does not exist in many cases previously, vascular excitement and tension have something to do with it; and the reflex irritation of the pregnant uterus, aud often of the intestinal canal, must be taken into account amongst the probable factors.

In investigating this matter, I found that the urine passed just before the convulsion, in half the cases in which I could secure it, had no albumen, though all subsequently had it. I think it is not unlikely that this may be found in some of the supposed uræmic convulsions in the male.

The diseases of the spinal column are much more frequent in the male. But there is one condition, on which I wish to make a few remarks, that finds its victims among females. This has been called *spinal irritation*, and has been classified as a distinct disorder. Without attempting to decide whether sometimes there is a primary centric cause, I would wish to record the opinion, derived from long and careful attention to the subject, that in the majority of cases they have an eccentric origin, and that principally of the internal organs, which by their disorder cause a reflex irritation on a corresponding part of the spinal column, and then an extension to the nerves which pass out behind—sometimes only to those supplying the surface over the vertebræ; sometimes extending to those which pass to the front, when it has the form of neuralgias more clearly marked. I take it that it exactly corresponds to the sacral pain in women in labour or suffering from uterine disorders.

This pain, besides the aching over the sacrum, as I have before shown, is accompanied by a distinct tenderness of the skin, limited to a space generally of two or three inches in diameter, most commonly in the centre, sometimes on one side. When touched it is tender, sore, and is relieved by anodynes; in other words, the nerves of the skin are reflexly sensitive and in a state of irritation. Pressure, as is well known, benumbs it; and nothing shows its origin better than its complete subsidence on the cure of the internal cause, though, in long-standing cases, it is some time before all this effect has passed off, and a slight return of the cause will more quickly set up pain than at first: from which fact, I think we shall be right in assuming that the part of the spinal cord in connexion with the disorder becomes itself affected in some manner; but whether it goes so far as to produce paralysis, as asserted by Dr. Brown-Séquard, I will not here discuss.

With regard to the *digestive organs*, there can be no doubt but that the functional disturbances are much more frequent in females. I endeavoured to point out many of the causes for this in my last lecture. Neuroses of all parts abound: dyspepsia, gastrodynia, vomiting, spasmodic contraction of the intestines, colic, consciousness of the peristaltic action, imperfect function rendering them liable to constipation, impacted fæces, etc., tending to hæmorrhoids.

The majority of these troubles in women are the outcome of a general depression of the vital force, or the effect of reflex irritation from other parts, or most commonly dependent on both, each of which reacts on the other. Hence, to treat these cases as local disorders—as, for instance, the dyspepsia by stomachic medicine—without also attending to the causes, is unscientific; so also to endeavour to relieve the constipation by simple purgatives, and the colic by antispasmodics only.

Women, as a rule, rather underfeed themselves habitually, or eat unnourishing food; and thus gradually arrive to a state of general atresia, more or less marked; and this is a fruitful source of functional disturbance. There are many reasons for this: carelessness; want of healthful exercise to give appetite; reflex irritations giving rise to more or less constant nausea. A common cause arises from the fact that, having to look after her own food, the having but little desire for it, or having nausea, she does not take trouble to get it; or, in our English mode of living, having to carve for a large family, she does not help herself till the food is cold and not inviting. It is fortunate then that she does not seek to replace the solid food by stimulants. I have known very many cases of alcoholism produced by the coustant nausea consequent on uterine disturbauces. One case occurs to me, where a young married woman had adopted this habit from the constant and intense nausea and vomitiug during pregnancy, and from the same thing upon every menstrual period. This nausea was most distressing, with utter loathing of food and prostration upon the slightest uterine disturbance, and she found that stimulants relieved it.

In men these functional disturbances are more rare; but, amongst those engaged in the restless, anxious business of the world, they are generally of the forms most common in women. However, a considerable number of men, also some women, suffer from the effects of gross feeding and from the too free use of stimulants, coupled with want of exercise. The treatment of these latter, therefore, with general tonics is not so much indicated, as the reduction to simple food and healthful exercise, with such correction of symptoms as the case may require.

Let us now pass on to the *vaseular system*. Broadly, we may say that this system is more delicate in females than in males.

But there is one clinical condition much more frequent in woman which canuot be passed over, because, being the excess of a physiological phenomenon in frequent, or we may say constant action, it has a large and general application. I allude to that state of the vessels which tends to hæmorrhages, or sometimes only to effusions of serum. I alluded in my first lecture to menstruation, saying that there was every evidence to make us believe that a condition of vascular excitement or arterial tension existed throughout the system, and suggested that this, finding a ready exit in the denuded surface of the uterus, hæmorrhage occurred, and thus the tension was relieved. But, supposing this process was interfered with, then the tension would remain; and if any other part of the body was in a similar state denuded, or the skin or mucous membrane delicate, the tension of the venules becoming too high, their walls would give way, and thus we have a vicarious hæmorrhage. Without dilating on this highly interesting subject too much, one can readily conceive that, if there be already a congested or denuded state of the bronchial tube, hæmorrhage would be more likely to take place here than elsewhere; and thus tension would be taken off. We know that hæmorrhages from the lungs do recur at the menstrual epoch. I have known it occur from the bladder, which was in a state ordinarily of chronic inflammation. The same cause doubtless occurs in all those cases of periodical hæmorrhages.

But it is not necessary that the menstrual secretion should be deficient; it may be that the tension is in excess, and the vessels of some part weak, which, giving way, permit the hæmorrhage, which we then call supplementary. There seems to be a tendency to periodical recurrences of arterial tension, not only in women, but in men and in the lower animals; not always necessarily monthly. In women, a second or intermediate menstruation occurs, about half-way between the normal menses, with much disturbance. I have seen this in the healthy and often in neurotic patients.

Besides, there are other paroxysms of a similar kind following various excitements, which are relieved by oozings of blood; so that there is hardly any part of the body which has not been the seat of these hæmorrhages. This may serve to explain the occurrence of bleeding from the eyes, nipples, and skin, especially under the ecstatic erethism; though generally, if not always, there is a local stasis at the same time of neural

origin. This is a very interesting subject, and clearly requires, and would repay, more research. The sphygmograph will vastly help us in it.

But, besides these cases, there also exists in females a greater tendency to local congestions (blood-stases). I do not mean those bleedings from mechanical causes, for instance, from the stomach and bowels, from portal vein obstruction; nor those which occur from a vitiated state of the blood, as in Bright's disease, purpura, jaundice, etc.; but those which seem, so far as can be made out, dependent on disturbances of the vaso-motor nerves from emotional or reflex stimulation. The engorgements of the breasts and of the uterus from mental emotions may be instanced among many.

Men are subject to blood-losses from these influences, but not to so great a degree nor so frequently.

The opposite of this state of general vascular excitement is to be seen in the diseases I have already alluded to, namely, anæmia and chlorosis and their allies. Possibly, the functional paralyses, not infrequent in women, are owing also to a kind of local anæmia affecting the nervous structures in correspondence with the affected parts. The case I mentioned in my last lecture would be readily explained on this supposition. The sensitiveness of the vaso-motor nerves, as well as the sympathetic, would lead us to expect that we should find her more liable to the phenomena which follow both contraction (irritation) and dilatation (relaxation) of the vessels; and this is borne out by everyday experience.

The majority of the cases where errors occur in these functions never come on the post-mortem table, and probably, if they did so, we should find nothing, the action being vital, leaving no sign.

There is one other phenomenon which it might be well to consider a moment. I mean the growth of the heart which takes place during pregnancy. This now established fact is doubtless the result of sympathetic excitement communicated from the uterus, and enables it to meet the new requirements. It is a purely healthy process; but it would be interesting to know how far this growth may occur in the presence of large tumours in either sex; and how far the opposite—viz., amputation of limbs—would be attended by shrinking of the heart.

One cannot pass this subject without alluding to the changes which occur in the state of the blood during pregnancy. There can be now no doubt that this fluid is in a decidedly different condition from that of the non-pregnant state. The blood of non-pregnant women differs somewhat from that of healthy men, being more watery; but when men are of the leuco-phlegmatic type, their blood is but little different from that of women. But as soon as woman becomes pregnant, the change slowly commences and gradually increases till she arrives at full term. So far as investigations have ascertained, the changes are as follows:—It is more watery, its serum deficient in albumen, the coloured globules less in the proportion of 111·8 against 127·2 in the non-gravid state. The fibrin, on the contrary, is increased, and that undefined "extractive" also. Hence is explained the liability to thrombosis, which is so well known.

There is also a substance passed out from the kidney during pregnancy, which has been called "gravidine," or "kiestine" when altered by keeping. This exists probably in the blood previously. There are other changes, probably, with which we are little acquainted.

It is this state of the blood which renders the woman so liable to contract the formidable blood-changes so well known in the puerperal state; it is this which intensifies all the zymotic diseases when they invade the lying-in woman.

Is it a change found only in the pregnant and puerperal person? Are there no phenomena similar in the male? It may be so; for, at any rate, kiestine has been noticed in the non-pregnant woman by myself; and by others in men. One has a parallel in the susceptibilities to blood-changes in some men, who, apparently in excellent health, succumb to pyæmic and septicæmic conditions in a few days.

The process of pregnancy is simply physiological, and is doubtless carried on according to the same principles as the other processes of the body. But it is so enormous a change, and takes place so rapidly, that we are apt to think we find in it new and unique phenomena. In this exaggerated action and its errors, may we not find a magnified view of less but similar conditions in the non-pregnant woman and the male; a more distinct and clear exposition of what is in them ambiguous, both in physiology and pathology?

Respiratory Organs.—In this group we find that, taken altogether, men are rather more liable to disease than women, and the excess may arise from the greater degree to which men are exposed.

So as regards the *urinary organs*,—men suffer twice as severely and fatally from diseases of the urinary organs as the female, because of their liability to stricture, and retention of a stone, and prostatic disease. At the same time, the bladder suffers annoyance and violent pressure in pregnancy and during labour; but from the shortness and dilatability of the urethra, local curative treatment is much more easy and successful; and calculi which have descended from the kidney escape generally in a few days.

Malignant disease shows itself more frequently in the sexual organs than in any other; and in the female the high rate of activity and changes to which these organs are liable no doubt tends to set up the abnormal actions of malignant disease. Thus, in 1868, we find there occurred in England 6137 deaths from cancer in females, while only 2743 took place in males; in 1866, in females 5761, and only 2332 in males. Up to the age of thirty the sexes are equally affected, but after there is a great variation.

Again, the uterus renders woman very obnoxious to the absorption of irritating matters, whereby peritonitis, septic and otherwise, phlebitis, and septicæmia invade her. Its shape is one particularly adapted to retain secretions, blood, etc.; and thus, by the communication with the atmosphere, these are liable by the warmth of the body to decompose. Its structure is also peculiarly adapted for absorption: cavernous in texture, the lymph spaces large and very numerous, and connected with openings in the peritoneum, it is easy to see how readily irritating matter may be taken in if abrasion exist, as after abortions and delivery at full term; and this particularly if vascular tension have been previously lessened by hæmorrhages, ill-health, and fatigue, and other depressants, which act also in another manner. For whenever the vital force is depressed, the check it holds against decomposition is lessened, and we find secretions, which otherwise would have been innocuous, are then more liable to the putrid change. From this special danger the male is exempt.

From the violent uterine hæmorrhages, too, or slow draining of blood, which tells so severely and often fatally on the female, man is exempt. From the anæmia resulting she recovers, but slowly; indeed, I should say, never entirely. If you watch these patients, you will find them complaining of the sense of lassitude, imperfect functions, neuroses, emotional excesses, etc., very bitterly; in many for years after, if not for life. Some of them try to get over it by the use of alcoholic stimulants, only to increase the feeling, and ultimately to yield to fatty degeneration throughout.

From these special troubles also man is free; and thus he is more competent to maintain his position as a bread-winner, with muscular, nervous, and mental power well sustained by rich and nourishing blood.

It is curious to notice and difficult to explain why women, and especially pregnant women, are so much more liable to malakosteon, or mollities ossium, or osteo-malakia, than men. The proportion is at three or four times as many in females: always a condition of adult life, and frequently started by pregnancy, or relit by successive ones. Does it derive its virulence by the altered state of the blood, such as occurs in pregnancy? It must be something common to both sexes; but in what point does its cause exceed in women?

Before I conclude, there is one other subject which must not be omitted. I mean the period called "change of life," the "climacteric," "cessation of menses," "turn of life," or, by the French, "ménopause." These terms are applied to woman; but the term "climacteric," "turn of life," is also applied to man. In him the change is more gradual, as puberty is. Virility ceases at a very uncertain time, lasting till at least eighty in some; and though, no doubt, retrograde changes tending to decay take place in him, yet they scarcely can be said to be accelerated at any definite period; they are generally slow, and to himself scarcely noticeable. No doubt, when man has passed the prime of life, and his system is less vigorous than before, he is conscious of this change; and perhaps, if the task he set himself in the world's work be only half-accomplished, and the great struggle is to come,—if he have already overtaxed his strength, and then only partly succeeded,—or, still more, if he have failed,—his mind recognises its position, and the nervous power, losing its sustaining force, is apt to yield; and melancholia, hypochondriasis, dyspepsia, may easily supervene, and, supervening, add

to the depression. But this is not the equivalent of the ménopause in women. This is definitely attended by the involution of the ovary; the cessation of its activity, the reverse of the accelerated growth of it at puberty. As the latter was accompanied by the process of menstruation, so this is accompanied by its cessation. In other words, the ovary fails to stimulate the nervous and vascular system generally, and the uterus in particular; and almost invariably the power of conception is lost, like as it commonly ceases upon the occurrence of amenorrhœa earlier in life. We shall not be far wrong, probably, if we were to say that the negation of ovarian action occurs in both conditions. But does ovulation cease entirely? It would be difficult to say "Yes" at present, because we say imperfect ova passed away in childhood, and it may be imperfect ova pass away after the cessation of the menses. But it is quite certain that all the tendency to various troubles, to which I have partly alluded as belonging to females, principally after puberty, now cease, or at least do so after a time. All the local uterine irritations, engorgements, and fluxes; all the reflex symptoms, neuroses, vomiting, neuralgias, headaches, pass gradually off; and then, when the change is complete, the woman passes much into the state of one who has had her ovaries removed, having a tendency to revert to the neutral man-woman state; yet not entirely so, because there remains impressed upon the mind, memory, and nervous system the reflection of the woman, in manifold ways recalling to her actions and movements that manner and style she had in earlier life.

But after the change has been completed we generally find her system improved: not disturbed by the periods, nor pregnancy, nor by the multitudinous reflex symptoms which distracted her attention, losing sexuality and its various impulses, she becomes more capable of rendering herself useful. She is less of the woman she was than a man is at the same time of life. The study of the subsidence of menstruation tells us the same physiological facts as those which accompanied its origin; and, further, they point out the essence of those complaints, which, troubling the woman so long, subside at this epoch, showing how very neural they were, directly or indirectly; and few of them are attended by any lesions or change of structure. Thus, suffering all their menstrual life, women now generally become comfortable, stout instead of emaciated, composed instead of hysterical. It is true that those who were not in this state, but rather redundant, unless during the transition state they had free blood-loss, become hyperæmic relatively, and suffer its effects, such as sweatings, flushings, headaches, etc. But, where the later menses were free at the change, these disturbances are not much felt. However, while the change is going on, while the ovaries are fitfully discharging ova, there is much disturbance of the system, both vascular and nervous; sometimes the hyperæmia and its results, sometimes severe blood-loss, sometimes, as the occasional menstruation occurs, the reflex sympathies are rudely perturbed, producing much disturbance and distress. The cerebro-spinal system is excited or unduly depressed, and the mind often more or less vacillating, so that insanity and melancholia are often observed. Sometimes the vascular tension is so great as to result in violent uterine hæmorrhages, bleeding from piles, and apoplexy; or excitement in the sexual organs so great as to kindle malignant disease, as I have already shown, in the uterus, ovaries, or breast.

Time would fail me to point out all these changes, but this is less important, because they are so well known to you. When, as I said before, the change is well established, woman passes on to old age better than man, because free from sexual activity and its many demands on the powers of the system at this later period of life; and, as a rule, suffering less from disease and more secure against external battles, exposure to the elements, more cared for, she more frequently outlives her male comrade in the battle of life.

I have thus, though but imperfectly, as I feel, placed before you an outline of the points wherein the male differs from the female. In all these points, some allowance must be made for the effect of the habits and mode of life belonging to each sex, tending it more or less to disease; and also for that other influence already mentioned—namely, the transmission of sexual peculiarities. The accurate estimate of these forces is very difficult; though it is not of so much consequence to the subject before us, because this deals with the actual accomplished result. I venture, however, to think that it may serve us something in our diagnosis, elucidation, and treatment of these diseases, thus to bring them in contrast.

There are many things that suggest themselves upon consideration of the foregoing facts. A few of the most prominent I will mention:—

1. In studying diseases, we may expect to find the greatest information in that sex in which the disease is more marked or more prevalent; and, also, we can study it best at that age in which it is more marked or more prevalent.

2. We may possibly find a solution of the difficulty in the nature of a disease by first noticing how it affects the sexes differently, and comparing this with the general sexual differences.

3. In females, and men of a similar type, we cannot allow an irritation or depressant to continue long without the liability to greater effects than in the typical male.

4. Neither can vigorous treatment in these be so severe or prolonged without the liability of setting up irritation itself in turn.

5. The emotional system in women and men of feminine type being easily disturbed, more care must be given to allaying its excitements in these persons.

6. In cases of emotional excitements, neuroses, functional derangements, unusual pains, etc., we should endeavour to find the cause, not shielding ourselves under the terms "hysteria," "nervousness," "fancy," etc.

7. Inasmuch as cancer of the sexual organs is so frequent in women at the climacteric, it should be a rule to us especially to allay irritations and disturbances of these organs and system as much as possible.

8. Men need not be more subject to gout than women, provided for a few generations the causes which develope gout in adult life were carefully avoided.

9. We should be careful not to underrate any sign of commencing disease of the cerebrum or spinal cord when it presents itself in men.

Many other hints may be taken, which I will not detain you in mentioning; each of you will be able to do so for himself.

I place before you a table drawn out from the foregoing lectures, which shows the distinction of the sexes in regard to disease more readily. It is difficult to estimate accurately the proportion in such cases as chlorosis, anæmia, etc.; but the proportions may be taken as approximately correct, according to our present information.

Gentlemen, I feel conscious of possibly wearying you by placing before you a view of human nature taken, perhaps, rather from the obstetric side. I could easily add to it: the sketch is not complete, it is but a rough one. Yet, to properly study our complex nature, we require not only the assistance of the binocular stereoscope, but rather of a polyscope. But, to make a perfect combination, one side should not be too salient. I trust mine is not so.

ORIGINAL COMMUNICATIONS.

A SECOND CONTRIBUTION TO ANTISEPTIC SURGERY.(a)

BEING NOTES OF CASES TREATED IN THE GLASGOW ROYAL INFIRMARY

By JAMES DUNLOP, M.D.,

Surgeon to the Royal Infirmary, and Professor of Surgery in Anderson's University.

[Reported by Mr. D. TYNDAL, Surgeon.]

I HAVE pleasure in bringing before you another contribution to the evidence of the value of the antiseptic method of treating wounds, which had been supplied by the cases under my care in Wards Nos. 15, 23, and 24, in the Royal Infirmary, for the year ending November 30, 1876.

With reference to the details of the antiseptic method of treatment, or as it is now termed "Lister's dressing," I have nothing to add to what was stated in my report for the year 1875. I can say, however, with regard to the results of the treatment, that I have not had to record a single death from pyæmia during the year—a statement which I was unable to make in my former report.

In preparing the subjoined statistical table, I have, for purposes of comparison, adopted the form used by Professor

(a) A paper read before the Southern Medical Society of Glasgow on February 8, 1877.

Spence, of Edinburgh, and published in the *Medical Times and Gazette* for April, 1876, in which he gives the results of his operations, and of the simple methods of treatment which he adopts in his wards in the Royal Infirmary, Edinburgh.

These results appear to me to be so satisfactory, and the method of obtaining them so simple, that I have ventured to give what I may term "Spence's dressing" a trial during the current year. In case that some of you may have omitted to read Professor Spence's paper, I may be allowed to make from it the following extract, which will give you an idea of the simplicity of the dressings employed:—

"The boracic solution is prepared by pouring boiling water upon the pure crystals of boracic acid, allowing it to stand in a covered vessel till it cools, and decanting the clear, adding more boiling water to dissolve any portion that remains. The acid is so sparingly soluble that there is not much fear of it being too strong. For use in dressings, say in an excision of the breast, the method is, after the wound has been thoroughly cleansed by pouring a stream of tepid carbolic lotion over the surface, and closed by sutures, two separate layers of lint which have been soaked in the solution, and wrung nearly dry, are laid over the line of incision and contiguous surface. At first the upper layer is occasionally removed, wetted, and reapplied, without removing the under layer next the wound, merely to keep that layer moist. Drainage-tubing is used to favour the escape of any blood or serous discharge, and to give an easy means of occasionally washing the wound gently out by means of a syringe. Unless there be bleeding there is no need to disturb the deep dressing for twenty-four or even thirty-six hours. After the second day only a single bit of lint is used, covered with wax-paper. The sutures are generally removed about the fourth day, but, before doing so, strips of strong adhesive-plaster are applied between the stitches so as to maintain the edges of the wound in apposition, and these straps should not be removed unless they become loosened or dirty. In most cases I leave the sutures long, merely twisting them so as, if bleeding occur, to allow the wound to be reopened and all clots washed out. The surface is then cleansed, the edges of the incision closed by the sutures, which are then cut short, and the dressing applied; thus reactionary oozing and its effects are guarded against, and primary union generally obtained. In regard to the comparative advantages of the boracic lotion or of the carbolised oil dressing, I can scarcely speak, for both have answered well. I certainly prefer the former in cases of excision of tumours and joints, and in amputations when the soft tissues are healthy; but in cases of amputation or excisions of joints in which there are old sinuses and a diseased state of the skin, the oil dressings seem to meet the requirements of the case better, and are more easily applied and removed without causing pain. In using oil dressing, I apply a narrow strip of waxed paper over the line of incision as a protection from the irritating quality of the carbolised oil."

With this simple method of dressing, combined with careful general treatment, Professor Spence tells us that he had eighteen amputations of upper and lower extremities with only four deaths—an amount of success which must appear to many of you as very remarkable, more especially when you reflect upon the fact that during the whole period of treatment there was not the slightest attempt to keep germs out of the wound. There does not appear to have been any belief whatever in the germ theory itself, or in the special efficacy of the antiseptic method of treatment. I think, however, that much of the success which has attended Mr. Spence's practice must be the result of his great experience as an operating surgeon, and specially of his knowledge of general therapeutics. Some surgeons seem disposed to ignore constitutional treatment altogether in the management of their operation cases, and trust entirely to spray, and gauze, and drainage-tubes for bringing about successful results. So long as the discharge from a stump keeps sweet, the case may be considered to be going on favourably, while at the same time there may be albumen in the urine or tubercles in the lungs, which may be rapidly proving fatal.

While my confidence in the antiseptic system of Lister remains unabated, I feel that not a little of the success which is often attained is due to the careful nursing of the patients, to the generally improved hygienic condition of the patients' wards, and to the effective constitutional treatment which they receive both before and after operation.

TABLE I.—*Cases Operated and Treated Antiseptically by Dr. James Dunlop, from November* 30, 1875, *to November* 30, 1876.

	Recovered.	Died.	Total.	Total recovered.	Total died.	Grand total.	Cause of death.
A.—AMPUTATIONS:							
1. Upper Extremity—							
a. At shoulder for disease—Malignant disease of head and tuberosities of humerus	1	..	1				..
for injury—Severe railway smash; arm severed from the body	1	..	1				..
b. Upper arm for disease—Extensive strumous disease of elbow and forearm	2	..	2				..
for injury—One a railway smash, and one by machinery (toothed rollers)	2	..	2				..
c. Lower arm for disease—Strumous disease of hand, wrist, and forearm	1	..	1				..
Amputations in upper extremity, 7 (for disease 4, for injury 3); no deaths				7	..	7	
2. Lower Extremity—							
a. Through thigh for disease—Two for strumous disease of knee-joint; one for malignant disease in leg	3	..	3				..
for injury	3	3	6	..	..	..	Shock; traumatic gangrene.
b. Through leg (1) for disease—(Syme's operation) Strumous disease of ankle-joint and tarsus	3	..	3				..
for injury—(Syme's operation) Railway injury to foot; wheel passed over it	1	..	1				..
(2) Primary—One a railway injury; one by wheels of a loaded omnibus	1	1	2	..	..	..	Delirium tremens.
Secondary — Compound comminuted fracture through ankle-joint by twist of chain	1	..	1				..
Amputations in lower extremity, 16 (for disease, 6—no deaths; for injury, 10—4 deaths).				12	4	16	
				19	4	23	
B.—EXCISIONS OF ELBOW FOR DISEASE	8	..	8				..
C.—STRANGULATED HERNIA	1	..	1				..
D.—EXCISION OF TUMOURS from scalp, sternum, knee, labium, perineum	7	..	7				..
				16	..	16	
				35	4	39	

TABLE II.—*Miscellaneous Operations, and their Results.*

	Recovered.	Died.	Total.	Cause of death.
Lithotomy: 11 calculi removed(b)	—	1	1	Bronchitis.
Lithotrity	1	—	1	—
Open knee-joints	6	1	7	Erysipelas.
Circumcision	5	—	5	—
Vesico-vaginal fistulæ	1	—	1	—
Hæmorrhoids	3	—	3	—
Fistula in ano	2	—	2	—
Psoas abscess (aspirated)	1	—	1	—
Division of cicatrix (burn)	1	—	1	—
Retention of urine (by aspiration)	1	—	1	—
Paraphymosis	1	—	1	—
Ligature of artery	1	—	1	—
Clubfoot (tenotomy)	1	—	1	—
Tracheotomy (syphilitic)	1	—	1	—
Epithelioma	—	1	1	Traumatic gangrene.
Ovariotomy	—	1	1	Peritonitis.
	25	4	29	

A.—AMPUTATIONS IN UPPER EXTREMITY.

On glancing over the above table it will be observed that the amputations in the upper extremity were seven in number, and these were all successful. Two were at the shoulder-joint—one for malignant disease of the head of the humerus; the other for injury. Two were smashes in the upper arm—one by toothed rollers, and one by a railway wheel; one a smash of the hand and wrist by toothed rollers; and two for extensive disease of the elbow-joint.

The following notes of the more important of the above cases have been extracted from the ward journal by my clinical assistant, Mr. Tyndal:—

Case 1.—M. H., aged twenty-three years, was admitted into Ward 24 on June 27, 1876, with his left arm amputated near the shoulder-joint. It appears that while in a state of intoxication he wandered along the line of railway in the neighbourhood of Cambuslang, and, feeling indisposed to go further, he lay down and fell asleep upon the line. He was awoke by an engine drawing several loaded waggons passing over his arm, completely severing it from his body. After calling for assistance, which soon came, he was conveyed to the station, which was close at hand, where he was seen by a surgeon, who ligatured the main vessel, and thereafter sent him on to the Infirmary, a distance of a few miles, where he arrived in a very weakly and exhausted condition, as there had been, in addition to the dreadful injury, considerable oozing from the lacerated stump. He was immediately placed in bed, and to control any further bleeding an Esmarch's ligature was applied. External warmth by means of hot pans was promoted, and at the same time hot tea with a little brandy in it was administered from time to time. In the course of two or three hours he had sufficiently rallied to admit of operation, which was performed under chloroform, and the stump dressed under the antiseptic spray. When the remaining portion of the humerus had been removed from the glenoid cavity, it was found that the three inches of bone which had been left was splintered into several pieces, the fractures passing through the head of the bone. The flaps, which were ample, were brought together by means of silver wire, and a large drainage-tube was inserted into the wound. A half-grain morphia suppository was introduced into the rectum at bedtime. A few hours after the operation, when reaction was fairly setting in, there was so much oozing of blood that the dressings had to be removed, the flaps opened, and one or two small bleeding points secured. After the wound had been syringed carefully, the dressings were re-applied under the spray. Under the influence of the morphia he had a comfortable night's sleep, and during the day he partook of some food. For several days he progressed favourably. He made no complaint; he was cheerful, and took his food fairly. There was only a little discharge, and the stump was looking well. On the night of the 24th, however, he became slightly delirious, his pulse rising from 96 to 112, and his temperature, which had been normal, to 101·2°. He had administered to him several doses of hydrochloral and bromide of potassium; and on the following morning the nervous symptoms had subsided. The patient had slept for several hours, and on awaking his pulse was 100, and his temperature 99·3°. The discharge was copious, though sweet. The chloral mixture was to be continued if necessary. There was no return of the delirium. There was considerable discharge for about two weeks, but on July 4 the patient had progressed so favourably that the sutures were all removed, and by the end of the month the flaps were completely united. On August 11 he was dismissed well. It occurred to me during the course of treatment that the large drainage-tube, which had been specially serviceable for the first few days after the operation, had been retained in the flap too long, for no sooner had it been removed than the amount of discharge was visibly lessened, and the drainage-opening itself, contracting daily, very soon healed up, leaving a nicely rounded consolidated stump.

(b) An old man, aged seventy.

Case 2.—W. S., a mason, aged twenty years, was admitted into No. 15 ward on August 8, 1876, with a diffuse swelling occupying the entire arm from the elbow to the shoulder. He had been in good health two months before, and he thought that his arm had been strained in assisting at removals at the term time. About a fortnight before admission the swelling at its posterior aspect was aspirated, and about six ounces of dark-coloured fluid blood and pus were removed. On the 20th amputation was performed at the shoulder-joint, the flaps being entirely of skin. There was nothing worthy of note in the further treatment of the case. The flaps readily united with very little suppuration, and by the end of September he was dismissed well. Dr. Foulis, the pathologist, who made a careful examination of the amputated limb, reported that the case had been one of malignant disease of the tuberosities and shaft of the humerus. I have repeatedly observed that in amputations for the removal of malignant disease, if the flaps are formed of (at the time) sound tissue, the progress of the case is usually satisfactory, the patient rapidly regaining that health which he may recently have lost, while the wound is readily healing without much suppuration or any constitutional disturbance whatever. In this case the disease returned in the stump after it had been perfectly whole for two months and a half. Of course there was no further operative procedure contemplated.

Case 3.—Y. G., a quarryman, aged twenty-three years, was admitted into Ward 15 with strumous disease of the left elbow-joint. The disease had continued for twelve months, and during the last three the health of the patient had completely broken down. When admitted he was very weak and emaciated, and the arm, both above and below the elbow, was a diseased mass, with numerous sinuses leading down to carious bone. For several weeks he was carefully nursed and fed, under the hope that he would rally and gain sufficient strength to enable him to bear amputation of the limb. The disease was too extensive and the system too low even to suggest the idea of excision of the joint. On March 18 amputation was performed on the arm by the modified circular method, the lower section of the flap being cut out of tissue having strumous material more or less infiltrated through it. My object in forming the coverings of the bone so low down was to enable me to limit the operation—to saw through the humerus just above the point where the disease stopped; and I hoped that thereby the patient would have a better chance, in his then weakly state, of getting over the shock of the operation itself. It was a mistake, however. I should have done better if I had gone higher up, and cut the flaps out of sound tissue, for I found that the strumous material in the flaps prevented ready union; suppuration ensued, and continued in the flaps for weeks. Then the patient had rigors and night-sweats, and several attacks of erysipelas, none of which, however, were severe; and on several occasions it was thought that our old enemy pyæmia had undoubtedly set in. Under careful nursing and feeding, however, and the liberal use of the hypophosphites in glycerine, the health began to improve, the night-sweats to cease, and the stump to heal. On May 16 (just three months after the operation had been performed) the patient was dismissed well, with his stump firmly cicatrised.

Case 4.—M. C., a mill-worker, aged twenty-five, was admitted into No. 23 ward on September 16, with a severe smash of the right forearm and hand. While at work she incautiously turned round to speak to a neighbouring worker, and at that moment her hand was caught, dragged in, and crushed between two heavy revolving cylinders, and before she was relieved her hand and the half of the forearm were separated from the body. She suffered very much from shock. There was, however, no hæmorrhage. After she had rallied somewhat, she was removed to the theatre and put under the

influence of chloroform. An examination of the lacerated stump revealed the fact that the remaining portions of the radius and ulna were split into several pieces, and the joint opened. The soft structures around the joint were uninjured, and for three inches and a half below the joint the skin appeared sufficiently sound to form a flap. Accordingly it was resolved to amputate through the joint, the flaps being formed by the circular method and consisting of muscles and skin. The end of the humerus was left entire. In twelve days the flaps were almost entirely healed, without a drop of pus; and on October 10 she was dismissed well. The dressings were only changed eight times during the course of treatment; and the remarks in the journal were—No pus; only a little watery discharge.

I now observe that the majority of cases under antiseptic dressings are uninteresting to the students going round the wards, because they are successful; and it is only when something is going wrong that they become really worthy of attention. I sometimes look with a favourable eye on the formation of a small abscess near the stump, especially in a case of Syme's amputation at the ankle-joint, because it breaks the monotony of the treatment; it is something for the student to look at, to examine, and to study. He becomes wearied very soon of jacconet and protective, of steam spray, and one-to-forty solution!

Of the remaining three amputations in the upper extremity, there was nothing in their history specially worthy of mention, beyond this fact: that in two of the cases—amputations for disease—union was complete, and the patients were dismissed, within four weeks of the date of operation. In the statistical report prepared by my assistant, Dr. Kendall, for the year 1875, I find that there had been fourteen amputations in the upper extremity, and that of these seven died, three from shock, and four from pyæmia. This year the operations in the upper extremity have been fewer, but the results are completely satisfactory. There were three amputations for disease, and four for injuries.

(To be continued.)

WHOOPING-COUGH AND COCHINEAL.

By BRINSLEY NICHOLSON, M.D.

In the small and isolated colony of West Australia, contagious diseases are introduced as unacknowledged imports, and, when their accumulated food-supply is exhausted, die out. Luckily, from the small communication and the distance of the colony from other civilised stations, these importations are very rare. But, in 1868, two companies of the 14th Regiment were sent thither from New South Wales to overawe the exported Fenians. They took their wives and children with them, and, with these, whooping-cough. After some little time the disease broke out—first at Freemantle (the seaport of the colony), where one company had been stationed; and afterwards at Perth (the capital), some seven miles up the river, and close to which the other company were housed. The climate being equable and warm, the population small and not overcrowded, the children sufficiently fed, and there being an absence of those dens of filth, squalor, and misery too common in our English towns, the disease was wanting in complications, and with some exceptions tolerably mild.

The treatment of those that came under my observation was at first, and partly of necessity, simple—doses of rhubarb, etc., of James's powder and grey, with expectorants and anodynes of ipecacuan in various combinations. Belladonna, contrary to my expectations from its use in other disorders of the throat and wind-pipe, was found useless, and was therefore soon discarded. Having but a limited quantity of hydrocyanic acid, I kept it in reserve for any case of danger, but none such occurred to me.

Such treatment, however, was unsatisfactory, having but a small and limited influence over the disease. Under these circumstances I remembered that my shrewd old hospital-sergeant had told me that two medical officers in the Royal Artillery had used a remedy which in his experience had been efficacious. This was cochineal. After questioning him again, I determined to give it a trial, though without much faith in its success. The result, however, was striking and decided. The whoop immediately lessened, or after a short time disappeared, and the course of the disease was shortened. So marked was the effect that neither error could be made nor doubt exist; and after the first trials, in which the medicine had been added to an ordinary expectorant mixture, I gave it alone in spirit and honey. The dose employed was a grain for every year of age, up to eight grains for adults (of whom I had two cases). During its administration I could observe no physiological effects.

On returning to Europe I had hoped to increase my experience, but, while in the army, only came across one case, and that accidentally. Some friends of mine in Cork went into lodgings, down the river, at a solitary house on the river-bank. On visiting them the next day, they replied to my inquiries, that they liked the place much, but had neither of them slept, having been kept awake by the very loud, frequent, and most distressing cough and whoop of their landlord's two children.

Being asked to see them, I found two boys of five and six or upwards, healthy in constitution, but exceedingly pale, and was told that so severe were the evening and night paroxysms, that blood flowed from the mouth, nose, and ears. Some cochineal mixture was sent them, and on my next visit I was informed that on the night following its administration the cough and whoop had greatly lessened, the bleeding had ceased, and my friends had slept comfortably and undisturbed.

I hesitate to call this remedy an antidote, but it has a most prompt effect either in directly calming the spasmodic whoop, or on the poison producing it. In the third stage of the disease it is useless. One cannot, of course, expect that it will be of use in the complications themselves; yet I anticipate that it will, by its action on the disease, greatly prevent them, more especially those which are nervous or cerebral.

My wife tells me that her grandmother gave it to her brother for the same some twenty years ago; and I also find its use mentioned in Squire's "Companion to the Pharmacopœia." Not, however, having heard of it till a little before the epidemic in West Australia, and as there is no mention of it in Copland or West, I have thought it as well to record its marked efficacy in my hands, and to make that efficacy more widely known.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LEEDS GENERAL INFIRMARY.

CASES OF SYPHILITIC DISEASE OF THE NERVOUS SYSTEM.

[Reported by Dr. E. H. Jacob, Resident Physician.]

Case 1.—*Hemiplegia from Inherited Syphilis.*

H. M. R., aged sixteen, was admitted into the Leeds Infirmary, under the care of Dr. Clifford Allbutt, on April 22, 1876. She was brought by a friend, and but little information could be obtained as to her past history. Her father was said to have deserted her, and her mother to have died from some disease contracted from her husband. For the last six months the girl had been ailing, with general loss of strength, and swollen cervical glands. A month before admission she was found one morning to have lost power over the left side. About two months ago she became suddenly deaf. She had been getting gradually worse since the beginning of her illness.

On Admission.—The patient presented a most pitiable sight. She was considerably emaciated; her head showed the characteristic form of hereditary syphilis, with low forehead, raised occiput, and flattened nose, and the teeth were tolerably marked in their specific indications. The right eye was squinting outwards. There had been interstitial keratitis in both eyes, completely destroying vision in the right, and partially so in the left. Hearing was completely gone. She spoke in a low, harsh voice, and moaned frequently as if in pain. There was complete loss of power in the left arm and leg, but with sensibility only partially impaired. There was but slight wasting of muscles and no facial paralysis. There was some tenderness on percussion over the lower dorsal spines, but no prominence perceptible. She had some cough, but no expectoration; some deficient resonance and flattening at the right apex, with moist râles all over the chest. The heart was healthy. She complained of pain in her arms and back, and was unable to hold her water. She was said to be "naturally stupid," and, though she could read, there was great difficulty

in getting her to understand questions put to her on paper. She was ordered five grains of iodide of potassium and decoction of cinchona. About a month after admission she suddenly became paralysed on the left side also, and lay completely unable to stir a limb. She moaned if she were touched, but took food pretty well. She was very restless at night, sleeping badly, and moving her head constantly, and complaining of itching of the skin. The iodide was now increased to fifteen grains three times a day (May 22).

June 14.—Power has returned in the right arm. She looks better, and is less fretful.

July 5.—There is now some power in the left arm, and she can grasp pretty well with the hand. General appearance improved.

7th.—There is some return of power in the left leg, and she can sit up in bed.

15th.—She sits up for the greater part of the day. The legs are emaciated and slightly flexed, but looser than before. Ordered to be rubbed every day with oil.

October 4.—She has continued to improve, and can now stand without assistance, and walk with the help of an arm. The left leg has considerable power, though less than the right, but it is stiff and slightly flexed, so that the heel does not touch the ground. There is no pain. She is cheerful, and will talk and read aloud, and knit. She was now discharged, after a stay in the hospital of nearly six months.

Case 2.—Hemiplegia.

T. M., aged forty, was admitted September 2, 1876, under the care of Dr. Heaton. He gave the following history:—Ten years ago he was invalided from the army while in India for "sunstroke." Soon after this he became lame in the left leg, and suffered from large suppurating sores on his forehead, which he was told were "nodes." He has occasionally an offensive discharge from the nose. Four years ago he lost consciousness for a short time, and on regaining it found he had lost power over the right side. He got rather better after some weeks, and could walk with the help of a stick. Since this he has had two similar attacks, followed by paralysis of the right side, the last being six months ago, since which time he has not materially improved. There is now nearly complete loss of power in the right arm; he can move the right leg slightly. The left leg is not strong, but there is no obvious paralysis. He speaks slowly and hesitatingly, and says his memory has failed lately. Tongue clean; appetite good. Urine 1015; no albumen. Pupils rather contracted; the left larger. He was given five grains of iodide of potassium three times a day, with chlorate of potassium and citrate of iron.

On the 15th the iodide was increased to ten grains. He was then much improved, and could lift his leg better.

The iodide was gradually raised to twenty-five grains to the dose, and on October 7 he left the hospital able to walk, and considerably improved in general health.

Case 3.—Partial Paraplegia.

A. B., aged forty, a painter, was admitted on May 2, under the care of Dr. Eddison.

Fourteen years before admission he had suffered from a chancre, followed by a rash, but had felt no further effects. He had enjoyed fairly good health till a year ago, when, in New Hampshire, U.S., he had an attack of ague, and since that he had had occasional shiverings. For the last two or three years he had suffered from shortness of breath, but did not stop work.

A fortnight before admission his feet became gradually numb—first the left, then the right. This was followed by loss of power, and pain on moving his feet, with occasional cramps. He had also occasionally some numbness in his left hand.

On Admission.—He can walk with great difficulty. His feet and ankles are stiff and weak, and he cannot feel the floor. There is almost entire loss of sensibility in the left foot; he can just feel a sharp point against the sole; the foot is colder than the right; no reflex movement can be obtained. The right foot has slightly diminished sensibility, but reflex movements are active. The right leg is easily raised and flexed; the left with great difficulty. The sensibility on the thighs is normal. He perspires profusely; temperature 99·2°. Lungs healthy. Apex of the heart beats in the line of the nipple, two inches and a half below it. There is a double murmur audible over the aortic valves. He has a troublesome dry cough. Urine 1020; no albumen. He was ordered three grains of quinine and five grains of iodide of potassium thrice daily.

May 5.—Perspiration much less; cough very troublesome. For this he was ordered gelseminum, which was given in increasing doses till toxic effects were produced—viz., headache, diplopia, and some œdema of eyelids—but with no benefit to the cough. The sensibility has increased in the right foot, but is absent in the left up to a line corresponding to the upper part of the internal malleolus.

8th.—Slightly increased feeling in left foot.

12th.—He can move his left foot much better, and it feels as warm as the other, but the extent of numbness is different. There is now loss of sensibility on the front of the foot and leg from the toes up to the junction of the middle with the upper third. On the inner side the feeling is good down to a line drawn through the middle of the sole.

16th.—The continuous current was applied to his left leg.

17th.—The numbness is less since the galvanism.

22nd.—He can now feel fairly well on the outside of the left leg down to the ankle.

24th.—The skin of the left leg was faradised. Faradism to be continued daily.

25th.—There is some return of feeling to the dorsum of the foot.

31st.—Sensibility nearly perfect over whole foot and leg. He can walk fairly. Discharged.

Remarks.—The three cases reported above show the effects of syphilis on the nervous system in three different degrees of severity. In the first case we have the effects of hereditary syphilis developed to a most unusual degree. I believe there are few reported cases where so extensive and disastrous a series of symptoms have been observed to follow an inherited syphilitic infection; and the publication of similar cases would be of great interest. In the second case there was hemiplegia and slight aphasia, from acquired syphilis, greatly improving, as did the first case, under the influence of the iodide. In the third case the symptoms were those of slight myelitis, which completely vanished under the use of iodide of potassium and the faradic current.

Diminution of Professional Incomes in the United States.—The Editor of the *Boston Medical and Surgical Journal*, February 8, states that, from varied and numerous opportunities of observation, he is in the position to state that the financial embarrassments of the United States, which have prevailed for nearly four years, have now begun to tell very seriously on professional incomes—people seeming to consider the doctor a luxury to be dispensed with as much as possible. "A general shrinkage of incomes, such as is witnessed at rare intervals in this country, has been the result." Another cause which has contributed to this result is that there has been "inflation" in medical education as well as in trade. The ranks of the profession became much swollen during the war, and for some years afterwards; the readiness with which degrees can be obtained, and the limited choice which young men have in America who do not wish to go into trading, having induced many to take up this calling.

Composition and Quality of the Metropolitan Waters in March.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	22·90	0·053	0·195	0·001	0·008	13·7	4·2
West Middlesex .	21·40	0·073	0·168	0·001	0·006	14·3	4·6
Southwark and Vauxhall . .	20·50	0·071	0·198	0·001	0·007	14·3	4·6
Chelsea . .	21·20	0·054	0·165	0·000	0·008	14·3	3·0
Lambeth . .	22·10	0·070	0·186	0·000	0·009	13·7	4·2
Other Companies.							
Kent . . .	30·10	0·007	0·375	0·000	0·002	18·8	4·6
New River . .	21·20	0·066	0·168	0·000	0·006	14·8	4·2
East London .	22·50	0·070	0·150	0·000	0·006	13·7	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, the Grand Junction, West Middlesex, and the Lambeth.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, APRIL 21, 1877.

THE GENERAL MEDICAL COUNCIL.

The Genoral Council of Medical Education and Registration has been summoned to meet on Thursday, May 10. There will, we believe, be a meeting of the Branch Council for England on the 27th of the present month; and the Executive Committee will hold meetings on May 8 and 9, in order to prepare, so far as can be done, the business for the Council. There is plenty of work of the highest importance awaiting the Council—work that has been postponed year after year, and work handed over from last session only. The subject of professional education has been over and over again put off for one reason or another, though a very full examination into, and careful consideration of, the whole matter has been for some time now a question of great urgency; and though perhaps the results of the regulations made by the Council respecting preliminary education have not been altogether very encouraging, yet we must think that it is full time that the "Council of Medical education" devoted themselves to the regulation of professional education in real earnest, or let the subject altogether alone, leaving it to be regulated by the examinations. Anything almost would be less bad, harassing, and perplexing to teachers, students, and examiners than the present constantly impending "regulation" of professional education. Meanwhile changes are made in, and additions to, the subjects "recommended" or required to be taught and examined in; the tests of sound preliminary education prove to be anything but efficient; the proportion of rejected to successful candidates at the various examinations increases; and the number of medical men in proportion to the population is said to be steadily diminishing;—a state of things which can hardly by any glamour or eloquence be made to appear a satisfactory result of eighteen years' work of that costly machine, the General Medical Council. It will be remembered that the reports of the Committees on Visitations of Examinations, and on the remarks of the Licensing Bodies on the Visitors' Reports, have yet to be considered, and if possible turned to good account, and that on the last day of last year's session the Council resolved that they "should be considered on the first day of the session of 1877." It was also then resolved that a long and minute report by the Committee on the "Recommendations of the General Medical Council on Education and Examination" shall be considered "on an early day" of the approaching session; and the consideration of the grievous ignorance in general education displayed by many of the candidates who come up for the professional examinations was also deferred to the present year. Besides all this, it seems very probable the Scheme for the formation of a Conjoint Examining Board for England will be laid before the Council. The three medical corporations and the University of Oxford have already agreed in accepting two and rejecting one of the alterations proposed in the Scheme by the Syndicate of the University of Cambridge, and it is expected that the Universities of London and Durham will take a similar view of those proposals. The alteration objected to will therefore most probably be withdrawn, and the Altered Amended Scheme will be complete. It has, however, we believe, to be again brought before the Council of the Royal College of Surgeons, to be considered in its legal bearings, so that, unless considerable diligence is shown, the Scheme may even yet not be ready in time. It is abundantly clear, however, that even without that the Council will have plenty of business, and business of the first importance, before them.

Moreover, there will also be not a little of what may be called ordinary or routine business that will take up a considerable amount of time; and we have heard a rumour that the question of the legality of the registration of honorary medical degrees or diplomas will probably be raised in Council. We need not remind our readers that admittance to the Medical Register has lately been refused to some honorary degrees, and it is, we believe, well known that some barristers are of opinion that no degrees, diplomas, or licences can be legally registered, save such as have been obtained by examination. There is, at any rate, much annoyance, and some dispute about the matter, and it will be well to settle the question; and none the less so because some of the members of Council happen to have honorary degrees on the Register.

THE MEDICAL GOVERNMENT OF LUNATIC ASYLUMS.

It is not our practice to comment upon half-told tales, and we intend to reserve our remarks upon the evidence which has been given before the Select Committee of the Commons upon the Lunacy Laws until the Report of that Committee is presented. But of the evidence already adduced there is one small part so episodical in its nature, so thoroughly at variance with all the other testimony, and so calculated to damage the medical profession did any weight attach to it, that we need make no apology for considering it separately, and for at once pointing out why, notwithstanding the official dignity of the witness from whom it was obtained, the public and the Committee may summarily discard it as crotchetty and fallacious. We allude to the evidence of Sir James Coxe, the Chief Commissioner in Lunacy for Scotland, who, although himself a member of the medical profession, did not hesitate to represent to the Committee that that profession plays but a sorry part in its relations to diseases of the mind. A hospital for the insane is, according to this eminent witness, a mere necessary evil, which has nothing but convenience to recommend it, while the medical and moral treatment of insanity is little better than

humbug. "The best asylums in Scotland," says Sir James Coxe, "are those which have no medical superintendents." The Asylum at Banff, which is the model that he would hold up for imitation, is presided over by a layman, and there is nothing, to his thinking, in the general management of any asylum that renders it necessary that a medical man should be at the head of affairs. The Banff Asylum, the model of the North, which contains about 100 patients, used to have a resident medical officer, but there was nothing for him to do, and so his services were dispensed with, and ever since that time the Asylum has gone on improving. Sir James Coxe's remarks go beyond merely showing that medical officers in asylums are unnecessary and expensive superfluities, and indicate that they are drawbacks and obstructions, and that the true way to reform our asylums is to sweep them away altogether. "We do not," said he, with admirable logic, "have resident medical men in our own houses, and I do not see why we should have them in asylums." Of course not! We do not have operating theatres in our own houses, and why should we have them in hospitals? We do not have counters in our own houses, and why should we have them in shops? We do not, being robust and healthy people, have resident medical men in our own houses, and why should we have them in asylums, where large numbers of the victims of cerebral disease, who are peculiarly liable to accidents and seizures endangering life, are collected together? Sir James Coxe admitted that he goes to the doctor himself when he is afflicted by any bodily ailment—which we trust is a rare occurrence,—and we fancy that if he were seriously ill he might not object to have a doctor resident in his hospitable mansion. But to lunatics he is not disposed to concede much medical care. They may sink under their central malady, or under any of the innumerable bodily diseases that are grouped round it; they may choke and fracture their bones and attempt suicide at discretion, without that incessant medical assistance which has hitherto been thought desirable, because Sir James Coxe has formed a very low estimate of the value of medical work in asylums.

The unfavourable opinion of the medical government of lunatic asylums, which Sir James Coxe so confidently expressed, would have been entitled to some weight had it been formed on an adequate knowledge of the requirements and administration of these establishments. But no such adequate knowledge can Sir James Coxe possess, as he never held office in an asylum, and knows really nothing about asylums beyond such information as he may have picked up when making a dignified progress through the Scotch asylums during about one month per annum when engaged in his official duties. It is not to be forgotten that at the time of Sir James Coxe's appointment as a Commissioner it was made a serious charge against the Government of the day, that it had elevated into that important position one who, however able he might be, had no special knowledge of the work before him, and who could not command the confidence of the medical profession, as he had never been engaged in active practice. Sir James Coxe's youth had been devoted to phrenology. When other medical men are studying living tissues, he had been contemplating dry skulls and plaster-of-Paris casts of the heads of defunct murderers. When other medical men are tracking out diseases and testing remedies, he had been studying bumps and inventing new mental faculties. A training of this kind, while well calculated, no doubt, to fit a man for certain callings, was not exactly that which we should have selected for one who is to supervise great hospitals, and to appraise the value of treatment in one of the most complex and obscure class of diseases that flesh is heir to. In this training, perhaps, is to be found the explanation of that inability to appreciate the true bearings of the scientific and medical problems brought officially before him which Sir James Coxe has always displayed, as well as of the extraordinary evidence upon which we have been animadverting.

The mere facts of Sir James Coxe's professional career are sufficient of themselves to pluck the sting from his testimony borne against the medical profession. But, apart from these facts, the testimony would fall to pieces, for it is inconsistent with itself and with the published statements of its author. The best asylums in Scotland are those without medical superintendents: so says our authority. One of these asylums—and there cannot be more than three or four of them altogether—is the Elgin Asylum; and we must say that it is one of the best in Scotland. Our notions hitherto entertained respecting the Scotch asylums must have been strongly exaggerated. We turn to the reports of the Commissioners, and find there a melancholy picture of this establishment. "In several ways," says the inspecting Commissioner, "a tendency to economy trenching upon parsimony was perceptible." "A good deal of loud complaint has occurred, the cause of which may probably be ascribed to the great scarcity of water." As regards attendants, "it is strongly recommended that an effort be made to secure the services of persons of greater efficiency and trustworthiness by increasing the remuneration." "The supply of milk is defective." "The physical and mental condition of the patients is certainly less satisfactory than it used to be, and it can no longer be regarded as a mitigation of a poor lunatic's misfortune that his support fell on a Morayshire parish." To call an institution, upon which such strictures were passed quite recently, one of the best asylums in Scotland, betokens a very humble idea of what excellence in a Scotch asylum amounts to. The eulogy, however, on the Elgin Asylum is certainly magnanimous, as the District Board of Elgin, that presides over that Asylum, has not wasted compliments on the Commissioners. At a meeting of that Board held on July 18 last, the chairman spoke of the Commissioners as "would-be dignitaries," and accused them of "an arbitrary and domineering spirit," of "mean retaliation," of "vile insinuations," and of innumerable "crotchets and absurdities"; while the whole Board adopted a report characterising the statements of the Commissioners as "unwarranted and misleading," as "groundless and gratuitously mischievous allegations," as "gross libels," and as "false aspersions"; and calling upon the Home Secretary for an independent inquiry into the conduct of the Commissioners.

But the Banff Asylum is the true model for imitation. It contains, as we have said, about 100 patients; and there, as there was nothing for a resident medical officer to do, his services were dispensed with. A little later in his examination, Sir James Coxe was asked what was the maximum number of patients that he would approve of in an asylum, and he replied 200; giving, as his reason for fixing upon that figure, that beyond it the medical officers could not give the necessary individual care and treatment to cases. But in an asylum for 100 patients there is nothing for a medical officer to do. How comes it, then, that in an asylum for 200 the energies of medical officers are taxed to the utmost? Double nothing, it appears, is something very considerable!

Fortunately, some English witnesses who had preceded Sir James Coxe had given the Committee juster views of the true character of an asylum and of the relations of medical science to lunacy than those which he advanced, so that the minds of the Committee were prepared to deal critically with this illumination from the North, and to see through it into solid fact. Dr. Crichton Browne had insisted that asylums should become hospitals more and more, and had advocated an increase in their medical staff, while pointing out that every improvement that has taken place in the treatment of the insane had originated with the medical profession, and that their labours

are even now giving strength and precision to our means of arresting and controlling mental disorders. Dr. Bucknill and Mr. Wilks had pursued the same course, and had convinced the Committee that every detail of management, no matter how trifling, in an asylum must be looked at from a medical standpoint. And it is not to be wondered at that after their evidence that of Sir James Coxe should have fallen somewhat flat upon incredulous ears. The medical profession survives his onslaught, and asylums are likely to remain medical institutions. The era of moral governors has not yet come. The one experiment in this direction, tried in a large asylum in England, had a result not calculated to encourage repetition. The experience of all the best authorities is, that the more perfect the medical organisation of an asylum is, the more efficiently and economically will it fulfil the benevolent purposes for which it was called into existence.

PURE MILK.

Why the milk-supply of London should have been so long left to take care of itself is, or might be, wonderful to any nation not governed as we are—that is, by ourselves. The importance of the subject is beyond dispute; but there was, probably is, a kind of hazy notion lingering in men's minds, that, beyond dilution with water or such traditional impurities as chalk and calves' brains, nothing could possibly be wrong with milk. Unfortunately, modern researches have shown us something very different. They have shown that diseases of the most serious kind may be, and are, propagated by means of milk. Prominent in this group is the most insidious, yet most fatal, malady of typhoid fever. But we have full reason to believe that this is not the only disease so spread abroad; scarlet fever, measles, and many other maladies are suspected, or more than suspected, of being so transmitted. If we hold by the germ theory, even in the most limited degree, we can scarcely avoid admitting the possibility of the survival of germs in such a fluid as milk; and that being once admitted, it is hard to say where we are to stop. Now, let anyone step into an ordinary milk-shop—we do not say in the worst parts of London, but even in the best. What does he find? An ordinary dwelling-house, most likely, with a tin full of milk in the front room, and the ordinary living-room of the family behind. In the poorer parts it is worse; often there is only one room, or, if two, then in the back one the whole family eat and sleep, often with the milk-can as their companion.

It was not until comparatively recent days that the power of milk as an agent for carrying contagion was fully understood; and the first fairly and fully substantiated instance was the now well-known and what might almost be described as the classic epidemic of typhoid in Marylebone. This occurred almost entirely in and among the families of medical men, and might have escaped notice had it not been for the exceeding great pains taken by certain members of the profession to investigate the whole matter. The results were surprising: they showed instances where with the same milk no typhoid prevailed; these people boiled their milk. Instances again were found of typhoid where the same milk was not used, they getting their milk from another dairy; but it was also shown that the servants in these cases had been visiting where the suspected milk was taken in, and had freely partaken of it. Finally, it was shown that, at one of the farms whence the suspected milk came, typhoid fever had prevailed. The water used for washing the cans was in a position to receive impurities, and in all probability had done so. This may be described as the first fairly authenticated case. Previously much had been suspected, but nothing proven. This outbreak, however, settled the matter.

Since that time many other instances of the transmission of fever by milk have occurred, notably in Glasgow, at Jarrow, and at Burnley. In all of these instances there was a clear case of transmitted contagion, and in each the result was disastrous. How many other cases may have occurred we are not now in a position to state, but we are quite safe in saying that in multitudes of instances in our larger towns, and in the poorer districts, contagion must have been conveyed over and over again by a medium practically shown to be so readily accessible, and so capable of transmitting disease-germs. Hence it is that to secure a milk-supply not only pure in its source and origin, but also carefully watched from beginning to end, is of the highest public importance. Elsewhere we have given some account of the only dairy company which, so far as we know, professes to do this, and we are bound to say that, as far as we have seen, the promise is duly carried out. It is no part of our duty, nor is it our desire, to laud one company or individual above another; but in this case we take it as our duty to testify to the care taken by the Aylesbury Dairy Company to give their customers the best and safest article they can command It has been said that hypocrisy is the best testimony to the value of virtue, and certainly counterfeiting trade marks is an indication of the value of an article for selling purposes: if this be so, the Aylesbury Dairy Company (Limited) are to be congratulated, for a host of spurious articles in the shape of quasi-companies have sprung up all over London. Be that as it may, the Company we have spoken of prosper, and we trust will continue so to do.

THE PATHOLOGICAL SOCIETY.

Pursuing the very successful arrangement which they have adopted this session, the Pathological Society had the satisfaction of listening on Tuesday evening to the accounts of no less than three original investigations in their own department of science. Two of these were by Dr. Klein—on the Minute Anatomy of Scarlatina, and on the so-called Pig-Typhoid, respectively; and the third was a contribution by Dr. Braidwood to the intimate pathology of Contagion. While these communications were all of much interest, it is almost unnecessary to say that the first of the three, relating as it especially did to the changes of the kidneys in scarlatina, attracted most attention, in connexion with the recent investigations on Bright's disease by other eminent pathologists. Dr. Klein has examined the principal viscera in twenty-three cases of scarlatina in which death occurred from the second to the forty-second day of the disease. In the kidney the changes observed in the first week were chiefly four—namely, (1) increase of nuclei in the Malpighian bodies; (2) hyaline degeneration of the intima of the minute arteries, causing swelling, narrowing of lumen, and ultimate impermeability—"undoubtedly the same changes," said Dr. Klein, "as those observed by Sir William Gull and Dr. Sutton"; (3) multiplication of the nuclei of the muscular coat of the minute arteries—probably an incipent hypertrophy: and (4) parenchymatous nephritis (catarrh of the tubes). After the first week, the pathological changes, being more extensive and advanced, have to be more generally expressed. They are described as (1) interstitial inflammation, consisting of infiltration of the tissue around the vascular trunks and between the tubes, with lymphoid cells; and (2) parenchymatous or tubal nephritis.

It will thus be seen that, contrary to the view generally held in this country, Dr. Klein believes that the renal disease in scarlatina is not a simple catarrh or tubal nephritis, but a true interstitial inflammation as well, attended with cell infiltration; and it appeared from his reply to the President that he further believes that this interstitial inflammation may resolve as convalescence advances.

We would direct special attention to the above description of the earliest changes in the renal vessels in scarlatina. This appears to be another and most important contribution to the

now rapidly accumulating evidence that alteration in the vascular system is an essential element of "Bright's disease," even in its earliest stages.

Dr. Klein's second communication, on the so-called typhoid of the pig, went far to prove that this disease and typhoid fever in man are not only not identical, but extremely unlike each other. Having sketched rapidly the clinical features of the disease—an acute infective fever,—Dr. Klein gave the results of his examination of the viscera in twelve cases. The ulcerations found in the intestine do not resemble those of human typhoid, either to the naked eye or microscopically; they are due to a necrosis of a portion of the mucosa, and have no relation whatever to the lymphatic structures. With respect to the etiology of pig-typhoid, it was found by experiment to spread by the air; and to be communicable by inoculation of fluid from the skin eruption, from the intestinal ulcers, or from the spleen, and by feeding with particles from the spleen or intestines. On the other hand, the blood does not appear to contain the poison.

Dr. Braidwood's specimens and beautifully carmined drawings illustrative of the ultimate pathology of Vaccinia and Variola would have received more attention had there not been such a plethora of interesting objects. The various stages in the development of the eruption of the two diseases were carefully traced anatomically; no organisms whatever were found. Among other most important observations on the physical properties of contagion were those relating to the effects of temperature on vaccine lymph. Dr. Braidwood finds that the highest point to which vaccine lymph can be heated without destroying its specific effect is 139° Fahr. On the other hand, a specimen that had been kept for one hour and a quarter at a temperature of 100° below the freezing-point of mercury did not lose its inoculative power. The most potent germicides proved to be sulphurous acid and chlorine.

THE WEEK.

TOPICS OF THE DAY.

We briefly called attention last week to the fact that the City Commissioners of Sewers had determined to provide accommodation for the holding of inquests in the City of London. As a result of the inquiries which have been instituted, we believe that it has been decided to erect the necessary buildings on the south side of the mortuary-yard in Golden-lane, at an estimated expense of £1775. There can be no doubt that this will prove a great benefit to the public. The number of inquests held in the City may be taken approximately at 250 annually; of these about fifty are conducted in the public hospitals. The Coroner is paid by salary, and the erection of a proper court, although of no pecuniary interest to him, will entail a saving in the amount paid for the use of a room in public-houses—generally half a guinea per inquest. He is, however, empowered to allow a small fee (about half a crown) for the cleansing and preparation of the inquest-room, which would suffice to reimburse the cost of the maintenance of the court, without further charge to the Commissioners than the first outlay for the building. Mr. W. J. Payne, the Coroner for London and Southwark, in a communication to the Commissioners, states that it has always been a source of great discomfort to himself and the jurors to meet at public-houses; and, moreover, it was a great inducement to witnesses to drink more than they ought, and thus to render their evidence less trustworthy. In the City of London the Coroner used to be allowed to hold his inquiry in the vestry of a church, and the body used to be taken to the vault of the same church; but of late years the permission for both has been largely withdrawn, and at the present time there is only one church remaining where the practice is continued. He is therefore rejoiced to think that, after thirty years' experience, he will, through the consideration of the Commissioners, in future have a court where inquiries can be conducted with quietude and propriety, and with comfort to those engaged in the furtherance of justice. Now that this step has been determined on, the only wonder is that it has not been taken before.

As a proof of the necessity of the inquiry recently held before the Commission appointed by the Secretary of State under the Artisans' Dwellings Acts, to investigate into the condition of the Golden-lane area, in the City, it was shown in evidence that in one room in this locality, about nine feet by twelve feet, there resided at that time a woman (ill), a man and his wife, a young woman and three children, her younger sister, her younger brother, and a bitch with six pups. The house which contained this miscellaneous collection was situated within half a mile of the Bank of England.

A numerously attended meeting was held last week at the Society of Arts, to consider the uses to which town sewage could be applied. The meeting assumed the form of a conference of gentlemen who had paid great attention to the subject. Mr. Bartlett gave the result of his analyses, and stated that whatever manurial value was contained in town sewage, three-fourths of that value arose from the salts in the liquid. He declared that ammoniacal fermentation would scatter broadcast the germs of disease, such as had been forcibly shown in late lectures by Professor Tyndall; and the speaker stated that he could add another link in the chain of evidence which immediately connected the fermentative growths of zymotic diseases with the fluids from typhoid patients. He proceeded to give facts which had come under his own investigation, and made suggestions for the prevention of contagion and the utilisation of the valuable parts of sewage. Colonel Jones, of Wrexham, said that towns could not expect to reap pecuniary advantage from sewage at present, but the farmer would from the use of town sewage obtain a good return for his outlay. The admixture of rainfall and slops, however, he asserted, rendered the sewage less strong than the farmer required. Mr. Wanklyn gave the results of dealing with sewage in Germany and Glasgow. He considered that the great mixture of water with town sewage rendered the material commercially valueless. Mr. Rawson also spoke against the conclusions in the recent Blue-book as to the worthlessness of sewage-sludge, and said the experience of the use of this material had given splendid results.

A very important experiment has been inaugurated at Sheffield by the opening of a cocoa- and coffee-house for the working classes. The establishment has been erected at the expense of Mr. F. T. Mappin, and comprises billiard-, reading-, and coffee-rooms. Several influential persons attended the opening, and Mr. Roebuck, M.P., explained the object of the institution, which is to provide a comfortable retreat for the artisan after his hours of labour, which might wean him from the attractions of the flaring gin-palace, and the miserable results attending upon the habitual resort to such objectionable places. He appealed in forcible language to the working-classes to forsake the gin-palaces and spend their evenings at the coffee-club, and paid a high compliment to Mr. Mappin for his endeavour, by erecting the club-house, to check the spread of intemperance and promote the welfare of the lower orders.

At Worship-street Police-court, last week, a labourer and his son-in-law were charged with refusing to obey an order for the removal of a person suffering with small-pox, and threatening the sanitary inspector. Dr. Tripe, Medical Officer of Health for the parish of Hackney, proved that application had been made for an order for the removal of the elder defendant's son, who was suffering from small-pox, and the sanitary inspector duly attended with the ambulance at the

patient's residence; but, after repeated applications, he was refused admittance, nor would they allow the boy to be taken away. The defendant stated that his child was nearly well at the time, and as the doctor had ordered him to be kept warm, he objected to him being removed with the risk of catching cold. Dr. Tripe said the house in question was a small one; several persons lived in it, and there were two beds in the room in which the boy lay, and of course the defendant's clothes were exposed at night to infection. The magistrate ordered the defendants each to pay a fine of 20s. and costs.

It is stated, on the authority of Dr. Lyon Playfair and Sir Henry Peek, that on Saturday last Messrs. Meux and Company, the large brewing firm, who have been engaged for some time in sinking a well at their brewery in the Tottenham Court-road, struck the green sand at a depth of 1001 feet, and obtained water. Sinking three feet more, an ample supply was obtained for their own purpose; and the engineers believe, contrary to the opinion which has hitherto been expressed by geologists, that in the green sand there is an ample supply for the whole of the wants of London. Mr. Williams, the Superintending Architect of the Metropolitan Board of Works, reports that at the Crossness pumping-station of the Board the sinkings have been carried much deeper without reaching the green sand.

The Liverpool Hospital Sunday Committee has recently distributed the amount collected for the current year; this amounted to the very handsome sum of £9650. When the population of Liverpool is compared with that of London, the sum annually realised in the former city contrasts most favourably with the amount collected in the metropolis on similar occasions. With four millions of inhabitants and an energetic committee, up to the present time it has been found impossible in London to realise even £30,000; and these figures afford a striking proof of the correctness of our remarks as to the questionable benefit of the movement upon its inauguration in the metropolis. It is well known that in Liverpool the poorer classes form a much larger portion of the population than is the case in London; yet, relatively, the amount collected for public hospitals is much greater than that contributed by the inhabitants of the largest and richest city in the world, for the same object.

The result of Mr. D. Cubitt Nicholls' inquiries, on behalf of the Home Secretary, into the various metropolitan areas sought to be improved under the Artisans and Labourers' Dwellings Act will be looked for with some anxiety. Last week this gentleman resumed the consideration of the Clerkenwell scheme. Dr. Griffiths, the medical officer of the district, made an official representation condemning the plot of ground indicated as an unhealthy area. Some very strong evidence was adduced in opposition, notably on behalf of Mr. Early Cook, the principal landowner in the district, who, it was shown, had been gradually improving his property, but in such a manner that those turned out of the houses which he demolished might not be inconvenienced by the difficulty of finding shelter. Subsequently Dr. Griffiths was called for cross-examination, during which he stated that the death of an infant from being overlain was a fact which went to show that the area was within the Act; children did not die from overlying in respectable neighbourhoods. The inquiry then closed, and Mr. Nicholls will report to the Home Secretary.

Last week, Professor Tyndall opened a series of lectures on the subject of "Heat," at the Royal Institution, Albemarle-street, in the presence of a numerous audience. The main points of this, which may be termed the introductory lecture, turned upon the first principles of heat, the earliest known origin of fire, and the various methods adopted in different countries of producing it, especially amongst savage tribes. Of these he gave many practical illustrations, with the view of showing with what facility intense heat could be produced by friction. He explained that, some fifteen years ago, the references to which a lecturer on heat could turn were very few; but since that time much greater attention had been paid to science by the public, and the result was that, in the place of a scarcity of reference, there existed a weighty literature devoted to this single question; and that fact he looked upon as an encouraging sign of the times. The great organisations of France and Germany, which had raised science in most countries to its present high level, were not known in this country, and science had succeeded here simply because it commended itself to the people—a fact which would give it a much broader growth than if it were induced by any Government action.

The Corporation of Southampton have issued a further statement for circulation among members of the House of Commons, setting forth additional evidence in favour of Hamble as a site for the proposed Naval Cadets' College, and for its preference over Mount Boon, Dartmouth.

ROYAL COLLEGE OF SURGEONS, ENGLAND.

At the quarterly meeting of the Council of the Royal College of Surgeons, held on Thursday, the 12th inst., the minutes of the meeting of the 27th ult., relating to the question of giving effect to Mr. Russell Gurney's Permissive Act, were confirmed. The resolutions themselves have not been made public, but, as we stated at page 313 of our current volume it is understood that the Council decided, for the present, against admitting female candidates to the examinations for the Membership or Fellowship of the College; but expressed their willingness, separately or conjointly with the conjoined authorities, to consider the advisability of admitting such candidates to a modified examination for some other registrable qualification. What that may mean we cannot pretend to guess, but we may at any rate express the earnest hope that the Council will not entertain any proposal for admitting candidates, male or female, to the *Medical* Register through any less complete examination than that required of candidates for the Membership of the College.

The Council adopted, we believe, a motion of Mr. Hancock's, which requires that the Conjoint Scheme, when complete, shall again come before the Council for discussion in its legal bearings.

The recommendation of the Dental Board, that in future certificates of attendance on lectures and dental hospital practice, respectively, shall not be received from any lecturer on dental anatomy, dental physiology, or dental surgery, nor any surgeon to a dental hospital or the dental department of a recognised hospital, who does not hold a registrable qualification in surgery in addition to the licence in dental surgery of the College, was, we believe, again referred to a Committee. It is said that a great fight is being carried on in the dental profession on this subject, one party urging upon the College not to accept any certificates from any lecturer on dental anatomy, physiology, or surgery who does not hold the Membership or Fellowship of the College, or some other registrable surgical diploma; and the opinion that such lecturers shall not be required to possess the dental licence of the College; and the other party insisting that the dental licence alone ought to be considered as sufficient to qualify its holder to give certificates of attendance on dental hospital practice, and on lectures on dental anatomy, physiology, or surgery. We must confess that we agree with the latter party rather than with the former. At any rate, the recommendation of the Dental Board appears to be anything but a happy one. Unless the College is prepared to stigmatise its dental curriculum and its dental licence as shams, surely the holders of the dental licence ought to be held to be qualified to teach their profession; and, again, as the greater includes the less, a Member

or Fellow of the College ought to be capable of teaching dental anatomy, physiology, and surgery without being required to hold the dental licence "in addition"; if not, why does not the College require that those of its Members or Fellows who teach ophthalmic or aural surgery shall also take diplomas in those specialities? We cannot see how, in reason, the College can demand that a teacher of dental surgery shall hold both a registrable diploma in surgery and its licence in dental surgery; and if the examination for the latter is a true and full one, it ought to qualify its holder to teach dental surgery.

MEDICAL RELIEF IN THE METROPOLIS.

On Tuesday, the 17th inst., a large and important meeting was held at the Society of Arts, to consider the best means of giving medical aid at hospitals to the poor, without encouraging habits of improvidence among the classes able to provide for themselves out of their own earnings. Dr. Acland presided, and Sir William Gull, Mr. Prescott Hewett, Dr. A. P. Stewart, Dr. West, Mr. T. Holmes, Mr. Brudenell Carter, and other medical men, were present; besides Earl Stanhope, Sir Charles Trevelyan, and many other laymen of influence and note. The proceedings were opened by a paper from Sir C. Trevelyan, which was very interesting, though somewhat lengthy, and going over statements and arguments with which the profession are pretty well familiar. He began by declaring, what we have always held to be an exaggerated or in some way fallacious statement—viz., that upwards of 1,000,000 of our London population, or one-fourth of the dwellers within fifteen miles round Charing-cross, received gratuitous medical treatment; and he then pointed out the many unfortunate results that flow from this central fact. His remedy is the establishment of provident dispensaries. Sir William Gull, in an exhaustive speech, proposed the following resolution:—"That the improvement of the people of London in health and habits of thrift and independence, demands that, while, on the one hand, out-patient departments should be regulated so as to secure the prompt treatment of cases requiring the special resources of a hospital, on the other, free dispensaries should be converted into provident dispensaries, and new provident dispensaries should be established in proportion to the wants of the population." Mr. Prescott Hewett seconded the motion, in which he said he entirely agreed. Sir R. Alcock spoke of the evils of indiscriminate medical relief, and Mr. Brudenell Carter dwelt upon the difficulties which the working-classes experienced in combating evils arising from causes which it was the duty of the governing classes to remedy—the evils of overcrowding, of bad drainage, of want of water-supply, and of contaminated rivers,—and said it was not to be expected that the working-classes could altogether provide the means of fighting against the diseases engendered among them by the remissness and neglect of Government. He supported the motion; as also did Mr. Holmes, Dr. West, the Hon. Reginald Capel (Hon. Secretary to the Great Northern Hospital), and other gentlemen; and the resolution was carried.

SALE OF DISEASED MEAT WITH THE APPARENT SANCTION OF A SANITARY AUTHORITY.

On Friday, April 13, in the Southern Divisional Police-court of Dublin, an application was made by Mr. MacSheehy, solicitor to the Corporation of Dublin, for an order for the destruction of the carcase of a cow which had been seized in a butcher's stall in Bride's-alley on the previous evening, and which was unfit for human food. It appeared that the original owner of the cow, seeing that it was ill, reported the matter to the Veterinary Inspector of the North Dublin Union, who took possession of the animal, and sold it to a butcher, thereby entitling the owner to compensation. The butcher stated that he bought the animal from Mr. Newman, the inspector, for £4 10s., and had it been healthy it would have been worth £20. He would have sold it at 3½d. or 4d. per lb. He also stated that he had bought twenty cows from the Union within the last two months. Dr. Cameron, Medical Officer of Health for Dublin city, deposed that he had examined the carcase. The animal had died in an advanced stage of pleuro-pneumonia; the lungs, which if healthy should weigh twelve or thirteen pounds, weighed fifty-two pounds—one of them was full of pus. In reply to the presiding magistrate, Dr. Cameron said that the Guardians of the North Dublin Union had adopted the Contagious Diseases Act, and had appointed a veterinary surgeon under it, and had compensated persons who gave timely notice of the disease. The magistrate expressed extreme surprise that the Guardians of the North Dublin Union, having caused this animal to be slaughtered, and knowing it to be diseased, then sanctioned the sale of the animal. But Dr. Cameron said that a similar case had occurred before one of the magistrates, in which it was proved that the butcher had bought it from the Union for £8, the Union having compensated the owner with £24. In the present case the butcher was not only harmless in the matter, but he had given them all the assistance in his power. The magistrate, being loth to believe that this was a recognised practice on the part of the Guardians of the North Dublin Union, hoped they might be able to give a satisfactory account of the occurrence. He at once made an order for the destruction of the condemned carcase.

UPPINGHAM SCHOOL.

We are glad to hear that at the end of the present holidays Uppingham School will meet again at Uppingham. The exile of the School to Borth has lasted a year, and we trust that no such emigration may ever again be necessary. Certainly the Head Master, and all the other masters, have done their utmost, without any regard to expense, to insure, by a new and sufficient pure water-supply, and a perfect system of drainage, the future healthiness of the School; and as the authorities of the town of Uppingham have at last done their part also, it may be confidently expected that the School will be, as it ought to be, one of the most healthy as well as, from the educational point of view, one of the best schools in England. The prolonged absence of the School must have been a very serious loss to the tradesmen of the town of Uppingham, and the lesson thus taught them will not, we trust, be easily forgotten. The highest praise is due to the masters of the School for the courage, enterprise, and skill shown in transporting the School bodily to such a far-off place as Borth, and keeping it so perfectly together there; and it is pleasant to learn, from the warm farewell-demonstration given to the School by the good people of Borth, what excellent friends they had all become, and how sorry the Borth people were that the School was going away. The inhabitants of a quiet Welsh seaside place might very excusably feel some alarm at the sudden advent among them of a school of some 200 boys, and it redounds to the credit of both sides that during a residence of twelve months not a single difficulty arose. The villagers parted with the masters, the ladies, and the scholars as with true and tried friends, and among these friends one of the most popular and most regretted was Dr. Childs, the medical officer of the School.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

At a meeting of the Royal College of Physicians, held on the 16th inst., Dr. Quain was elected Senior Censor in place of Dr. Peacock, who had resigned the office on account of ill-health; and Dr. Fincham was elected Censor in place of Dr. Bristowe, resigned. The College had before them the alterations proposed by the Syndicate of the University of Cambridge in the Amended Scheme for a Conjoint Examining

Board for England; and, without much discussion, we believe, agreed to accept the changes by which Section 6 will read as follows, viz.:—"That the Committee of Reference consist of two representatives from each of the medical corporations and universities of England"; and Clause 2, Section 8, as follows, viz.:—"To nominate on each occasion double the number of persons required to be appointed as examiners." But the College rejected the new section proposed to follow Section 12 of the Scheme, viz.:—"That the Scheme of Conjoint Examinations terminate at the end of ten years from the date of its sanction by the General Medical Council, and do then cease, unless renewed." The College considered such an addition unadvisable and unnecessary; and they added to their resolution on the subject an expression of their hope that the University would reconsider and withdraw this part of their proposed changes. The College enacted the following by-law, altered somewhat for the better since it was proposed at the last previous meeting, viz.:—"That any candidate for the College licence who shall have obtained a degree in medicine or surgery at a British, colonial, or foreign university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on such subjects as shall in each case be considered unnecessary."

A READY METHOD OF CLINICALLY ESTIMATING UREA.

At a meeting of the Medical Society of the College of Physicians in Ireland, held on the evening of Thursday, April 5, Dr. Emerson Reynolds, Professor of Chemistry in the University of Dublin, exhibited and described a new form of apparatus for the estimation of urea in urine by means of alkaline hypobromite. He said that, in his opinion, Liebig's method of estimating urea afforded the most accurate results when carefully carried out, but the process is a troublesome one, and therefore unsuited for rough clinical purposes. On the other hand, the hypobromite process (which is but an improved form of the hypochlorite treatment long ago proposed by Dr. John Davy) is undoubtedly that which most rapidly affords the desired results, although the latter have no pretensions to a high degree of accuracy. When strongly alkaline hypobromite of sodium is added to urine, pure nitrogen is evolved; this gas is almost wholly derived from the urea, which is known to yield up most of its nitrogen by this treatment—hence the volume of gas given off approximately measures the urea contained in a given specimen of urine. Various forms of apparatus have been proposed for collecting and measuring the nitrogen, notably those of Russell and West, Blackly, and more recently by Simpson and O'Keefe. But all these involve the use of specially graduated measuring and other vessels, which are both expensive and not easily obtained. The process which Dr. Reynolds has arranged affords the desired results very rapidly, while the only measuring apparatus required is a common two-drachm minim measure, which every medical man is supposed to have, and the rest of the apparatus can be fitted up at a very small cost (about one shilling and eightpence) with materials very easily procurable. Dr. Reynolds made an estimation of urea with his apparatus in a few minutes in presence of the meeting. A more detailed description of the new ureometer would not be intelligible without the aid of a woodcut.

AMERICAN DIPLOMAS IN THE LAW COURTS.

In the Exchequer Division of the High Court of Justice, on Wednesday, the case of Carpenter *v.* Hamilton, which is of great importance to the medical profession, came on for hearing. It may be remembered that some months ago Dr. Carpenter, acting on behalf of the East London Branch of the Medical Defence Association, took out a summons against a man named John Hamilton, residing at 404, Oxford-street, under Section 40 of the Medical Act, 1858, for falsely assuming medical titles. The case was originally heard before Mr. Knox, at the Marlborough-street Police-court, when the defendant produced a diploma purporting to be from the Metropolitan Medical College of New York, granting him the title of doctor of medicine, and which diploma he had exhibited in his window. Mr. Knox dismissed the case, on the ground that to pretend to be a medical graduate of a foreign university was not an offence within the Act. Against this decision Dr. Carpenter appealed. Mr. Russell, Q.C., who appeared on behalf of the Medical Defence Association, having read the case as set forth by Mr. Knox for the decision of the Court, said that some important points which had been given in evidence at the original hearing had been omitted; and, at his request, the Court ordered the case to be sent back to Mr. Knox, in order to state more fully the facts on which the prosecution relied for a conviction. At the same Court the case of Lewis *v.* Carpenter was set down for hearing. In this case the appellant Lewis, otherwise "Dr. Bell," had been convicted by Mr. Knox, under Section 40 of the Medical Act, and fined £20. When the case was called on, the appellant's counsel said that his client had been advised to withdraw from the appeal, and would consent to an order confirming the conviction with costs.

INQUIRY IN DUBLIN UNDER THE "ARTISANS' DWELLINGS ACT" OF 1875.

Mr. W. P. O'Brien, an inspector of the Local Government Board, Ireland, held an inquiry at the City Hall, Dublin, on Friday, the 13th inst., in conformity with the petition presented by the Lord Mayor and Corporation of Dublin, as Sanitary Authority for the Urban District, praying for the issue of a Provisional Order to enable them to apply to the said district the provisions of the "Artisans and Labourers' Dwellings Act, 1875." The inspector, having explained that he sat to consider—(1) the correctness of the official representation, (2) the sufficiency of the scheme proposed in it, and (3) the objections to the scheme, proceeded to receive evidence. Dr. Mapother, Consulting Sanitary Officer; Dr. Grimshaw; Mr. Boyle, Executive Sanitary Officer; Mr. Hartz, C.E., Assistant-Engineer to the Corporation; Mr. R. O'B. Furlong, Honorary Secretary of the Dublin Sanitary Association, and others, gave evidence as to the insanitary condition of the areas in the Upper Coombe and Boyne-street, proposed to be dealt with under the scheme. Evidence was also given on the part of the "Artisans' Dwellings Company" by the architect and secretary, and in opposition to the scheme by several residents and landlords in the above-mentioned localities. On the termination of the inquiry, Mr. O'Brien said he would send in his report to the Local Government Board as soon as possible.

BIRMINGHAM MEDICAL INSTITUTE.

The third annual meeting of this Society was held on Thursday, the 29th ult. Dr. Bell Fletcher, the retiring President, occupied the chair, and about forty other members were present. The annual report showed that the Institute was now established on a sound basis, and that during the past year considerable progress had been made in its organisation. Commodious rooms had been occupied on lease for a series of years in Queen's College; a reading-room containing all the principal English and foreign periodicals had been opened; the library had been augmented by several thousand volumes, by gift or purchase; and considerable progress had already been made by the Sub-Librarian in cataloguing the books on a satisfactory system. The report further showed that the finances were satisfactory, the amount of principal invested, including a building fund of more than £3000, being over £9000, with promises in addition of several hundred pounds in donations towards the building fund. Building plans were laid before the meeting, but their consideration was postponed

for the present. The following are the officers of the Institute elected for the ensuing year :—*President :* Dr. Bodington. *Vice-Presidents :* Mr. Crompton and Mr. Barry. *Hon. Secretaries :* Mr. G. H. Evans and Mr. Priestley Smith. *Hon. Librarians :* Mr. L. Tait and Mr. W. Bates. The following retiring members of the Committee were re-elected—viz., Dr. Fletcher, Dr. T. Underhill, and Mr. W. C. Garman; and Mr. C. J. Bracey and Dr. Savage were elected to the two other vacancies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Among the most recent communications to this Society were the following :—Dr. J. W. Moore showed the thoracic viscera of a man, aged forty-four, who was the subject of pulmonary and laryngeal phthisis. His death was at last caused by hæmoptysis, due to rupture of a branch of the pulmonary artery, which traversed the wall of a large cavity in the apex of the right lung. Dr. Robert McDonnell presented the brain of an aphasic man, aged sixty-four, with a series of illustrative photographs and microscopic sections. The left third frontal convolution consisted only of *débris*, granular degeneration cells, and connective tissue of the pia mater. The branch of the corresponding Sylvian artery supplying Broca's convolution was blocked up. The secondary degenerations of the brain, medulla oblongata, and spinal cord were particularly well marked. Above the decussation they existed on the left side; below it, on the right side. The President (Dr. Hayden) showed specimens of acute general miliary tuberculosis in a girl aged fourteen. The history of the case was evidently one of old-standing latent tuberculisation of the apices of the lungs, which had been fanned into a flame by a recent attack of cold and bronchitis seventeen days before her death.

THE LEDWICH SCHOOL OF MEDICINE AND THE UNIVERSITY OF DUBLIN.

We have been informed by the Secretary to the Board of the Ledwich School of Medicine that the correspondence between that institution and the Board and Academic Council of the University of Dublin having been brought under the notice of the President and Council of the Royal College of Surgeons in Ireland, the following resolution was unanimously passed by them on the 5th inst., viz. :—"That the question of the disfranchisement of the Ledwich School of Medicine by the University of Dublin having been fully brought under the notice of this Council by its proprietors, this Council hereby express their opinion that such procedure was not warranted by the facts now disclosed, and that nothing has been brought under their notice which could call on them to withdraw the confidence they have hitherto reposed in the proprietors of that School."

DANGERS ATTENDING THE INTRODUCTION OF FLUIDS INTO THE NASAL PASSAGES.

In the *New York Medical Record* for March, Dr. Albert Buck draws attention to the above subject, and gives some very interesting cases in support of his view. Dr. Buck believes "that the introduction of a fluid into the nasal passages in a sufficiently large quantity to bathe the orifice of the Eustachian tube—no matter by what method it is introduced—is not wholly free from the danger of setting up an inflammation of the middle ear." He believes that all the advantages which in many cases are obtained by this mode of treatment may be obtained by "swabbing" the naso-pharyngeal mucous membranes; and the remedy which has given the best results in his hands has been nitrate of silver in solutions of twenty to forty grains to the ounce of distilled water.

THE WOMEN AND THE UNIVERSITY OF LONDON.

The memorial of the medical graduates of the University of London, to which we referred last week, praying the Senate to "reconsider their decision" to admit women to degrees in medicine, was presented on Wednesday, bearing no less than 230 signatures. We learn that this remarkable expression of opinion by the medical members of the University has not been without its effect upon the Senate. They have resolved to postpone for a time the discussion of the regulations relating to the examinations for women, until, as we trust, the more general question shall have been considered.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The next meeting will be held on Friday, April 20, at 7.30 p.m. The report of the Council will be read on the proposals of the managers of the Metropolitan Asylum District respecting the provision for the isolation and treatment of epidemic infectious diseases. Dr. E. B. Baxter will read a paper on "Disinfection in its Theoretical Aspects." Dr. E. Seaton (Nottingham) will read a paper on "Disinfection in its Practical Aspects."

THE AYLESBURY DAIRY COMPANY.

It may, we think, be safely said that the supply of milk, especially to a city of the size of London, is of little less importance than that of drinking-water. It is certainly of more importance than the supply of beer, considering the number of fragile lives dependent upon it. And if we take into consideration the knowledge which we now possess of its disease-spreading powers, we should be justified in ascribing to milk almost the foremost rank amongst the articles of domestic consumption which ought to be supervised from its earliest production to its ultimate use. It is true the Adulteration Act has done something in this way. London milk—at least in respectable districts—has no longer the reputation of containing anything but cow's milk; but there is something much more required than this. Elsewhere we enter into the question, but here we propose to limit ourselves to some account of a milk-supply, where everything which can be done seems to be done to secure a healthful and unprejudiced supply of the only food which is suitable for all ages, and we might almost say for all conditions of health or disease. Some little inquiry into the so-called London *dairies* had given us cause for thought. The knowledge that disease might be transmitted by milk made this all the more serious; and it was with something like satisfaction that we heard of a milk-supply where due precautions were taken, not only to secure the delivery of pure milk, as given by the cow, in London, but also to secure its purity from its origin, through its transit, to its delivery.

The Aylesbury Dairy Company was started a few years ago, and first of all by local gentlemen who were anxious to promote their own welfare as well as that of the public at large. At first, too, as might readily be supposed, the co-partners were not over-successful—(when were ever pioneers successful against true stolidity?)—but by degrees the care taken by them, and especially by the managing partner, began to tell. Larger capital was required, and a limited Company was formed. This Company, with various modifications, now exists.

The first thing to note about the Company (and we do not know that it can be said of any other in London) is, that they had their present premises in St. Petersburgh-place, Bayswater,(a) constructed specially for their business. Hence we find here all accessories for such a business, such as tiled underground rooms for milk, butter, etc., coupled with due means for sending out speedily large quantities of milk for local distribution.

The Aylesbury Company's building is now in course of

(a) St. Petersburgh-place can be approached either from the Notting-hill-road, almost opposite Kensington Palace-gardens, or from Queen's-road, Bayswater.

enlargement which will more than double its magnitude. It consists partly of offices (where the stringent notice of "weekly payments" is prominent), partly of the premises devoted to the reception and distribution of the milk, and in part also to the supply of other dairy produce. Besides these, but totally unconnected in any way which could cause harm (for even the drains are quite separate), are dwellings for the *employés* of tho firm; and in the buildings now under progress these dwellings will be certainly far superior to those obtainable by the same class of men at almost double the rent elsewhere. The firm have bought up and destroyed some miserable places, which lay not far off from their stables, and now propose to provide, as far as possible, by means of rebuilding, for their own workmen in apartments specially built for them.

But to come to the *milk*. Our readers will understand that in the Bayswater establishment there are the ordinary business offices as aforesaid. There is also what one might call an open shop with a can of milk whereof to buy if desired, and a store open to the public for dairy produce. Beyond this it may be said that everything about the premises is devoted to securing the purity and wholesomeness of the milk sent out.

In telling a story it is always better to begin at the beginning. The special point this Company make is, that they, so to speak, watch over the milk they sell—not exactly from the cradle to the grave, but, at all events, till they have disposed of it and left it in the hands of consumers. To this end they apply all their resources. They bind down all farmers or dairy-keepers to a certain form of agreement to observe these rules. After the milk passes into the hands of the authorities at St. Petersburgh-place they themselves become responsible for it. The following constitute the most important elements of the agreement entered into by them with the farmers and country dairymen :—

"All milk to be delivered pure, of good quality, and in good condition. No milk to be sent from a newly calved cow. No milk to be sent from any cow that is not in good health, or that is under physic. No milk to be sent from a newly purchased cow until she shall have been in the possession of the sender one clear day. No milk to be sent from any cow whose calf has been removed, for the space of one clear day after removal. All milk to be cooled in a Lawrence refrigerator, to a temperature not exceeding 60°, before the churns are closed. The Aylesbury Dairy Company to have power to deduct from any money due by them to the sender the sum of 6d. per barn gallon on every gallon of milk not so cooled—such deduction not to affect the liability of the sender under the last clause of this agreement. No mixed milk of two separate meals to be sent. All milk to be sent away fresh—that is, the morning's milk to be sent off the same morning, and the evening's milk the same evening, summer and winter. That the sender shall cause all dairy utensils, vessels, and churns to be thoroughly inspected before being used, and their perfect cleanliness insured; all water used to be boiled. That the sender shall send no purchased milk—that is, no milk other than that produced on his own farm unless by mutual agreement. That in case any disease of a contagious character, such as small-pox, typhoid, or scarlet fever, occur in the family of the sender or of any of his servants employed on or about the dairy, or in charge of any of the cows, then the person or persons so affected, and those persons living in the same house who have in any way personal communication with him, shall be prohibited from coming on the premises of the farm, or from taking part in the dairy operations, and he, the sender, shall immediately give information to the Aylesbury Dairy Company, in order that the directors may use their own judgment as regards the use of the milk, they guaranteeing that the sender shall not sustain any loss from having given such information; but should any such disease exist, and the sender shall wilfully neglect to give information, then he, the sender, shall be liable to pay to the Company the sum of £100, as and for liquidated damages. That the sender shall be liable for all damage sustained by the Aylesbury Dairy Company (Limited) that may arise from disregard or neglect of all or any of the above conditions."

Such being the somewhat stringent agreement with the milk producers, the Company take the further precaution of having their dairy arrangements carefully inspected, more especially as regards the supply of water for washing out cans and other utensils. This is done by Mr. Eassie, a civil engineer, who has devoted much time and attention to such matters. His inquiries are chiefly directed at these farms to the sewage outfall, its relations to the water-supply, the sanitary arrangements of the dairy itself, and so forth.

Though called the Aylesbury Dairy Company, and commenced by Aylesbury men, the main supply of milk to this Company now comes from Berkshire, and arrives at the Great Western Railway Station at Paddington. Here the Company take the milk in hand, one of their inspectors having an office on the arrival platform, where he receives the milk as delivered by the railway company; and after selling in a wholesale way any milk which may be in excess of the demands on the Company, has it transmitted to the premises in St. Petersburgh-place. The cans, as they arrive there, are lowered by a lift into the special chamber used for their reception, whence also the milk is given out for distribution in London. On its arrival in this chamber, which is almost entirely underground, which has no communication by drain with any other portion of the building, and which is moreover paved with stone and lined with glazed tiles, the covers of the cans are removed. These covers are of a special construction, allowing easily of the escape of heated air, but admitting of no dilution of the contained milk by water or otherwise. The contents of each can are then gauged, a portion is removed, the specific gravity and temperature taken, and the sample so dealt with set aside for further analysis if deemed necessary. From the farm cans the milk is poured directly (through a sieve, however) into the distribution-cans, the quantity placed in each numbered distribution-can being in proportion to the quantity required in any given district or round. These cans are then hoisted up to the ground-level, sealed with a leaden seal, and sent out by men engaged in the distribution of the milk in large or small cans, according to the quantity required, as many families have their supply from the dairy in a special can of their own.

Such may be said to be the ordinary history of the milk-supply as furnished by the Aylesbury Dairy Company. But it is obvious that the supply and demand cannot be always in the same ratio. Moreover, as in all other dairies, there are often special demands for cream. To meet these variations, two sets of regulating processes are at hand. If the demand is in excess of the ordinary country supply, the Company possess in London a fine stable of cows, whence a certain quantity of milk is always obtainable. If the demand is not so great as the supply, the milk is set aside in pans in the cool chamber already described, and after standing about twelve hours is skimmed, and the cream either sold or made into butter. The skimmed milk and any other not required is sent down to Swindon, where the Company have a large cheese factory. It is, indeed, from this factory that most of the cream used comes, for the Company there are chiefly engaged in making skimmed milk cheese—an article for which there is always a large demand in certain districts.

Now to fall back on the samples removed from the milk-cans when received. These are taken to the laboratory to be tested should anything at all suspicious be noticed about them, or even from time to time by way of precaution. The testing on the premises is only comparatively rough, but should anything be noted worthy of attention, the sample, along with several others, is sent to Mr. Wanklyn, by whom they are analysed more fully, and the result returned. In this way about a dozen samples are examined every week, and if any farmer's samples are persistently bad or below par, the contract with him is dropped at the end of the year, or even more abruptly terminated.

In the London stables of this Company some time ago a curious experiment was tried. A question arose as to what was the best food for cows in London; and, to put this to the test, certain cows were put on certain diet. The following are the results of Mr. Wanklyn's analyses. Eight samples of cows' milk (the animals being fed on ordinary diet) were sent for examination, with the following results :—

Grammes per 100· *Cubic Centimetres.*

Label.	Total Solids.	Fat.	Solids, not Fat.	Ash.	Remarks.
No. 18	13·00	3·36	9·64	0·80	
50	12·94	3·36	9·58	0·74	
64	12·06	2·86	9·20	0·82	
85	13·16	—	—	0·80	
116	13·34	—	—	0·74	
120	12·50	—	—	0·78	
121	13·86	—	—	0·78	
125	16·20	6·77	9·43	—	Contains excess of cream.

Three days afterwards, when the cows had become fully

accustomed to their new diet, the milk was again examined, the result being as follows :—

Grammes per 100· *Cubic Centimetres.*

Label.	Total Solids.	Fat.	Solids, not Fat.	Ash.	Remarks.
No. 18	10·76	0·12	10·64	0·84	Totally skimmed milk.
50	10·04	0·04	10·00	0·80	,, ,, ,,
64	11·68	0·48	11·20	0·84	,, ,, ,,
85	10·32	0·38	9·94	0·76	,, ,, ,,
116	13·48	3·16	10·32	0·78	Nearly normal.
120	17·10	5·22	11·88	0·78	Excess of cream.
121	18·26	9·15	9·11	0·76	,, ,,
125	14·22	3·77	10·45	0·80	Nearly normal.

Cows Nos. 18 and 64 had distillers' wash with their other food.
,, 50 and 85 had porter-grains in the same way.
,, 116 and 125 had distillers' grains.
,, 120 and 121 had ale-grains.

From this it will be seen that with distillers' wash and porter-grains there was almost complete suppression of the fat given by the cows in the shape of cream, whereas with ale-grains the quantity yielded was decidedly in excess. The "solids" remained much as usual.

In this way, then, the Aylesbury Dairy Company may be said to watch over the milk-supply they provide from the time of its production to the time it is handed over to the consumer. They bind down their farmers by a strict agreement to observe certain conditions. The farms are carefully inspected by competent men as to their sanitary arrangements. The milk when received is properly tested, and is sent out under the seal of the Company in such a way that there can be no tampering with it out of doors. The whole of the large staff of men employed by the Company is under the superintendence of inspectors, with various duties assigned to each ; these are, for the most part, old army non-commissioned officers, who have earned a well-merited pension, and who are men in whom unbounded confidence may be placed. We have seen no dairy or milk company where such care is taken as in this, the establishment of the Aylesbury Dairy Company ; nor have we heard of any such in London. We do not here speak of the quality of their goods—that each one can test for himself ; but we can speak of the exceeding great care taken to insure a supply of pure, wholesome, and unadulterated milk.

Our thanks in this inquiry are specially due to Mr. Allender, the managing director, who has spent much time and taken much trouble to let us see everything connected with the Company's business.

FROM ABROAD.

Croup and Diphtheria.

Two recent meetings of the New York Academy of Medicine (*New York Medical Record*, February 17) were occupied in the discussion of the question introduced by Dr. Austin Flint—"The Relations between Pseudo-Membranous Croup and Diphtheria, and the Value of Tracheotomy in each." Dr. Flint regarded these from a clinical point of view as essentially two distinct diseases. Thus, croup appears rarely except as a sporadic disease, and never epidemically, while diphtheria appears as an epidemic, and is communicable by inoculation and by infectious miasm. Croup rarely occurs before two, and scarcely ever after seven, years of age ; diphtheria not infrequently attacks persons of all ages. Croup is a local disease, the fever attending it being symptomatic, and the constitutional symptoms being proportionate to the amount of fever ; diphtheria is to be regarded as an essential fever, and the local affection is its anatomical characteristic. In croup, death takes place by apnœa ; but in diphtheria by asthenia, often without laryngeal affection. Exudation within the fauces and nares does not accompany croup as it does diphtheria, nor are exudations upon the vulva, anus, and excoriated surfaces met with in it. Enlargement, sometimes with suppuration of lymphatic glands, are peculiar to diphtheria ; and neither hæmorrhages nor paralyses are met with in croup. Croup may, however, complicate diphtheria, but this is not inconsistent with their being considered as distinct diseases. With respect to tracheotomy, the chances of its success are much less in diphtheria than in croup. The value of the operation can only be determined by trustworthy statistics, but in Dr. Flint's opinion although the amount of success attending it may be very small, the operation should be performed, as it at all events relieves suffering and contributes to euthanasia.

Dr. Jacobi stated that he was convinced of the value of tracheotomy, which he had performed about 200 times, having been always solely guided in resorting to it by the presence of imminent suffocation. The duration of the disease or the presence of complications should not deter us ; and although it is true that when the septic character of the diphtheria is much developed the chances of recovery are diminished, yet, this being frequently the result of inhaling material from the nose and pharynx, the operation in such cases may prove the immediate cause of improvement. Cases in which an operation should be refused are those in which the signs of exhaustion are more prominent than those of suffocation, in which it must prove useless. In Dr. Jacobi's opinion, croup and diphtheria are identical processes, although their clinical features may differ according to the anatomy of the part affected and the general symptoms developed in consequence. The abundance of muciparous follicles in the trachea facilitates the elevation of what is termed the "croupous" membrane ; while on surfaces beneath which no such follicles existed, especially when covered with pavement epithelium, the membrane did not prove "croupous" but "diphtheritic," and could not be easily removed from the surface to which it was attached. "Where different results followed one and the same diphtheritic process, it was due to differences in the anatomy of the parts in which the process was located. When the process occurred on the tonsils, it was innocent, because there was no lymphatic connexion with the rest of the system. When it occurred in the nares, where the lymphatics are abundant, glandular swellings were developed in a short time, and septic disease, because absorption took place rapidly." As to the clinical differences between croup and diphtheria, the same differences may be observed in the clinical manifestations of scarlatina and malarial fever. "Those who distinguished between pseudo-membranous croup and diphtheritic laryngitis were begging the question. They postulated differences as essential, which were but casual and clinical."

Dr. Lewis Smith maintained that these affections were distinct from each other for the following reasons :—1. Croup is a local malady like other inflammatory diseases from non-specific causes. Systemic infection results only from the entrance or retention of some noxious principle, of the existence of which in croup there is no evidence. 2. In croup there is a single tract of continuous inflammatory exudation. If it were a systemic disease we should find the exudation appearing on some other surfaces than the air-passages. 3. The depression in diphtheria is wanting in croup, in which also we do not find symptoms of blood-changes after the malady has ceased. 4. Tolerance of depressing remedies also indicates the local nature of croup. On the other hand, Dr. Smith believes, for the following reasons, that diphtheria is constitutional from its commencement, the local inflammations which occurred simply being manifestations of a blood-disease : —1. The long period of incubation that may occur (a week sometimes elapsing after exposure before symptoms appear). 2. Severe constitutional symptoms, lasting perhaps for twelve hours, may precede the local manifestation. 3. Early and repeated local treatment does not prevent the occurrence of symptoms of blood-poisoning in all cases of a severe type. Local treatment is to be used to prevent septic poisoning, but it does not prevent diphtheritic systemic poisoning. 4. The state of the kidneys affords strong evidence of the constitutional nature of the malady, the urine being found in some cases albuminous as soon as it can be obtained. In the cases of croup where the urine is albuminous, it is so only when there is passive congestion of the internal organs due to impeded respiration. 5. Diphtheria occurs at a very early age. True croup does not occur under six or eight months, and for the most part not under eighteen months ; nor, as a rule, does it occur after the sixteenth year. 6. The fact that diphtheria is, and croup is not, contagious is strong evidence of their distinct natures.

Salicylic Acid in Rheumatism.

Dr. Brown, House-Physician to the Boston City Hospital, publishes in the *Boston Medical and Surgical Journal* for February 8 a tabulated history of 109 cases of rheumatism treated by salicylic acid and salicine. Since February, 1876,

nearly all the cases of rheumatism have been so treated, excepting those of undoubted chronic character. Of the 109 cases, 59 were males and 50 females. In 57 it was a first attack, in 32 a second, and in 10 a third. In 38 out of 63 cases in which the examination of the heart was recorded, its action continued normal throughout, and in 24 it was affected on admission. It became affected after entrance in only 4·76 per cent., while under the alkaline treatment formerly reported upon the percentage was 13. In very few cases were more than from ten to fifteen doses of the acid required before marked benefit was perceived, about 400 grains on the average being required to effect a complete cure—the number of days passed in the hospital varying from three to fifty-nine, giving an average of eighteen days. Nausea and vomiting were noticed in 20 cases, headache in 6, singing in the ears in 19, and deafness in 10 cases. In nearly all the cases in which nervous symptoms were manifested, the persons were in poor physical condition. The universal result of the acid, when given in full doses in acute cases, was to cause a fall of temperature, but never much below the normal point. The pulse and respirations usually fell less rapidly, the former often increasing for a time in debilitated subjects. Many cases were left in a poor general condition after treatment, with loss of appetite; and recovery from this state often required more time than the cure of the rheumatic symptoms. The patients usually began the treatment soon after admission, taking ten grains every hour while awake for twelve to thirty-six hours, until the symptoms were wholly or partially relieved. The acid was then omitted altogether, or reduced to ten grains every two or three hours for a time, to be again reduced, and finally discontinued in from ten days upwards. Usually no opiates were administered, and no attention was paid to the state of the bowels. The acid was administered in pills of three grains and a half, each made up with honey or molasses. The number of cases treated by salicine was too small to admit of comparison; but it certainly acts more slowly than the acid.

The French Medical Association.

This body has just held its nineteenth annual meeting under the presidency of M. Henri Roger. The report states that its funds are in a flourishing state, so that it is able to increase the number of its life-pensions to decayed members of the profession or their families. It now grants forty-eight of these, viz., five of 600 fr., three of 500 fr., eleven of 400 fr., and thirty-nine of 300 fr. Some of the members are indeed of opinion that their numbers might be still further increased, as the Association has now a capital of 250,000 fr. (of 1,000,000 fr. including branch societies), with little else to do with it. The Association, although increasing in wealth, does not seem to have attracted so much support from the profession as might have been expected (there are about 7000 members), considering that its object is not only to provide for necessitous cases, but also to act as a kind of guardian of professional interests. This a critic in the *Gazette Médicale* believes arises in a great measure from its affairs being managed by a clique or coterie, with which the mass of the profession has but little sympathy, and which mistakes mutual self-laudation for popular approval. Its efforts at amending the laws with the object of repressing quackery and illegal practice, have proved hitherto abortive, although it has here and there done good service in putting into useful execution laws which already exist. The blame which some of the members seem disposed to cast upon it for want of energy in this respect has been also shared by the Society of *Médicins-Législateurs*, which is composed of the numerous medical members of the present Chamber of Deputies who have associated themselves together for the purpose of considering and advancing all measures connected with public health and medical legislation. Many entertained great hopes of the success likely to attend upon the combined action of such a body, and believed that the various medical reforms, as regards illegal practice, education, foreign doctors, and the like, were speedily to be realised. Plenty of measures were indeed brought forward, as everyone in the French Chambers is apt enough in producing *projêts de loi* which elaborately provide for everything but their own execution. But these, after being published, have for the most part entered upon their eternal rest, little time remaining for their consideration after the tired legislators return from their prolonged vacations. M. Lausseiat, who is the president of this Committee of *Médecins-Législateurs*, explained to the meeting that the first duty of this body is to occupy themselves with questions of public interest in which medicine is called upon to intervene, and that purely professional topics must be adjourned to a more favourable epoch. The medical body has, indeed, always met with too little sympathy and too many opponents in the Chambers to allow of any other course being practicable. The medical members would only ruin any influence a more cautious procedure might procure them, by at once pressing on professional questions, irrespective of their importance to, and against the convictions of, the public at large. As the critic we have already quoted suggests, the best course is to trust more to intimate and personal professional union, and less to the providential character of deputed bodies.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 3.

Wilson Fox, M.D., F.R.S., Vice-President, in the Chair.

Granulation-Material from White Swelling of the Knee-Joint.

Mr. Godlee showed microscopic specimens, and drawings of the same, from a case of acute white swelling of the knee in a child of four years and a half. The process had been so active, although it had not arrived at suppuration, that amputation was performed. Death followed in a few days from acute blood-poisoning. Post-mortem no tubercle was found in any organ. On the cartilage of the affected joint was a layer of granulation-material half an inch thick. Examined microscopically this proved to consist chiefly of trabecular tissue containing various cells in its meshes; while at places it presented a circular arrangement with giant-cells. The cartilage was partly fibrillated at the surface, and passed gradually into the granulation-tissue. No syphilitic history was found in the family. Mr. Godlee said that the present description did not offer any new feature in the histology of granulation-material from such joints; this was a good example of what must simply be called a low inflammation, since no constitutional taint could be discovered. He especially drew attention to the occurrence of giant-cells lying in the circular arrangement of trabecular tissue, and pointed out how this could not be explained by the presence of alveoli or of tubules, as had been attempted in the lung and testes.

The Chairman spoke on the relation of tubercle and scrofula, and inquired what Mr. Godlee thought on the subject, and on chronic inflammations. Neglecting the giant-cells as non-specific, what was the relation of the reticulated growth, with its tendency to necrosis or to fibroid change, to a constitutional state? There were few changes specific in pathology, but he considered that there were some large groups that did not share their characters with other groups, and were associated with certain clinical conditions. He inquired what was the size of the giant-cells.

Mr. Godlee replied that the giant-cells in his specimen were from $\frac{1}{200}$ to $\frac{1}{250}$ of an inch in diameter. In this child's case there was no evidence, either clinically or anatomically, of tuberculosis.

Aneurism of the Inferior Mesenteric Artery compressing the Renal Arteries.

Dr. Burney Yeo showed this specimen, which had occurred in a man of fifty-two, a patient in King's College Hospital. The man came complaining of a pain in the epigastrium and back, from which he had suffered for six months, having to give up work for weeks at a time. For the same time, it was found on inquiry, there had been "beating" in the abdomen. When he presented himself he was found to be a tall, sallow man, with an emaciated and worn appearance; besides the above symptoms he complained of vomiting and headache. His father had lived till eighty-three; his mother was aged. He himself was an engineer, and had worked hard, but had not at any time strained himself. He had drunk moderately; and, twelve years before, had had syphilis and secondary symptoms. On examination a tumour was readily discovered in the epigastrium, as large as a Tangerine orange, quite superficial, so that it could be grasped by the hand, circumscribed, globular, and pulsating. It was dull on percussion, and yielded a soft systolic bellows-sound. It was diagnosed an aneurism of some branch of the abdominal aorta. The

cardiac signs were normal. Twelve days later the patient was admitted into the wards; the tumour was larger and had more pulsation; and sickness was complained of. Next day a new symptom appeared—namely, epileptiform convulsions, lasting from five to fifteen minutes, and recurring at intervals of half an hour to two hours. Consciousness returned between the first fits, bnt speech not after the second fit; there was no hemiplegia. On the third day there was retention of urine, with persistent unconsciousness. On the fourth day there were two convulsions. On the fifth, complete coma ensued after further convulsions, with albuminuria and almost complete suppression of urine. Death occurred on the sixth day from admission. Post-mortem, an aneurism was found growing from the anterior surface of the abdominal aorta, and involving the superior mesenteric artery at its origin. It was globular, and measured two inches in diameter. The tumour was so situated that, on extending downwards and backwards, it had completely occluded both renal arteries at some distance from their origin. The opening into the aneurism was as large as a shilling, and was partly closed by a coagulum. The walls of the aorta were quite healthy, and the aneurism contained a quantity of clot. The brain was perfectly healthy, and there was no special disease of any of the other viscera. Dr. Yeo said that aneurism of the superior mesenteric artery was very rare; but the chief point in the present case was the unusual mode of death—namely, pressure on the renal vessels and death by coma. In this respect, indeed, the case was probably unique.

Dr. Gowers asked what condition the kidneys were in—this was a most important point. The lesion resembled the experimental ligature of both renal arteries. He wished to hear further details of the state of the urine also.

Dr. Yeo replied that there was no obvious disease of the kidneys, except that one presented a large cyst at one extremity.

Dr. Moxon inquired what was the real state of the renal arteries, and whether there was evidence of their occlusion apart from their compression. Since the same pressure would exist within the aneurism and the arteries, it was difficult to understand how occlusion was possible.

Dr. Yeo replied that the arteries were compressed only, not occluded; yet when the parts were removed fresh, the obstruction was easily seen. It must be remembered that the compression had been gradually exerted.

Dr. Moxon added that, considering the great importance of the case, it was necessary to criticise the character of the evidencc. The suppression of urine and the appearance of albumen were interesting. Perhaps the latter was due to the convulsions, as in certain puerperal cases.

Dr. Yeo replied that a sufficient amount of urine could not be obtained to test the specific gravity. It had been suggested during life that the case was one of embolism.

Dr. Savage said that he had examined the urine before and after fits in general paralytics, and found the appearance of albumen rare.

Dr. Gowers said that the same result had been obtained by Dr. Sturge at the Hospital for the Epileptic, only one case out of forty presenting even a trace of albumen after convulsion.

The Chairman, referring to observations upon the relation between the renal circulation and the blood-supply, said that perhaps the great pressure in Dr. Yeo's case might have caused albuminuria before the convulsions had actually occurred.

Lymphadenoma of the Stomach, etc.

Dr. Coupland brought forward these specimens. A woman of twenty-four, married, was admitted into the Middlesex Hospital last September, being thin and pale, and complaining of persistent pain at the apex of the left scapula. For the last five years she had suffered from dyspepsia and vomiting; and for four months the present symptoms had been urgent, commencing with hæmatemesis. At the left side of the neck a globular tumour could be felt connected with the thyroid; and at the left costal margin in the abdomen another tumour of some size. Vomiting continued after admission, jaundice supervened, and a third tumour was discovered in the right thigh under Poupart's ligament, while tubercles began to form in the skin. The patient gradually sank. Post-mortem a tumour was found attached to the thyroid gland, passing into the anterior mediastinum. Nodules as large as a bean occurred in the lungs. In the abdomen there was more obvious disease, matting together the stomach, duodenum, and other viscera, and joining a retro-peritoneal mass, which surrounded the vena cava and the aorta. In the duodennm were several masses of growth, and these were connected with a large mass at the pyloric end of the stomach, which quite filled the duodenum, and had constituted the tumour palpable during life. Both kidneys and both ovaries were also affected. A tumour was also found among the muscles of the right groin, and the inguinal glands of both sides were involved. Microscopically the new growth in all situations presented the structure of a lymphadenoma. As regarded its point of origin, this was probably the stomach or the retro-peritoneal glands, though perhaps even from the first the outbreak might have been simultaneous at several points.

Lymphoma of the Prostate.

Dr. Coupland also showed this specimen, which was probably unique. A policeman of twenty-nine, who had had gonorrhœa and chancre five years previously, was taken with cystitis in consequence of a debauch five months before admission. He was partly treated with catheterism for ten days, and once there was considerable hæmorrhage. Thereafter he was in a hospital for seventeen days, where he was treated for "spasmodic stricture" while the symptoms increased. When seen at the Middlesex Hospital he was tall and thin, and had constant desire to micturate, with pain across the hypogastrium; and his urine contained stringy "mucus" and phosphates. No calculus could be discovered: the handle of the sound had, however, to be depressed before the bladder was entered, and smooth enlargement of the prostate could be felt through the rectum. After an acute febrile attack with rigors, from which he was relieved, the patient sank exhausted by cystitis and suppurative nephritis, at the end of fifty-four days. Post-mortem the prostate was found replaced by an ovoidal tumour, glistening on section, as large as a swan's egg: the bladder was small. Two other nodules were found in the body—one in the right supra-renal capsule, and the other in the pancreas. No glands were affected. Microscopic sections proved that the enlargement of the prostate was due to the presence of a lympho-sarcoma, consisting of small round and angular cells, completely concealing a fine adenoid reticulum until they were pencilled. Such a form of disease, Dr. Coupland said, was extremely rare; and even sarcoma of the prostate was not common. Indeed, lympho-sarcoma of the prostate had never been previously recorded.

Mr. Spencer Watson asked whether the thoracic duct was involved in the first case.

Dr. Gibbons asked whether the blood had been examined in the same case.

Dr. Moxon asked whether, at the place where the duodenum and stomach were involved in the disease, the bowel was widened or narrowed. In many cases of cancer of the abdomen, beginning in the retro-peritoneal tissues, diarrhœa was followed by an appearance of widening of the bowel.

Dr. Frederick Taylor reminded the Society of a case of his, in which lymphoma of the jejunum was attended by such widening of the gut.

Dr. Coupland replied: The thoracic duct could not, of course, be found. The blood had probably been examined. The duodenum was certainly dilated at the seat of disease, as if by being stretched over the tumour, which was as large as an orange, projecting into the lumen.

The Chairman referred to the rarity of the growth from the prostate, and inquired for further details about its histology.

Dr. Coupland replied that it consisted of small rounded cells lying in a reticulum, the nodal points of which were nucleated. After all, the prostate was normally pervaded with lymphatic tissue.

The specimen of prostate was referred to the Morbid Growths Committee.

Ulcerative Disease of the Aorta.

Dr. Irvine brought forward this case. A man, aged fifty-five, a labourer, was admitted into Charing-cross Hospital last August with the report that he had been well up to the same forenoon, when he fainted at work. He rallied in the hospital for a short time; but a few hours later, when seen by Dr. Irvine, presented the appearance of a patient with acute pneumonia, having dyspnœa, a flushed face, a temperature of 104°, a pulse of 120 (weak), and respirations amounting to 70 per minute. Only a superficial physical examination could be made under the circumstances, but this elicited increased præcordial dulness, weak indefinite cardiac sounds, and weak harsh respiratory murmur at both bases. Half an hour later the patient, while sitting up in bed speaking to a friend, fell back

dead. Post-mortem, fourteen ounces of fluid blood and a firm clot were found in the pericardium. The heart was hypertrophied and dilated, especially the left ventricle; and the free margins of the aortic valves were quite disorganised. Above the valves the aorta was healthy, except in the region opposite the valves and corresponding to them, where it was extensively diseased. At one point ulceration had proceeded, so as to perforate the walls and form an aneurism as large as a pea beneath the outer coat. This aneurism had ruptured, and been the source of the fatal hæmorrhage. Other spots of ulceration at the commencement of the aorta corresponded to lesions on the valves, and were manifestly of mechanical origin, being caused by friction. One vegetation would exactly fall into the mouth of a coronary artery in systole. Dr. Irvine said that the high temperature in this case seemed to be remarkable, and the question arose whether the pyrexia was connected with pericardial hæmorrhage. The lungs proved to be simply congested; there was no evidence of pneumonia. The spleen contained some embolised areas.

Dr. Irvine showed another specimen of aortic aneurism, proving fatal by hæmorrhage into the pericardium. In this instance twelve hours elapsed between death and the first symptoms.

The Chairman spoke on the question of a relation between pyrexia and intra-pericardial hæmorrhage. Shock might have been the cause of the rise of temperature.

Mr. Howse suggested that the pyrexia was allied to that occurring in fracture of the cervical spine, the link being the cervical sympathetic.

Dr. Church said that as the man had a large spleen and endocarditis, the high temperature might be accounted for by them.

Dr. Irvine replied that the patient had pyrexia three hours after the seizure: six hours and a half from the first, the temperature was 104°. The pyrexia was perhaps due to the shock. With respect to his valvular disease, it was chronic; and the patient was "quite well" up till the morning.

Dr. Powell said that there was really acute disease progressing at the aortic valves, and there might have been capillary embolisms of the nerve-centres. With respect to the friction against the mouths of the coronary arteries by the vegetations, the modern German view was that the coronaries are filled during cardiac systole, and not in diastole, the coronary pulse being synchronous with the radial.

Dr. Burney Yeo confirmed Dr. Powell's remarks.

Mr. Morrant Baker said that the statement respecting the diastolic action of the coronary arteries was founded on theory only, and had been disproved by observation. The sinuses of Valsalva were full at the moment of systole, and the coronary arteries fed accordingly, the valves not being stretched back against their openings.

Dr. Irvine replied to Dr. Powell that the brain was carefully searched, but without result; it was, however, decomposed. Aortic vegetations were generally on the cardiac surface of the valves, and the results of their friction rare accordingly.

Intestine in Exophthalmic Goître.

Mr. Howse showed this specimen for Dr. Goodhart, the intestine presenting catarrhal inflammation and a peculiar change around Peyer's glands. A woman of twenty-two had been subject to palpitation of the heart, and had goître, but urgent symptoms did not begin till eight months ago. Then the ordinary symptoms of the disease appeared, with emaciation; but the patient improved under treatment in the hospital. Three weeks ago a tumour was discovered in the axilla. Then diarrhœa set in, with high temperature, and the patient died. Post-mortem there was found evidence of general intestinal catarrh, Peyer's glands appeared livid, and minute capillary ecchymoses were seen on the surface. Both lungs presented broncho-pneumonia at the base. Both thyroid and thymus were enlarged. The brain, cord, and cervical sympathetic were normal to the naked eye, and were reserved for examination. The spleen was large and firm. In the axilla was an inflamed gland, which had been opened shortly before death, yielding five ounces of pus. The interesting point was the condition of the intestine. Was it typhoid? The glands were quite flat. Dr. Fagge had shown a somewhat similar case, which was supposed to be one of extremely acute typhoid poisoning. Or was it pyæmia? No case of erysipelas or of typhoid fever had been in the ward during the five months' residence of the patient.

Dr. Burney Yeo inquired whether the patient had had diarrhœa previously. It was important to remember that diarrhœa was an urgent symptom in exophthalmic goître, and one that might throw some light on the pathology of the condition.

The Chairman said that he had seen diarrhœa as a symptom in three cases of exophthalmic goître. In one case it threatened life; and it was the only catarrh present.

Mr. Howse replied that troublesome diarrhœa had occurred more than once during the patient's residence in hospital.

Renal Disease and Enlarged Heart.

Dr. Gowers showed specimens illustrating this connexion. A blacksmith of thirty-six had suffered from slight palpitation for three years, and had had general œdema for three weeks. Six months before, he had scarlatina. As a child he had suffered from occasional hæmaturia. The urine was of low specific gravity, and contained much albumen; and there was albuminuric retinitis. Death was directly due to erysipelas of the œdematous parts. There was no albumen in the urine during the last two days of life. Post-mortem one kidney was found to be very small, and its tissue replaced by small cavities containing pus; no calculus was found; the pelvis and the ureter were small and contracted. The other kidney was large and very fatty, weighing eight ounces. The heart weighed twenty-three ounces, the left ventricle being specially enlarged. Besides the relation between the renal and cardiac lesions, another point of interest was the suppuration of the small kidney: Dr. Gowers suggested that it might possibly have been due to the scarlatina.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, April 4.

Charles West, M.D., F.R.C.P., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—M. McWilliam Bradley, M.B., Jarrow-on-Tyne; William Eddowes, M.R.C.S., Shrewsbury; H. W. Maunsell, M.D., Melbourne; Robert Ostler, M.B.; Richard Paramore, M.R.C.S.; and William Wigmore, M.R.C.S.

Deformities.

Dr. Ashburton Thompson introduced two children the subjects of deformities. In the first were a supernumerary pair of mammæ, and a scar-like mark on the top of the head; in the second was observed in the median line, a little above the upper end of the sternum, a small pedunculated growth, immediately below the pedicle of which was situated a small orifice leading into a short canal lined by mucous membrane.

Instruments.

Dr. Bozeman exhibited his instruments for the operations for atresia vaginæ and vesico-vaginal fistula. He began to treat these conditions in 1855. He first treated the atresia on principles similar to those adopted in the treatment of stricture of the urethra—dilatation and division. He advocated the use of the button-suture. He recommended dilatation of the vagina in all cases of difficulty. He employed dilators of hard and soft material; the former were made of vulcanite, and the latter of sponge covered with oiled silk. Dr. Bozeman also showed a model of his chair for operating in the knee-elbow position.

Two-headed Monster.

The report of the Sub-committee on Dr. Palfrey's specimen of two-headed monster was read.

On Fibroid Tumour complicating Delivery.

Dr. W. S. Playfair read a paper which consisted of the relation of three cases in which this complication was present. In the first case the presence of a fibroid tumour was recognised before marriage; it was so large as to fill the pelvis. Dr. Farre had succeeded in pushing it out of the pelvic into the abdominal cavity. Pregnancy was accompanied by much suffering, but delivery took place naturally. No hæmorrhage followed, and the tumour, which immediately after delivery reached a foot above the pubes, had six months after diminished in size so that it could be discovered only by the bimanual method of examination. A second labour took place naturally. In the second case there were two large fibroid tumours situated at the fundus and sides of the uterus. The pains became feeble, and the forceps was resorted to. There was no post-partum hæmorrhage. Six months afterwards the presence of the

fibroid could with difficulty be detected. The third case was a multipara. Labour had begun, and a large fibroid was discovered filling the pelvis, jammed down in front of the fœtal head; it had a diffuse broad base, growing apparently from the posterior wall of the uterus. It was evident that the mass could not be removed by enucleation or the écraseur, and the space between it and the pubes was an inch and three-quarters only. The hand was introduced into the vagina, and pressure made on the tumour with a view to push it up out of the pelvis. Eventually this object was attained, and the forceps was applied to the head and delivery rapidly effected. No hæmorrhage followed. This was a case unsuited for enucleation on account of the character of the growth. In such cases action should be taken early, and an effort made at repression before having recourse to more desperate measures.

Dr. Barnes said that the difficulties and dangers associated with this complication varied with the seat of the tumour. When the growth projected into the cavity of the uterus the danger was very great; when situated in the lower segment of the uterus, enormous. In the latter case the tumour may be crushed, sphacelate, and give rise to pyæmia. There can be no doubt that fibroid tumours may atrophy; they are occasionally expelled. Hæmorrhage depends on the seat of the tumour.

Dr. Braxton Hicks said that not only small but also large tumours opposing labour might be removed when situated in the lower segment of the uterus. He had removed successfully a mass as large as the fœtal head. Some cases which appeared unpromising during early pregnancy improved during the course of gestation so as not to give any trouble. When these conditions are met with during active labour they should be treated mechanically.

Dr. Godson said that in a case under his care large masses were discharged, and the tumour disappeared.

Dr. Murray had seen relief to the bowels brought about by pressing the tumour from the pelvis by means of the hand introduced into the rectum.

Dr. de Gorrequer Griffith had seen three cases of this complication—two without a bad symptom, the third complicated by post-partum hæmorrhage. During gestation the tumours increased, and afterwards diminished in size.

Dr. Hayes referred to a case in which death took place from hæmorrhage before delivery. A fibroid, about the size of a Tangerine orange, which was easily enucleated after death, was found in the anterior wall of the cervix. Placenta was not prævia.

Dr. Edis thought the best position to effect reposition was the genupectoral.

After a few remarks from the President,

Dr. Playfair replied, saying that post-partum hæmorrhage occurred in some of these cases, but it did not appear to be so common as one would expect.

Perforation of the Popliteal Artery.—In the *Lyon Médical* for March 18 and 25, M. Bard relates the case of a boy, nine years of age, in whom, during the course of a suppurating white swelling of the knee-joint, the perforation of the popliteal artery gave rise to fatal hæmorrhage.

Yorkshire Association of Medical Officers of Health.—The next meeting will be held in the Board-room of the Infirmary, Halifax, on Wednesday, April 25. Public meeting at 2 p.m. 1. Paper by J. B. Pritchett, Esq., on "Isolation of Cases of Infectious Disease, and its Means." 2. Paper by T. Britton, M.D., on "Some Thoughts about Infectious Diseases."

Intussusception of the Trachea.—Dr. Lang relates the case of a man, twenty-eight years of age, who, in falling from a tree, hung by his feet, caught by the branches, and remained in this position for an hour, making great efforts to raise himself up. Soon afterwards he suffered from dyspnœa, which continued to increase in urgency, and threatened suffocation whenever the head inclined towards the chest. The cause of the dyspnœa remained quite obscure until, at the end of ten weeks the patient dying, it was found at the autopsy that the membrane between the second and third tracheal cartilages was enormously distended and relaxed; and whenever the head was bent forwards the lower portion of the trachea slid into the upper portion, so as to cause great narrowing of its capacity.—*Centralblatt*, March 24.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen were admitted Licentiates on April 16:—

Baker, John Henry, Hockley.
Beverley, William Henry, 144, Albany-street, N.W.
Cane, Howard, 15, Queen-square, W.C.
Cusack, Robert Oriel, Bedford.
Farbstein, Henry, Hull.
Forrest, John George Stracey, 19, Bessborough-gardens, S.W.
Gay, Charles William Ebenezer, Townsend, St. Albans.
George, George Aldridge, 8, Albert-street, N.W.
Job, John, Dowlais.
Jones, Roger Hughes, 26, High-street, Denbigh.
Layborn, William Kirkus, 25, Grafton-street East, W.C.
Lee, Charles George, Liverpool-road, Chester.
Le Quesne, Edwin Joseph, Metropolitan Free Hospital, E.
May, Arthur William, South Petherwyn, Launceston.
Munro, Alexander, M.D. Montreal, 10, Woburn-place, W.C.
Patmore, Tennyson Deighton, 131, Gower-street, W.C.
Pickering, Charles Frederick, Guy's Hospital, S.E.
Reynolds, William Percy, Berkeley Lodge, Norwood-road, S.E.
Sandwith, Fleming Mant, 142, York-road, S.E.
Sherrin, Francis Mark, University Hospital, W.C.
Steele, Henry Frederick, Dispensary, Carlisle.

King and Queen's College of Physicians, Ireland.—At the usual monthly examination meetings of the College held on Tuesday, Wednesday, and Thursday, April 10, 11, and 12, the following candidates were successful. For the first professional examination:—

Corr, Richard James. | Philip, Alexander.

For the Licence to practise Medicine:—

Frend, John Alfred. | Huey, William.
O'Neill, Laurence Joseph.

For the Licence to practise Midwifery:—

Frend, John Alfred. | O'Neill, Laurence Joseph.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 13th inst., and when eligible will be admitted to the pass examination:—

Bennett, Frederick J., student of St. George's Hospital.
Bond, Charles J., of University College Hospital.
Boyd, Robert J., of St. Thomas's Hospital.
Bramson, Cecil L. S., of St. George's Hospital.
Buckell, Arthur E., of University College Hospital.
Cree, E. Russell, of the Middlesex Hospital.
Crew, William T., of Guy's Hospital.
Davidson, John, of King's College Hospital.
Fenton, Herbert A. H., of St. Thomas's Hospital.
Flanagan, H. E. Bickerson, of Guy's Hospital.
Freeman, William T., of St. Bartholomew's Hospital.
Permewan, Arthur E., of University College Hospital.
Pardington, George L., of St. Bartholomew's Hospital.
Preston, Henry T., of St. Bartholomew's Hospital.
Sheild, A. Marmaduke, of St. George's Hospital.
Shepherd, Charles C., of St. Bartholomew's Hospital.
Silk, J. F. William, of King's College Hospital.
Takaki Kanehiro, of St. Thomas's Hospital.
White, W. Hale, of Guy's Hospital.
Wooldridge, Leonard C., of Guy's Hospital.

The following gentlemen passed on the 16th inst.:—

Bishop, James T., student of Guy's Hospital.
Cuffe, E. Meade, of St. Bartholomew's Hospital.
Dalton, Norman, of King's College Hospital.
Dickinson, T. Vincent, of St. George's Hospital.
Evans, Arthur O., of St. George's Hospital.
Fialho, Joao Henrique, of the Bombay School.
Fort, Thomas, of St. Thomas's Hospital.
Franklin, Arthur, of St. Bartholomew's Hospital.
Harvey, Sidney F., of St. Thomas's Hospital.
Holland, P. Alexander, M.A. Oxon., of St. Bartholomew's Hospital.
James, J. Thomas, of the Middlesex Hospital.
Jones, F. Felix, of Guy's Hospital.
Lerew, Frederick W., of St. Thomas's Hospital.
Money, Angel, of University College Hospital.
Mudge, James, of St. Bartholomew's Hospital.
Mumby, Bonner H., of University College Hospital.
Nance, H. Chester, of St. Bartholomew's Hospital.
Pratt, Reginald, of University College Hospital.
Priest, J. Damer, of St. Bartholomew's Hospital.
Shearman, Percy E., of University College Hospital.
Sloggett, Arthur T., of King's College Hospital.

The following gentlemen passed on the 17th inst.:—

Acland, T. Dyke, B.A. Oxon., student of St. Thomas's Hospital.
Barling, Gilbert H., of St. Bartholomew's Hospital.
Buckmaster, George A., of St. George's Hospital.
Day, Walter H., of the Charing-cross Hospital.
Easmon, John F., of University College Hospital.
Fisher, Frederick C., of St. George's Hospital.
Fooks, George E., of St. Bartholomew's Hospital.
Gresswell, D. Astley, B.A. Oxon., of St Bartholomew's Hospital.
Hatton, G. Stokes, of St. Thomas's Hospital.

Jago, E. Osborne, student of of Guy's Hospital.
Midwinter, Edward J. H., of the London Hospital.
Mudge, T. H. Tracey, of St. Bartholomew's Hospital.
Nankivell, J. Howard, of King's College Hospital.
Paddle, James J., of University College Hospital.
Pasteur, William, of University College Hospital.
Penny, William J., of King's College Hospital.
Purkiss, Arthur, of St. Thomas's Hospital.
Richardson, Charles B., of St. Thomas's Hospital.
Saunders, Francis H., of University College Hospital.
Webb, Charles A., of St. George's Hospital.
Wharry, Arthur J., of St. Bartholomew's Hospital.
Wright, H. Elliston, of Guy's Hospital.

The following gentlemen passed on the 18th inst.:—

Adam, Caleb Donovan, student of St. Mary's Hospital.
Aldin, E. Wenham, of the Middlesex Hospital.
Baird, Andrew, of St. Mary's Hospital.
Bowlby, Anthony A., of St. Bartholomew's Hospital.
Brookes, Frederick W., of the Charing-cross Hospital.
Butler, G. Henry, of the Westminster Hospital.
Curde, Charles, of the Charing-cross Hospital.
Davies, Arthur M., of the Westminster Hospital.
Davies, David S., of St. Thomas's Hospital.
Hoets, Alton K., of the London Hospital.
Ho Kai, of St. Thomas's Hospital.
Little, Edward, of St. Bartholomew's Hospital.
McKee, Gerard, of St. Bartholomew's Hospital.
Pritchard, Samuel E., of the London Hospital.
Sutton, Francis W., of St. Thomas's Hospital.
Wightwick, F. Percy, of the Middlesex Hospital.

The following were the questions on Anatomy and Physiology submitted to the candidates at the primary (written) examination for the Membership of the Royal College of Surgeons on the 6th inst., viz.:—1. Describe the minute structure of a very large and a very small artery. What endowments do their component tissues respectively confer upon arteries? 2. How long would a man be likely to survive when entirely deprived of food and water? What would be the relative loss of weight before death ensues? The condition of the temperature, the symptoms, and appearances after death? 3. Describe the astragalus, and mention in order the tendons in contact with it. 4. Describe the attachment of the muscles to the metacarpal bone and phalanges of the index-finger. 5. Describe the origin, course, and relations of the gluteal artery. Name its branches and their anastomoses. 6. Describe the course and relations of the duodenum.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 12:—

Lawless, Edmond James, Cadogan-terrace, South Hackney.
Steele, Charles Edward, Rodney-street, Liverpool.
McGachen, Frederic William Dobson, Bethnal-green, E.
Blackmore, Alfred, Quay-street, Manchester.

The following gentlemen also on the same day passed their primary professional examination:—

Gimlette, Thomas Desmond, St. Thomas's Hospital.
Smale, Morton Alfred, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

NIXON, NEWTON H.—Secretary to University College Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—YEOMANRY CAVALRY, CHESHIRE.—Surgeon W. M'Ewen resigns his commission.

YORKSHIRE HUSSARS.—Richard Hewetson, gentleman, to be Surgeon.

BIRTHS.

CANTON.—On April 14, the wife of Frederick Canton, M.R.C.S., L.R.C.P. Lond., of Minden Villas, Anerley, and Great Marlborough-street, W., of a son.

FRY.—On April 15, at Wateringbury, Kent, the wife of John Wm. Fry, M.R.C.S., of a daughter.

HOWARD.—On April 2, at 47, Union-avenue, Montreal, the wife of R. Palmer Howard, M.D., of a son.

KERR.—On April 15, at 42, Grove-road, Regent's-park, the wife of Norman Kerr, M.D., of a daughter.

MCCONVILLE.—On April 16, at 11, Elmbank-crescent, Glasgow, the wife of John McConville, M.D., of a son.

WARD.—On April 15, at Saltburn, Twickenham-common, the wife of Martindale C. Ward, M.D., of a daughter.

MARRIAGES.

DAVIES—FELTOE.—On April 12, at Holy Trinity Church, Kilburn, Thomas Davies, L.R.C.P. Edin., of Colwyn Bay, North Wales, to Sarah Ann Dutton, eldest daughter of F. F. Feltoe, of Heworth House, Kilburn, and Albemarle-street, London.

DAVIES—STEWART.—On March 17, at Meean Meer, Punjaub, India, Surgeon-Major Richard William Davies, M.R.C.S. Eng., to Flora Alice, eldest daughter of Major-General D. M. Stewart, C.B., Commanding Lahore Division.

FREEMAN—DOBELL.—On April 14, at St. Andrew's, Well-street, George Broke Freeman, M.A., barrister-at-law, of Lincoln's-inn, to Horatia, youngest daughter of Horace B. Dobell, M.D., of 84, Harley-street, W.

JOY—MASTERMAN.—On April 17, at the parish church, Clifton, George William Joy, Esq., second son of William Bruce Joy, M.D., of Bayswater, to Florence Isabel Mary, only daughter of Thomas Masterman, Esq., of Royal York-crescent, Clifton.

LAKE—MACROBIN.—On April 11, at Aberdeen, Herbert Lake, M.A., barrister-at-law, of New College, Oxford, and of Lincoln's-inn, to Anna Hare Challoner, youngest daughter of John Macrobin, M.D., of Migvie House, Emeritus Professor of Medicine, University of Aberdeen.

TOD—MOIR.—On April 17, at 52, Castle-street, Edinburgh, Henry Tod, W.S., to Margaret Louisa, daughter of John Moir, M.D., F.R.C.P.

WYBRANTS—COOPER.—On April 12, at Wincanton, Robert Bath Wybrants, M.A., L.K.Q.C.P. Ire., only son of Jonathan Wybrants, M.D., of Shepton Mallet, to Caroline Brunton, youngest daughter of Edward Yalden Cooper, Esq., of Wincanton.

DEATHS.

BARNES, ELIZA, wife of J. Wickham Barnes, F.R.C.S., of Bolt-court, Fleet-street, at Mayow Lodge, Sydenham, on April 14, aged 43.

DAVIES, MARIA LOUISA, wife of Owen Davies, L.R.C.P., Mile-end House, Landport, on April 8.

EDWARDS, ALFRED, M.R.C.S.E., formerly of New Cross, and late of Wandsworth-road, London, at St. Mary's, Sully, on April 10, in his 29th year.

ENGLISH, JANE, wife of Thomas English, M.D., of 126, Fulham-road, on April 14.

SKINNER, DAVID, M.R.C.S. Eng., J.P., late of Headcorn, Kent, at Winchelsea, on April 14, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BECKETT HOSPITAL AND DISPENSARY, BARNSLEY.—House-Surgeon. Candidates must hold a diploma from one of the recognised universities of the United Kingdom, or from one of the Royal Colleges of Surgeons, and must also be a Licentiate of the Apothecaries' Company in London, and unmarried. Applications, with testimonials, to the Secretary, not later than May 1.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. Candidates must be registered to practise both in Medicine and Surgery. Must be unmarried, and free from the care of a family. Applications to Mr. H. Howells, Secretary, 58, King-street, Carmarthen, on or before May 2.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon. Applications, stating age, previous experience, etc., with testimonials, to Captain A. S. Leatham, Hon. Sec., on or before May 5.

GENERAL HOSPITAL, NOTTINGHAM.—Resident Surgeon-Apothecary. Candidates must have the following qualifications, viz.:—Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Dublin, or of the Faculty of Glasgow; Licentiate of the Society of Apothecaries in London; duly registered under the Medical Act. Applications to Thos. W. Bush, Secretary to the Hospital, on or before May 9.

GLOUCESTER COUNTY INFIRMARY.—House-Surgeon. Candidates must have registered medical and surgical qualifications. Testimonials and statement of qualifications to Dr. Batten, Gloucester, on or before April 21.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon and Dispenser (one office). Candidates must be registered under the Medical Act as legally qualified to practise, and accustomed to dispense medicines: must be unmarried, and not more than fifty years of age. Applications and testimonials to the Secretary, at the Hospital, on or before April 27. Personal attendance of candidates on the day of election is desirable. Second-class return fare from London allowed to qualified candidates who attend the Board and are not elected.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.—Junior House-Surgeon. Candidates must produce unexceptionable testimonials as to moral conduct, and be legally qualified to practise medicine. Applications, with recent testimonials, to Wm. Heaton, Hon. Sec., on or before April 24.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY.—House-Surgeon. Candidates must possess registered qualifications. Testimonials, addressed to the Chairman of Committee, to be sent in on or before April 26.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Mitford and Launditch Union.—The Shipdham District is vacant; area 12,846; population 3015; salary £50 per annum.

Westhampnett Union.—Mr. N. B. Turner has resigned the Singleton District; area 17,806; population 1825; salary £70 per annum.

APPOINTMENTS.

Henstead Union.—Henry Ward, M.R.C.S. Eng., L.S.A., to the Second District.

St. Mary Lambeth Parish.—Walter E. Farnfield, L.R.C.P. Edin., L.F.P.& S. Glasg., L.S.A. Lond., to the Tenth District.

Uckfield Union.—Henry M. Langdale, M.R.C.S. Eng., L.S.A., to the Isfield District and the Workhouse.

THE POPULATION OF SWEDEN.—The Swedish census returns for 1875 have just been published. At the close of that year Sweden numbered 4,383,291 inhabitants—that is 41,732 more than a twelve month before. In 1800 the population of Sweden amounted to 2,347,308, in 1850 to 3,48,2541. Norway had a population of 1,817,237 at the close of the year 75, as against 883,038 in 1801.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the twenty-first session was held on Friday, April 6, at the Royal Kent Dispensary, Greenwich-road, W. Johnson Smith, F.R.C.S. (Senior Vice-President), in the chair. Resolutions expressing sympathy and condolence with the widows and families of the late Dr. W. Carr and Mr. David Hope (members who had died since the last meeting) were unanimously agreed to. Dr. G. Roper read a paper upon "Post-partum Illnesses generally, and Pelvic Cellulitis in particular."

SALICYLIC ACID IN SCARLATINA.—Dr. Erichsen says that he has found, in cases which had all the appearance of being severe, that salicylic acid speedily produces a reduction of temperature and corresponding amelioration of the general condition. He gives it in doses of one or two grains, according to the age of the child, every hour during the first two days, and afterwards every two hours. He also has found it useful as a prophylactic, administering it in the same doses to other children of a family in which one of them is the subject of scarlatina.—*St. Petersburg Med. Woch.*, March 24.

MICROCOCCI AND BACTERIA ON THE WALLS OF HOSPITAL WARDS.—In 1865, Prof. Broca, having caused the walls of one of the wards of the St. Antoine Hospital to be washed, found globules of pus in the water squeezed out of the sponges; in 1860, M. Chalvet attributed to the presence of a microscopic alga of the genus *Palmella* the blue colour that is often observed in the vicinity of wounds; and in 1861, Dr. Elisel, of Prague, having placed between two beds, in a ward in which were thirty-three children suffering from purulent ophthalmia, an instrument analogous to Pouchet's aëroscope, found, among the atmospheric corpuscles collected on the glass plate smeared with glycerine, pus globules, which were perfectly well defined. Lately, M. Nepveu, head of the laboratory at La Pitié, has presented an account of his researches in this direction to the Biological Society. A square metre of one of the surgical wards having been washed for the first time in two years, the liquid pressed from the sponge was carefully examined immediately afterwards. It was found to contain micrococci in great numbers (fifty or sixty in the field of the microscope), some microbacteria, a small number of epithelial cells, some pus globules and red globules, and some irregular black masses and ovoid bodies of an unknown nature. Every precaution was taken to prevent error, the sponge being new, and previously washed in distilled water. These facts give some idea of the elements constituting what has been called "nosocomial poison," and enable us to see how the germs of a great number of diseases exist in the air of hospitals, and render them liable to become centres of infection. Although in a lesser degree, the same conditions may prevail in civil practice, especially in winter, when patients are long confined to beds surrounded by curtains and insufficiently ventilated.—*Union Méd.*, April 14.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

G. Mc.—We have no information on the subject.

Dr. Barr, Liverpool.—The paper has not yet come into our hands.

An Assistant.—We are sorry that we cannot help you; but there is only one way of obtaining what you want—viz., by completing the required curriculum, and passing the examinations.

W. W.—There is a *Chicago Medical Journal*, but we have never noticed in it any advertisements of the kind you mention. The only satisfactory method of proceeding would, we think, be to make inquiries on the spot.

Tyro.—1. The ordinary text-books. 2. In the meantime there is no examining board. 3. The two books are very good, especially the latter.

"John Hunter-street."—A new street is about to be cut from Regent-circus to Tottenham-court-road, and will pass close to, without destroying, the house said to have been built by John Hunter—viz., 16, Great Windmill-street, now used as a restaurant and café. A correspondent makes the interesting suggestion that the Board of Works should confer on this new street the name at the head of this notice.

*** To oblige Dr. Hollis we publish the following letter:—

THE PHYSICS OF THE CEREBRAL CORTEX.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the criticism of the twelfth volume of the *St. Bartholomew's Hospital Reports*, your reviewer is much exercised in his mind because I have in my paper called the fissure of Rolando "the great transverse fissure of the brain." If it coincides better with his own ideas of what this important fissure ought to be, it can be dubbed for the future "the little transverse fissure." I thank him for pointing out a slight error in my quotation of Professor Turner's synonyms for the convolutions, and I admit that I am not familiar with his nomenclature, as I use by preference Professor Ecker's philosophical vocabulary. Such a mistake ought scarcely to necessitate a "revision of my anatomy." As regards the justice of his final remarks, I shall leave the issue in the hands of my readers.

Brighton, April 13. I am, &c., W. AINSLIE HOLLIS.

A Former Competitor.—It was stated at the last meeting of the Council of the College that no essay had been sent in for the Collegial-Triennial Prize, and only one for the Jacksonian Prize. No award for the former had been made since 1858.

Mr. Williams.—The Honorary Secretary is Mr. Wm. Allingham, of 26, Grosvenor-street. The retiring candidates are Messrs. Erichsen and Gay; they will offer themselves for re-election. Another vacancy, caused by the death of Sir William Fergusson, will have to be filled up. There is no doubt, from what recently took place in connexion with the Followship, that the gentleman mentioned by you would receive a majority of the votes of the Fellows.

Eusebius.—The Government Burials Bill provides for urban sanitary authorities obtaining possession of disused burial-grounds as gardens for the use of the people.

Climate.—According to a return which has been issued by the Registrar-General, the mean temperature of the year 1876, at Greenwich, was 50·1° Fahrenheit, which was 1·3° above the average of 105 years.

G. G., Hants.—Dr. Joseph Black, "the illustrious Nestor of the chemical revolution" (as he has been termed by Lavoisier), was not a native of Scotland, having been born on the banks of the Garonne, in France; but his father was of Scottish extraction, while his mother was a native of that country. Dr. Black was born in 1728, and died on November 26, 1799, in his seventy-first year. He had never been married.

A Student.—The anecdote told in reference to Abernethy's appointment of Anatomical Lecturer to the Royal College of Surgeons was,—A member of the College having remarked to him that now they should have something new, Abernethy seriously asked him what he meant. "Why," said the other, "of course you will brush up the lectures which you have been so long delivering at St. Bartholomew's Hospital, and let us have them in an improved form." "Do you take me for a fool or a knave?" rejoined Abernethy. "I have always given the students at the Hospital that to which they are entitled—the best produce of my mind. If I could have made my lectures to them better, I would instantly have made them so. I will give the College of Surgeons precisely the same lectures, down to the smallest details!"

Critic.—Dr. Johnson's remark is—"Many things which are false are transmitted from book to book, and gain credit in the world."

Percy C.—Charles Edward Brown-Séquard was born on the island of Mauritius, where his early boyhood was spent. His father was Edward Brown, a native of Philadelphia, and his mother was a Séquard, whose name he adopted. He took his degree of M.D. in Paris in 1840.

A SHARP BUT DESERVED SENTENCE.

At Lichfield, last week, a butcher in that town was sent to prison for twenty-one days with hard labour, and sentenced to pay £6, the costs of the prosecution, for having on his premises four carcases of sheep, one of which was intended for sale, unfit for human food. The delinquent was fined £10 about six months ago for a similar offence.

THE NEW VACCINATION BILL, BRIGHTON.

After a stormy discussion at the meeting of the Board of Guardians of Brighton, on a communication received from the Lancaster Union, asking co-operation in opposition to the Bill now before Parliament, proposing to limit the penalties for non-compliance with the Vaccination Acts, the anti-vaccination members who expressed themselves in favour of the Bill were defeated by a large majority, and it was resolved to petition Parliament in opposition to the measure.

THE GOTHENBURG SYSTEM.

The Parliamentary paper with reference to the Gothenburg system contains a letter from Mr. S. W. Duff, her Majesty's Consul at Gothenburg, dated February 22 last, in which he states:—"The Gothenburg Licensing Company, or Bolag, had a good object in view when established; but the system, it appears, has proved a failure, owing to the way it has been carried out, and is at present only a money-making concern, realising a large amount annually, which forms a considerable income to the town. The drunkenness in Gothenburg is great, even among the better classes, and the lower orders consider the Company's retail shops as their privileged abodes. The shops are situated in the most frequented places, right in the face of the labourers and seamen, and I consider this a great encouragement and temptation to drinking. The retail of so small a quantity as two bottles of spirit induces the labourers to buy this quantity, and drink it at their homes in the faces of their families, which, of course, has most demoralising effects. The system is adopted in most towns of Sweden; but the order in Gothenburg is no doubt better kept up than elsewhere by its large and well-disciplined force of police. The distilling of spirituous liquors in this country is done on a very large scale, and the Government has an income of about £730,000 annually, which is, no doubt, the reason for allowing such immense production of an article which is the ruination of many, and a curse to the country."

COMMUNICATIONS have been received from—

Mr. Hitchcock, Lewisham; Mr. Butler, Kirkstall; Dr. Gillespie, London; The Registrar of the Apothecaries' Hall, London; Mr. H. Franklin Parsons, Goole; Dr. Archer Farr, Kennington; The Secretary of the Obstetrical Society, London; Dr. Ainslie Hallis, Brighton; Mr. C. J. Cullingworth, Manchester; Messrs. Salmon Brothers, London; Dr. Jas. Barr, Everton; Surgeon-Major Parke, India; Mr. Thos. Crozier, Boston; Dr. Bagley, Stourbridge; Mr. John Ingpen, London: Dr. Carter, Liverpool; Dr. Corfield, London; Dr. Sinoleton, Victoria; Mr. Hamilton Cartwright, London; Mr. R. Steele, Hemel Hempstead; Dr. Taaffe, Brighton; Mr. Haynes Walton, London; The Secretary of the Clinical Society, London; The Secretary of the Statistical Society, London; Mr. W. E. Poole, London; Mr. B. R. Wheatley, London; Mr. T. M. Stone, London; Dr. Bruce, London; Dr. Sturges, London; Dr. John Williams, London; Dr. Arthur E. T. Longhurst, London; Dr. J. Crichton Browne, London; Mr. Benjamin Walker, Derby; Mr. J. Chatto, London; Mr. George H. Evans, Birmingham; The Registrar of the College of Physicians, London.

BOOKS AND PAMPHLETS RECEIVED—

Year Book of Pharmacy, 1876—John Coutts, Brain and Intellect—James Morton, M.D., The Treatment of Spina Bifida by a New Method—The Hon. George C. Brodrick, Liberal Principles—J. Stopford Taylor, M.D., Report of the Health of Liverpool during the Year 1876—Dr. Albert Neisser, Die Echinococcen-Krankheit—Robert S. Newton, M.D., Explorations in Cell-Pathology—Charles Murchison, M.D., LL.D., F.R.S., Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy—Army Medical Report for the Year 1875.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Practitioner—Nordiskt Medicinskt Arkiv—Canada Lancet—Westminster Review—Boston Journal of Chemistry—American Practitioner—New York Medical Journal—La Andaluza—Medical Enquirer.

APPOINTMENTS FOR THE WEEK.

April 21. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

23. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. T. P. Lucas, "On the Action of Alcohol."

24. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropolooical Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Gladstone, "On the Chemistry of the Heavenly Bodies."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Vandyke Carter, "On the Delhi Boil." Dr. Andrew and Dr. Duckworth, "On a Case of all but Universal Paralysis in a Child following Exposure to Heat, with complete Recovery." Dr. Laidlaw Purves, "On an International Calculating Scale for Ophthalmological Purposes."

25. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery, 8½ p.m. Mr. Fairbank, "On the various Morbid Conditions of the Tooth-Pulp and their Treatment." Other Communications.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

27. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Southey—1. "A Case of Idiopathic Tetanus successfully treated by Large Doses of Bromide of Potassium;" 2. "A Case of Parenchymatous Nephritis, in which the Dropsy was combated by Drainage-Tubes." Mr. Christopher Heath, "A Case of Badly United Fracture of the Bones of the Leg, treated by the Excision of a Wedge with Linhart's Chisel" (a living subject). Dr. Day, "A Case of Ascites in a Young Child treated by Paracentesis and Copaiba: Recovery" (a living subject).

Quekett Microscopical Club, 8 p.m. Mr. T. Charters White, "A Contribution to the Life-History of 'Botryllus.'"

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Dr. John Rae, "On Arctic Life" (instead of Lieut.-Gen. Strachey, whose discourse is postponed).

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 14, 1877.

BIRTHS.

Births of Boys, 1339; Girls, 1315; Total, 2654.
Average of 10 corresponding years 1867-76, 2295·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	896	818	1714
Average of the ten years 1867-76	760·6	717·1	1477·7
Average corrected to increased population ...	...	...	1581
Deaths of people aged 80 and upwards ...	...	...	74

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	5	2	6	...	6	...	1	...	5
North	751729	21	7	3	2	9	1	3	1	1
Central ...	334369	...	19	...	...	...	...	...	...	1
East	639111	15	9	5	...	16	1	1	1	1
South	967692	19	21	4	3	11	...	3	...	5
Total	3254260	60	58	18	5	42	2	8	2	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·632 in.
Mean temperature	46·9°
Highest point of thermometer	58·8°
Lowest point of thermometer	35·7°
Mean dew-point temperature	41·9°
General direction of wind	Variable.
Whole amount of rain in the week	1·73 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 14, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending April 14.	Deaths Registered during the week ending April 14.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2654	1714	58·8	35·7	47·1	8·39	1·73	4·39
Brighton	102264	43·4	64	37	58·7	39·3	47·8	8·78	1·07	2·72
Portsmouth ...	127144	28·3	92	39	58·2	40·4	48·9	9·39	0·45	1·14
Norwich	84023	11·2	48	34	57·2	36·0	44·8	7·12	0·93	2·36
Plymouth	72911	52·3	41	33	60·5	40·0	48·9	9·39	0·26	0·66
Bristol	202950	45·6	157	99	61·3	39·3	47·7	8·72	0·30	0·76
Wolverhampton ...	73389	21·6	72	29	56·2	36·1	43·8	6·56	0·40	1·02
Birmingham ...	377436	44·9	365	216	58·0	37·2	45·5	7·50	0·86	2·18
Leicester	117461	36·7	110	43	59·5	36·0	46·6	8·12	1·36	3·45
Nottingham ...	95025	47·6	88	57	57·6	34·5	45·3	7·39	0·96	2·44
Liverpool	527083	101·2	409	280	54·9	33·0	44·1	6·73	0·42	1·07
Manchester ...	359213	83·7	290	194	...	...	...	...	...	...
Salford	141184	27·3	144	88	54·2	30·0	42·5	5·84	0·62	1·57
Oldham	89796	19·2	96	51	...	...	...	...	...	...
Bradford	179315	24·8	175	73	52·0	36·8	42·2	5·67	1·21	3·07
Leeds	298189	13·8	244	144	55·0	33·0	42·7	5·95	1·11	2·82
Sheffield	282130	14·4	203	127	53·0	33·2	41·2	5·11	0·89	2·26
Hull	140002	38·5	109	65	58·0	34·0	42·4	5·78	1·20	3·05
Sunderland ...	110382	33·4	82	42	48·0	36·0	41·2	5·11	1·76	4·47
Newcastle-on-Tyne	142231	26·5	101	71	...	...	...	...	...	...
Edinburgh	218729	52·2	149	102	49·4	29·0	38·0	3·33	1·50	3·81
Glasgow	555933	92·1	433	264	...	...	...	...	...	...
Dublin	314666	31·3	179	207	61·0	34·0	47·7	8·72	1·10	2·79
Total of 23 Towns in United Kingdm	8144940	38·3	6305	4009	61·3	29·0	44·7	7·06	0·95	2·41

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·63 in. The lowest reading was 29·34 in. on Tuesday morning, and the highest 30·00 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE CLINICAL ASPECTS OF CHOREA,

AS AFFORDING A KEY TO ITS PATHOLOGY.(a)

By OCTAVIUS STURGES, M.D., F.R.C.P.,
Physician to the Westminster Hospital; Assistant-Physician to the Hospital for Sick Children.

Lecture II.

Musculo-Mental Phenomena.

Gentlemen,—It will be said, perhaps, that I underrate chorea, making an estimate of it which leaves out of sight the most marked and severe cases. Acute chorea, it may be urged, in its full development is a violent jactitation and tossing about of the body, where the will is altogether powerless, where there is true spasm, and where sometimes the mind itself participates in various measure, from a blunted intelligence to a very active delirium. It is but a difference of degree. The will-power, always impaired in chorea, is in the worst instances quite mastered; the mental faculty, often engaged, is quite exceptionally as much disordered as the muscles. The factors are still the same, but they are variously combined, and in the combinations the several relations of the affection find expression. I know not on what ground these grave and sometimes fatal cases are to be called "acute chorea," for they are not usually pyrexial, and not necessarily of short duration. "Acute" would here mean "severe," a new use of the word, yet not otherwise harmful. But to speak of such chorea as the "most marked" is not true. The most marked chorea is that which we have been contemplating—that which conforms to the common pattern. These others represent chorea in unnatural exaggeration, not what it is wont to be, but what it may come to in exceptional circumstances. Its common character is no more to be judged from such instances than is the common character of rheumatism to be judged from cases where there is extreme body-heat or very active delirium.

Yet they are not on that account to be left out of the reckoning. Spasmodic involuntary chorea, arching the back and throwing out the limbs, is almost always but a part of ordinary chorea. Either the muscular spasm has developed out of the half-voluntary disorder, or it eventually tones down to it. A continuous clonic spasm, wholly removed from the will and quite uninfluenced by emotion from first to last, would not be recognisable as chorea at all. If, for once, we might disregard the universal practice of dividing every disease into three, it would be useful to distinguish chorea of two degrees. First, that in which the influence of the will, the play of the emotions, and the effects of attention were all perceptible more or less—a class comprehending the very great majority of all the cases. And, secondly, chorea of that rare severity where, for the time, volition altogether disappears and the body is unceasingly agitated by clonic spasm. Yet even in this extreme condition does it ever happen that the convulsion is altogether removed from mental influence? From mental control it is, no doubt; but I question whether mental impressions ever altogether lose their sway, or that convulsion continues unvaried by this cause over any long period of time. Between these two stages of chorea, the quasi-voluntary and the convulsive, certain morbid changes may interpose, upon whose occurrence the development of actual spasm immediately depends. It has been shown by Dr. Dickinson and others that the structural lesions of chorea are to be found equally in a large group of nervous disorders. Hyperæmia, itself the result of choreic disturbance, may, in its turn and by the perivascular destruction to which it leads, introduce results of its own. Movements, at first intermittent, changeful, and half voluntary, may eventually become continuous and spasmodic as these secondary changes ensue. It is not necessary, however, to assume that these structural changes occur always, or that the ever-varying transitory chorea of childhood, which any sudden emotion may excite (and not only excite, but cure), has always this structural basis.

Let us consider, however, before discussing chorea from the side of morbid anatomy, some of the salient features of the affection in life—the rule and method of its muscular phenomena; its association with heart disturbance; the disorders that concur with it or take its place.

The great majority of cases of chorea happen, no doubt, between the ages of four and thirteen or thereabouts, from the period of second dentition to that of commencing puberty; the age of ten (at which Sydenham places its commencement) being, in fact, the time when it begins to decline. Yet there is no absolute limitation of age, except this: that chorea is *impossible in infancy*. Limbs that have not been put to set use—the legs in walking or crawling, the arms and hands in reaching and grasping—cannot be choreic. They are very prone to spasm; they are sometimes affected with tremor; they can never have chorea. For this latter there must be purposive movement, as there must be speech for stammering. In this sense, although it is true that paralysis may succeed chorea, and muscular weakness is its very common sequel, actual palsy is incompatible with it. It is the muscles that are being taught to execute movements—that have learnt, and still retain, a certain degree of use—that come thereby, or at least thereupon, not only subject to chorea, but in the highest degree liable to it.

In this relation it is interesting to observe that those who are congenitally deficient in mental respects, idiots whose higher development has been arrested, and who want the full power to direct and co-ordinate their movements, do not get chorea. They are epileptic in very large number, but not choreic. Dr. Grabham, the resident physician at Earlswood, who replied with much kindness to my inquiries upon this subject, tells me that he has "never seen true chorea supervening upon idiocy." It is to be remarked, further, that children away from civilisation and who are suffered to grow up in their own way, with little or no training, are indisposed to take chorea. I learn from my friend Mr. Macnamara, of the Westminster Hospital, that in the statistics of Calcutta and up-country practice in Bengal the affection is very rare.

As regards the order of the chorea invasion, it is found (and this with such frequency that I need not quote statistics) that of the limbs the hands and arms of children suffer in much larger proportion than the feet and legs. The rule is, as you know, that one hand, or one arm, or shoulder—right or left—begins, and its fellow soon follows, and next the legs; the face muscles, with the exception of the tongue *when it is ordered to move*, joining in sooner or later. In young children the facial muscles often escape altogether. Whether it be the right side or the left that suffers most or first, I have not yet been able to satisfy myself. There can be no great difference, yet here, as I think, the operation of a law is to be observed. In that exceptional form of chorea that remains throughout one-sided, the seat of the first attack remains the seat for subsequent ones. I have at this time a girl of fourteen with her fourth attack of one-sided chorea, every attack having been on the right side. Although, as has been said, the legs are usually affected after the arms, they begin earlier to recover. I have seen lately two severe cases of chorea in boys of thirteen, beginning in the hands. Both were quite incapable of walking, and in both the disease yielded but slowly; but it left the legs first, and so rapidly as for the moment to give colour to a belief that the patients were about to make a sudden recovery. Rarely chorea will begin in the legs, but it is never confined to these limbs, and such cases are usually both general and severe.

From the fact that chorea can only happen to muscles which have been intelligently employed, it follows of course that the range of vulnerable muscles increases as life goes on. Until the organs of speech begin to be used as such there can be no speech-chorea (the affection of the tongue, as has been said, is peculiar, and seen only when it is moved to command); until the face is exercised in expression there can be no face-chorea, while afterwards, when expression begins to centre there, it becomes of all localities the most liable to it. In the chorea of approaching puberty, the face, I believe, is always affected, as it is said to be in the chorea of pregnant women, which is often, as Dr. Barnes points out, but a revival of the same affection in childhood. But, whatever the special seat of chorea, it will readily yield its place when the affected muscles can be held, the disorder being then transferred to some other part.

(a) Delivered at the Hospital for Sick Children, Great Ormond-street, March, 1877.

Cases occur now and then which the nosologist might decline to call chorea, yet wherein some of the elements of the disease are displayed under interesting and instructive modification. Thus, for example, the muscular disorder, instead of being continuous and easily increased by emotion, may be intermittent and entirely subject to that cause; or, again, over-movement may be replaced by over-stillness, or, as it is more learnedly expressed, "chorea may be complicated with catalepsy." I have a country youth under my care at the present time in Westminster Hospital, a farm labourer, of ordinary intelligence and robust health, who, when addressed, or rather when about to make reply, has an agitation of the right arm and shoulder, which of himself he cannot restrain. Yet there is no want of co-ordination in that limb. He is right-handed, and his handwriting is better than with most of his class. When his arm is held, or when the boy is carrying a heavy weight in that hand, the opposite side takes on the movement instead. If the boy is got to speak continuously, the right arm being held the while, not only is the movement transferred to the left arm and shoulder, but as he continues his task the agitation spreads until all the limbs are choreic, and at length his voice and face betoken true mental emotion. When the patient is told to keep his left (or still) arm in continuous motion to and fro, questions may be addressed to him without causing the usual movement of the affected side; and in the ordinary talk of the ward, when not under observation, the movements are but slight.

An instance of catalepsy with chorea I take from Dr. Handfield Jones's(b) valuable treatise:—A girl of eight and a half, who had never had a trace of rheumatism, who was emotional, and tall for her age, was admitted with moderate chorea. Gradually she became quite helpless, "lay in bed like a statue, almost voiceless, and vacant-looking. It was a strange sight," says Dr. Jones, "this fair, large-eyed girl, lying there day after day so unnaturally still and silent." Yet in six weeks this child could walk by herself, and in less than two months was "almost quite well."

How are these several methods of muscular disorder to be explained? Why do they so often begin at the hands, and not rather on the limbs of one side of the body? Why does the derangement attach itself particularly to young girls; and why, as these patients grow, do they become less liable to chorea in its pure form of a mere movement-disorder, while still subject to a more localised affection in over-movement of the face mixed with emotional disturbance or hysteria?

Before attempting to answer these questions I must allude briefly to another symptom of chorea. Unobserved until lately, it is made now, in the judgment of some, of paramount importance, inasmuch as it is said to afford a key to the pathology of the disorder. I allude to the heart signs.

It is not easy by figures to show the exact frequency of heart-disturbance in chorea. Observers vary in the faculty of detecting very slight departures from the evenness of cardiac rhythm. It is enough that all agree that it is of very common occurrence. In 121 cases (my own and Dr. Dickinson's taken together) it was found in 79; while in 66 cases quoted by Dr. West a "cardiac bruit" was present in 25. It is evident from the fatal cases that such murmurs depend upon structural changes. Thus, of 31 fatal cases, of Drs. Ogle and Hughes together, there was fibrinous vegetation or deposit on the valves in 18. In Dr. Dickinson's 22 there were recent vegetations in 17 (upon the mitral valves in all, upon these *only* in 7), or, excluding 5 adults, there was valvular disease in all but 4 out of 19.

In the great majority of young children with chorea the heart's rhythm is disturbed both as to the sounds and as to the intervals. Successive "first sounds" are of unequal length; one will end with an echo, and the next with a murmur; while now and then, if the listening be prolonged, the heart will be heard to falter. From this condition to one of marked irregularity and loud (yet always variable) mitral murmur there are many gradations, all of which will sometimes be observed in the course of a single case.

It is not fanciful to speak of this cardiac disturbance as choreic. It is, in fact, disordered muscular movement, which both begins and ends with the disorder of the voluntary muscles. It will occur alike in the rheumatic and the non-rheumatic, in the severe cases and the slight, the cardiac muscle seeming all one with the others, suffering or escaping just as any particular group of these may do. Like them, too, the heart will shake off the affection and escape its consequences. For although cardiac murmur originating in chorea will sometimes persist, so that in a second attack the same murmur shall be present that was made by the first, it is remarkable how seldom the heart-disturbance of chorea is carried on into adult life. Not only are choreic adults commonly free from heart-murmur, but it is a quite rare experience to find secondary heart-changes, hypertrophy and dilatation, traceable to valvular disease having its origin in past chorea. It must be added that the cardiac disturbance is almost always a sign that must be *sought* for; there are no general symptoms to indicate it. It is not wonderful, therefore, that until the stethoscope detected it, it should have been unsuspected.

Endocarditis, then, belongs to chorea as such apart altogether from the rheumatic origin of the latter. Of fifty-seven cases of chorea with heart-disturbance, rheumatism is in the history of but six, while, separating rheumatic chorea from non-rheumatic, there is not a much larger proportion of valvular defect in the one class than in the other.

Whether or not the irregularity of action, which is the earliest symptom of heart-disturbance in chorea, and that to which murmur succeeds, is itself the cause of fibrinous deposit, as Dr. Dickinson suggests; or whether, as seems possible from its origin and duration, a real endocarditis is set up in these young hearts owing to the irregular working and unequal strain of the valvular apparatus,—whatever explanation we adopt, this at least is certain: that the cardiac symptoms are to be taken along with the muscular as proceeding from a common cause. The *place* of heart-disturbance amongst the phenomena of chorea is now determined, and any exposition of its pathology based upon the hypothesis that endocarditis or heart-defect of any kind precedes the muscular disturbance or renders its occurrence more probable would violate clinical facts.

To return to the voluntary muscles, it is to be noticed that at all times of life, except the earliest and the most advanced, mental emotion is apt to give rise both to the disordered movements of chorea, and to loss of movement also. It is not easy with grown subjects to foretell the consequence of such an impression, except that it will always find muscular expression somehow. I had lately under observation a man of forty-four, who, after being attacked by ruffians, was found to stammer in his speech and move his limbs restlessly when addressed, the right arm having become powerless. Similarly, Dr. Todd tells of a man of sixty, who, upon the mere irritation of argument, after displaying strong excitement, became temporarily hemiplegic, the loss of his temper involving the loss of limb-movement.

It must be freely admitted that the chorea of childhood is less immediately associated with mental disturbance than is the much rarer chorea of puberty and adult life. It is an affection of movement alone. In this respect the chorea induced by some grave terror is all one with that which follows rheumatism. At the outset of the affection it is curious to observe how readily the patients are amused, their sound uninterrupted sleep, good appetite, and general contentment.

There are, indeed, certain facts of disease which help to explain this issue of mental impression in muscular disorder—facts, I mean, which exhibit muscular movement as the exact correlative or complement of mental emotion, making the two freely interchangeable as joint yet varying factors in the individual life. I will mention but one. A girl of eleven was lately under my care in this hospital, afflicted with what might be called "falling sickness." On hearing unexpectedly any loud noise, she would start so violently as to lose her balance and fall to the ground, and in this way sometimes got badly bruised. It so happened, however, that the noise would sometimes fail to produce its usual effect, so that, instead of falling, the child would merely start. On these occasions, although escaping the shock and hurt of fall, the girl would always shed tears. The emotion, which was entirely absent when the shock was violent and the fall severe, was always expressed when the start was moderate and the fall saved.

To what conclusions do such facts point? Surely to this: that the pathology of an affection like chorea is to be sought in the natural endowments of the individual; that it comes to be a child's disease because those elements out of which it is evolved are especially prominent in early life; that childhood not only *predisposes* to chorea, but has also the material which is efficient to produce it. Such a doctrine, I am aware, will find little favour with those who decline to recognise

(b) "On Functional Nervous Diseases," page 376.

pathology apart from morbid anatomy, and regard functional disease as a phantom already fading before the light of science. Ordinary chorea hardly comes within the reach of these observers; they are compelled to judge of it from its rare exceptions. On the contrary, the hypothesis to which I would now ask your attention seeks its illustrations from the every-day incidents of the disorder; it professes to give an account of its whole history, and to find support, not from one or two remarkable instances, but from every case of chorea that has ever happened.

The facts to which I allude are indeed lost sight of in their very familiarity. Regarding the muscular system as subserving many uses in locomotion, handling, speaking, and the like, we do not sufficiently consider how in all these uses, and beyond them all, the voluntary muscles are the visible expression of the mind. It is no adequate representation of this relationship which speaks of the muscular system as the *instrument* of the will. It is its colleague, and often its master. Consider in what intimate respects muscular movement and posture express the man; how in all his moods and chance attitudes, in repose as well as in action, they never cease to express him. Not to speak as yet of emotion, there are the influences of education and culture and habit and inheritance, all conspiring insensibly to mould the man so that, apart from his will, and often in spite of his will, his muscular carriage becomes the index of his mind, and is, in fact, a part of it. This principle is so imperative as to be visible through all the accidents of awkwardness or physical weakness; it is so universal, that although, roughly speaking, the mode of progression is always the same, it requires but slight knowledge to recognise everyone at a distance by his gait, and no long acquaintance to read the mind from the gestures.

Now, this muscular deportment becomes distinctive in strict harmony with the mental growth. Uncertain and unstable in childhood, it tends as life goes on to become fixed and indelible, and indeed automatic. When mental and bodily development are completed, the man, so to speak, settles to his stride, and the muscular carriage becomes what, apart from accident, it is likely to remain until the infirmity of age makes the body tremulous and slack to obey. This early variableness and later fixity of muscular habit is well illustrated in the handwriting. Until nearly thirty, few men have finally resolved how to sign their own names. After that age the handwriting changes but little till it becomes shaky with age. Like other muscular performances, it is only in a measure voluntary in middle age; it is with pain and effort and ill success that we write a feigned hand,—so soon as attention is removed the fingers slip back into their old habit. It is the same with bodily carriage. We can but disguise ourselves a little and for a little while. There is always a tendency to swing back. The body, like the mind, though moved by many agencies, has one even tenor to which it will always revert.

With the strict preservation of individual habit there concurs endless variability between man and man. This, again, is best shown in those muscles which are the highest as being most concerned in intellectual service. No two pairs of hands will execute the same task in the same manner; yet there is no single hand engaged repeatedly in any use but will fall into the habit of moving on every occasion precisely in the same way.

By a limitation obviously too narrow, muscular expression is supposed to be centred in the face. It is there, no doubt, after the period of childhood, that the fineness of muscular adjustment to mental mood is best seen, partly because the muscles to be used are free from other employment, and partly because we are always conscious that the face is the index whence all men will seek to discover the actual working of our minds. But the muscles, considered as one company, are *all* expressive both of our present temper and of our habitual composure or mobility, although each group varies from the rest in its readiness of response. *Every department of the muscular system has thus its own measure of stability, and for its due order requires a corresponding force of control.* The muscles of readiest response are also those of ordinary expression. In ordinary converse the face-muscles are continually being moved over and above the movements actually requisite for articulation. In this wide range of movement (which is so varied as to defy anatomical analysis), supplemented by movements of the head and shoulders, and the occasional convulsion which is called laughter, the sentiments of our ordinary routine life find sufficient expression. But as the individual is moved or agitated in mental respects, so precisely is he moved or agitated in bodily respects. The area of movement is continually widening. Thus, if conversation be converted into declamation, the arms are moved and the body raised on tip-toe, and if excitement be still further increased, muscular movement becomes general, the several groups of muscles yielding successively in the order of their stability. There are emotions of every variety of strength, and, as these muster, the man yields one point after another until all are surrendered, from the conceit that just wrinkles the face, to the strong passion that deforms the whole frame. In our artificial civilised life, subject to satiety rather than surprise, the recurring round of monotonous duty is seldom broken by emotion of this violence. When it is so, custom and education are alike opposed to any open display. Tears must be suppressed, and laughter almost without noise. Emotion will find expression nevertheless, yet, owing to the violent restraint which is put upon it, it is distorted from the method of nature. With most men sudden grief or surprise or joy expends itself, not in increased muscular movement as nature would have it, but by convulsion of the face. The natural movement-response is converted into a hideous spasm.

But while these phenomena express generally the conduct of the muscular system considered as an exponent and correlative of the mind, they are subject to important modifications at different periods of life. In childhood muscular movement is active and incessant, while the imperfect impressions that crowd into the mind are evidenced less by the face than by movement of the whole body. *Children express themselves all over.* They know no reason for disguise, and have no respect for conventional uses. In spite of discipline and correction, the child still remains a restless individual, without the strength to be still, never dwelling upon an attitude, with a constant desire for movement, but little method or purpose in moving.

In the life of a single individual from infancy to old age the display of emotion (by which I mean not strong passion only, but all the sentiments that animate mankind) changes in method and seat and measure in exact correspondence with mental development and the ever-growing force of habit and association. The infant, unable to direct its movements, makes aimless springs and kicks and grimacing—a language as little coherent as its thoughts. Its chief response to material irritation is by way of spasm. Enlarging presently its field of observation and experience, the infant becomes a restless, impressionable child, moving its limbs much more than it uses them, with no defined purpose, and expressing such mind as it has almost entirely by that method. It has learnt to move imperfectly, but has yet to learn to be still. Next comes the reign of emotion. New passions now find expression in various perturbations of the mind, evidenced by tears and sighs and all the apparatus of hysteria, with less of muscular movement and more of muscular spasm. Mental impressions are now first clearly apprehended and intelligently expressed by words and appropriate gestures. To this succeeds the contemplative sedateness of middle life, with its habitual attitudes of body and fixed expression of face. Muscular stability is now at the highest. The control of the mind over the body is complete except for the tyranny of habit. At the last comes old age, when mental emotion is hardly expressed and but feebly felt, and such movement as occurs is but the trembling of tired-out muscles.

In these transitions allowance must, of course, be made for differences of sex and nation, and individual temperament. One will prolong his childhood, another will anticipate old age. Nevertheless, the great epochs of life preserve their distinctive characters, and the same quality of change is to be seen in every human being. As mental impressions get more and more clearly apprehended, so more and more do they fail to excite movement and find proper expression in language and muscular attitude. The nature of the response—whether it be spasm, or over-movement, or relaxation of muscle—corresponds always with the period of life.

It is, as I believe and have yet to show, a legitimate application of what has been said at tedious length to regard chorea as an affection of function, as hysteria is. It exhibits certain of the characteristics of childhood in unnatural exaggeration, and brings forward prominently what is always visible in the background. Without seeking to justify the term "functional disease," I perceive in chorea an exaltation or exuberance in the exercise of those functions which, in early life, are at the best turbulent and prone to disorder. I see its beginnings in every child, and more than its beginnings in every child

that I know well or have met in trying circumstances. The hypothesis of embolism, or thrombosis, or subacute inflammation (even supposing that any of these sufficed to account for the facts of chorea, or could be shown to be actually present along with it) would still be unnecessary. To justify and illustrate this view will be the object of my next lecture.

ORIGINAL COMMUNICATIONS.

NOTES ON HYDROPHOBIA IN CHINA.

By J. DUDGEON, M.D. etc.

This affection is not unknown in China, but, unfortunately, from the idea entertained by the Chinese of the sacredness of the human body, no case of post-mortem examination has ever been obtained, and, from the comparative suddenness of the attack and the subsequent death, few cases have been witnessed. We are able, therefore, to throw very little light on this subject, but, inasmuch as it is occupying a good deal of attention in some places at present by reason of various deaths having lately occurred from this disease, a few notes from China may not prove altogether uninteresting. Considering the number of dogs found everywhere in Chinese cities, hydrophobia might be pronounced comparatively rare. The dogs are fed on simple rice or millet, and abundance of water in the streets—not always the purest, I confess—is always to be obtained, and no laws exist regarding muzzling or restriction at certain seasons. Of all things in the streets of Chinese—I might say, of oriental—cities, beggars and mangy dogs, both living to a large extent on garbage, are not the least frequent. Ordinary dog-bites are therefore extremely common, and get well with ordinary simple treatment.

The natives are much alarmed when bitten by these street dogs. Two Chinese coolies, who had been bitten on the same day by a mad dog, came under my notice in 1873. One had only his clothes torn; the other had a bite on the outer aspect of the popliteal space of the left leg. I cut out a portion, and at the same time applied lunar caustic. A few months later, the case of a lad, twelve years old, was reported to me, as having been bitten by a neighbour's dog, not known to be mad, but which was nevertheless destroyed. The wound healed the next day, but forty-seven days after the bite the boy began to feel pain in the palm of the hand, where he had been bitten, which rapidly extended up the arm, and during the night the pain prevented him from sleeping. On the following day he was unable to swallow, and complained of obstruction in the throat. Ice-bags were ordered to the spine and nape of the neck, and ice *ad libitum* by the mouth. I was to be taken next day to see him, but he died the same evening. On the case being reported I supposed it to be one of hydrophobia. In the following year two bites of a similar kind occurred; the parts were freely and early excised, and lunar caustic also applied, and, so far as I am aware, no bad results followed. There was also one bad bite from a monkey, and several from human beings; in one of the latter one of the testicles was removed in this way; all did well. There were also two cases of bites, one by a bear, and the other by a bull-camel, both of which ended fatally. They are interesting from their rarity. In the former case, a boy of eight years old, one of a bear-exhibiting company, was bitten in the arm and scratched all over the body. Twenty-days afterwards I amputated the arm below the shoulder-joint, the bare ulna, radius, and black, dry, shrivelled hand being all that remained. A large abscess over the spine was at the same time opened. The boy recovered, but ultimately died from the effects apparently of the poisonous saliva of the bear. In the latter case, the man, a coal merchant, was bitten in the left leg, through thickly wadded trousers, the tibia and fibula being fractured just below the knee, and the lower portion of the fractured tibia projecting several inches through the wound. The whole leg was gangrenous, and the patient was brought to the hospital seven days after the accident in a moribund condition. He died the following day, no amputation having been performed. Bull-camels are very fierce, and are always muzzled.

Before mentioning the Chinese treatment of hydrophobia I take the liberty of referring to an important case of an adult which occurred in the practice of Dr. Reid, at Hankow, and which, like the case referred to above, had a very rapid fatal termination. This patient, a European adult, was bitten a little above the wrist on the unprotected forearm, on December 15, by a young native dog (which rushed into his room), while attempting to secure it. He kept it for some days in his bedroom along with two other dogs, a monkey, and a cat. Two days after the bite, the wound was cauterised with lunar caustic; it readily healed up, and the circumstance was forgotten. On February 1 the patient complained of great lassitude, prostration, and nausea, without any febrile symptoms. Next morning the nausea continued; he vomited once or twice during the night; the tongue was coated with a thick creamy fur, and the pulse (84) was full and bounding. At 2 a.m. he found himself unable to swallow water, and every attempt brought on the usual severe spasms of the pharynx. The secretion of saliva was increased; the wound had acquired a reddish tint, but without any pain at the spot or adjoining it. Morphia was injected subcutaneously, and cold water enemata administered in hope of soothing the burning thirst. He succeeded in three out of four efforts to swallow teaspoonfuls of ice, which assuaged the thirst for a moment. He frequently renewed the attempt to swallow, and each time threw himself back exhausted by the struggle. The viscid secretions of the mouth were hawked about in all directions; there was occasional delirium; the pupils were brilliant and dilated; a cold perspiration bedewed the skin; and there were intense spasms of pharynx and diaphragm, with forcible drawing-in of the lower ribs. There was also considerable difficulty in respiration and articulation, hoarseness of voice, and a haggard, anxious look. An enema of one drachm of chloral was administered and retained. The vomiting of a dark grumous liquid became more and more frequent. The throat-spasms and secretion of the mouth increased till midnight. After this, great prostration set in, and the patient became much quieter, lying apparently insensible, with eyes widely open and pupils dilated. About 4.30 he again became excited, and jumped out of bed, and when carried back he died of exhaustion. Up till 9 p.m. the thermometer did not exceed 99°; after which time the patient's movements rendered further observations impossible. The skin felt cold throughout, and was covered with sweat. The post-mortem examination exhibited intense congestion of the lungs and abdominal viscera; the heart was contracted, not distended as in death from asphyxia. Permission to open the cranium was refused by the friends.

The dog which bit the patient, as well as the monkey and cat, all died with nervous symptoms within two weeks of the date of the bite; and the two dogs which had been kept in the same room with it exhibited symptoms of excitement, and were destroyed. These circumstances were not known until after the fatal symptoms had set in.

Within the last ten years a few fatal cases have occurred among Europeans at Shanghai. An interesting case occurred there in November, 1874, in a European. The man was bitten on September 23, and the symptoms began to show themselves on November 8, or forty-one days after the accident. The period of invasion lasted about three days, and the patient complained of violent hypogastric pain whenever anyone entered the room. The various symptoms of rabies followed rapidly, and with great severity. The deep bite on the left hand suppurated, and cicatrisation was not complete till three weeks afterwards. He complained of no pain in the wound, and had no suspicion that the wound was connected with his present illness. Morphia injections gave him momentary relief. The chloral enemata administered induced anæsthesia, but not sleep. Death occurred by asphyxia, and appeared to have been hastened by the injections. The autopsy showed only that the spinal cord was anæmic, and all the muscles gorged with blood.

In regard to the notion that the saliva of a dog apparently healthy may produce rabies in man, I may state that I was myself bitten on the calf of the right leg by a dog in 1865, and the wound did not get well for six months afterwards.

Another practitioner at Hankow, during six years' practice, reported, among several cases of dog-bite, only one case of hydrophobia coming to his knowledge, and it was not brought to the hospital, after the development of the disease, which occurred some five weeks after the bite. The man was smothered to death—a not uncommon practice in such cases. The dogs when found are invariably also destroyed, frequently being beaten to death by long poles.

The treatment followed by the Chinese is to catch the animal, take some of its hair, mix it with lime, apply it to the

affected part, and in three days it is well. Our saying, "a hair of the animal that bit you," may have had its origin from this treatment. They also take the precaution in this, and in most other affections, to ligature the part very tightly above the wound, ulcer, or tumour. They are ignorant of the venous and absorbent systems; their practice is drawn from their observation that the inflammation travels upwards towards the trunk. Trousseau, in his "Clinique Médicale," gives a Chinese prescription regarded as infallible, consisting of musk and cinnabar. Numerous prescriptions, with many interesting, but at the same time puerile and ridiculous, observations, are found in all Chinese medical works on this, as on all subjects. I shall omit what seems utter nonsense, and only calculated to excite the risible muscles and throw discredit and ridicule on Chinese medicine, except what is necessary to illustrate and explain their treatment. The wound is ordered to be immediately and freely scratched till it bleeds plenteously, and likewise to be sucked and washed. An empty walnut-shell is to be filled with human fæces, placed on the wound, and the moxa applied. This is to be repeated one hundred times, if necessary, until the walnut-shell turns black and the contents are dry. A compound of various herbs mixed with saliva is then applied, and this is to be repeated on the second, fourth, and fifth days. A mixture of cantharides, yellow earth, realgar, and musk is administered internally, thrice daily, until micturition becomes painful. This latter symptom is to be relieved by administering a mixture of yellow earth, liquorice, amber, and indigo. On the top of the head a red hair will be found, which is to be extracted. Another method consists in using the curd of the black pea (peas and beans are considered antidotes to all poisons), made into a ball with hemp oil, and rolled frequently over the wound, until a red hair is produced in, and again disappears from, the bolus. As a last resource, the powder of the skull, teeth, and toes of a tiger are administered. If a speedy cure do not follow, the person becomes mad, barks like a dog, the eyes are white and glaring, and death soon ensues. Dry cupping over the wound is another plan advocated. This operation in China consists of heating a cup by boiling wine in it, pressing it over the wound, and as it cools it will draw out the impure blood. Repeat this until the black blood ceases to flow. Another remedy is to take the body *only* of a Spanish fly, which is supposed to expel the poison through the urinary organs Various prescriptions recommend the cantharides boiled in rice, the flies to be withdrawn and the rice eaten, on the supposition that strings or clots of blood will appear in the urine, which are supposed by some to be the poison of the rabid animal passing out of the system, by others to be small dogs formed in the body by the poison. During the whole treatment the utmost quietness must be observed; the patient must on no account hear any noise, such as that of a bell, gong, drum, etc., else the recovery is impossible. When the body swells, and the voice becomes like the bark of a dog, and the eyes brilliant and white, a fatal issue is likely to ensue. Another method, if the wound reopen, is to take one-fiftieth of an ounce of realgar and musk in wine; the patient is not to be disturbed, and if the urine be red and bloody, the medicine is to be continued. In another recipe, one seed of nux vomica is to be rubbed in water till dissolved, and the solution drunk. Tobacco oil or an infusion of the leaves is ordered. Frogs are ordered to be eaten, and the wound covered with the fresh entrails and changed daily. The application of the skin of a fowl to ulcers and wounds is of common occurrence. In one work the wound is ordered to be covered with the bark of the *Sophora japonica*, to be surrounded with a deep ring of flour-paste, the cavity to be filled up with fæces, a slice of the bark over all, and the moxa applied fifteen times. Another work advises burning with the moxa once daily for 100 days, and large quantities of almonds to be eaten.

Two things are particularly observable in the above Chinese practice, viz., the necessity for the immediate destruction of the poison, chiefly by the moxa or some practice involving the same principle, and the reliance placed on large doses of cantharides. Only in one work are the Spanish flies contra-indicated, because of their poisonous propensities and their producing pain in micturition. All believe in the existence of a red hair on the vertex, and all forbid dog's flesh, silkworms, and red bean curd to be eaten throughout life. All agree in stating that a man bitten by a mad dog has three chances of dying to one of living, and nearly all lay great stress upon perfect quiet being maintained during the progress of the case.

Pekin.

ON THE PREVENTION OF MEASLES.

By "MUCOR."

It appears to me that measles may be prevented amongst civilised communities by a very simple precaution. On the strength of inferences drawn from phenomena recorded by others, and from observations made by myself, I venture to say that every father of a family may at will preclude this disease from occurring in his house, and may also prevent its spreading through the family in the event of its accidental introduction into the house by an inmate. This proposition will no doubt appear hazardous, but I trust to show that it is not altogether unsound.

Obviously the first point to determine is the cause of measles; and it may surprise etiologists to be told that this problem of causation has virtually been solved these fourteen years. Yet I suspect it will have to be admitted eventually that such is the fact. In the July and October numbers of the *American Journal of Medical Sciences* for 1862, Dr. Salisbury published his views on this subject; and although these views, like some others of this original and splendid observer, have lain almost unheeded, I conceive they contain the true explanation of the causation, and suggest a ready mode for the prevention of measles. Let me therefore ask etiologists to reconsider the experiments of Dr. Salisbury carefully, and to re-examine his conclusion by the light of more recent knowledge and in view of a few facts to be presently adduced. For the convenience of those who may not have the *American Journal* at hand to refer to, I will epitomise the two papers in question. It is sufficient to say here that Dr. Salisbury details several phenomena connected with the occurrence of measles which led him to the inference that the efficient cause of the disease may be a mildew growing on straw, and that he made certain experiments to verify the inference, and also to ascertain whether inoculation with straw fungi would throw any protection over the inoculated. He moistened some clean wheaten straw, placed it in a box in a warm place, and found it in twenty-four hours covered with a white mildew. With some of the spores and cells of this mildew he inoculated his own arm, and two days after had mild morbillous, or morbilloid, symptoms—coughing, sneezing, lachrymation, dry throat, blotches on the face and neck, slight fever, etc. At the end of a week he was free from all these symptoms, and he then inoculated himself as before, without other result than a slight watering of the eyes, which passed off in a day. Dr. Salisbury also inoculated his wife, who suffered less than himself, and had "scarcely any perceptible blotches, yet the other symptoms . . . . were all present." Subsequently he inoculated some children with similar results, and under circumstances which appeared to show that the inoculation had a decided protective influence. Finally, he inoculated twenty-seven boys in the Ohio State Reform Institution at a time when measles were present. The fungi invariably caused a red blush round the point of inoculation, as well as slight catarrhal and febrile disturbances of a measly type. Of the twenty-seven boys, twenty-three did not take measles. The other four had the characteristic rash, and were in bed for a day or two. It seems doubtful, however, whether these boys contracted the disease in the ordinary way by exposure to the common cause, or whether the symptoms had been artificially induced by the straw mildew.

Although modern writers have rejected or ignored Dr. Salisbury's views of causation, I am not aware that anyone has challenged his description of the physical effects following the introduction of straw mildews into the human body. For my part, I accept his description unhesitatingly, not only because his papers bear the impress of sterling work, but because the local and general effects of the inoculation he describes are analogous to those which will sometimes ensue when mowers or reapers handle mildewed cereals. In warm climates, farm labourers employed in getting in crops occasionally find their wounds, sores, or abrasions red and swollen, and have such severe catarrh and fever that they are thrown out of work for several days. In New South Wales, indeed, this is so fully recognised as a risk in times of "rust" and "blight" in the corn, that harvest-men then regularly demand and obtain a higher wage. It is not unlikely that the English labourer suffers similarly from "take-all," or "smut," in exceptionally moist harvest seasons, although it may not have attracted special notice. Be this as it may, I consider it has been demonstrated by Dr. Salisbury that when certain straw

mildews are inoculated in man they rapidly induce a train of symptoms closely resembling those of measles. I take this to be clearly established; and the question next arises whether the disorder set up by straw mildews is related in kind to true or genuine measles. To be seized of the whole argument on this cardinal point the inquirer must, of necessity, consult Dr. Salisbury; but I may at once concede that, although Dr. Salisbury was unable to detect any generic or specific difference between the constitutional disturbance caused by straw fungi and the symptoms of measles, yet it does not follow, therefore, that the two sets of phenomena depend on a like cause. Similarity is not affinity. Moreover, it will be obvious that all the evidence adduced by Dr. Salisbury to show that the morbillous poison derives from straw is purely negative. For it cannot be maintained that it was a consequence of their inoculation that the boys in the Ohio Reformatory did not take measles; and even if their exemption could be shown to have been a consequence of the inoculation, it would not be positive, though it would be strong presumptive, proof that straw mildew is the efficient cause of measles. Fungi have not been found in the blood or excreta of patients, and proved to be related to or identical with straw mildew. In short, a straw mildew has not been shown experimentally to be the infective agent of measles. The absence of positive proof, however, does not preclude our obtaining inferential proof.

If this mildew theory of causation be sound, it is a sequence that all cases of measles have hitherto originated, and will hereafter originate, from straw (or from allied forms of vegetable matter). As regards the remote part, all that can be said is that the history of the disease brings out that countries in which cereals have not been grown have been free from indigenous measles, and discloses nothing which is incompatible with the theory; whilst as regards the immediate past, my impression is that if those who have had either ordinary or special opportunities for observing outbreaks, for the last ten or twenty years, will be at the pains of tracing back, they will find that damp or rotten straw may generally, if not invariably, be connected with the appearance and spread of measles. But if the evidence as to the past be obscure and incomplete, that to be obtained in the future should be clear and full. Any inquiry in this direction will be but rarely complicated by questions as to the actual source of infection: for I venture to suggest that measles are seldom communicated direct from body to body, although it is commonly taught that the affection is largely propagated in this way. They who investigate this matter should have regard to one source of error. A straw mildew will colonise itself on congenial substrates in its neighbourhood just as readily as when transplanted on to the living human substrate, and perhaps with greater facility. It will be borne in mind, therefore, that a mildew occurring on damp straw may quickly overrun other moist vegetable and animal substrates, and may thus convey infection (more or less modified toxically, perhaps, by the nature of these foreign soils) to some distance from the straw starting-point. From this and other causes occasional difficulties may intervene to prevent particular cases from being relegated to their precise sources. There must always be a proportion of cases where infective agents are concerned in which the infective processes are set up under conditions that are sometimes considered anomalous or erratic, because the appearance of the disease is inexplicable. Fewer instances will be met with in connexion with measles, however, than with most of the so-called zymotic diseases. Even a superficial investigation of outbreaks will, I conceive, enable the inquirer to connect measles with damp straw as surely as ague may be connected with marsh miasm.

As I may merely outline an argument here, perhaps the most concise shape in which to put it will be to assume a mildew causation of measles. This is admittedly a resort to the *petitio principii*, but it will be a convenient form for exposition. The reader can easily correct the conclusion. I therefore submit:—1. That in a dwelling free from straw (or the like vegetable fibre) measles will not occur *de novo*. 2. That the inmates of such a dwelling have immunity even in the centre of severe epidemics. 3. That if a patient be introduced into, and remain during the whole progress of the disease in such a dwelling, the probabilities are great that the other inmates will not be affected. (In such a case, however, the nature of the excreta-disposal system of the dwelling may determine whether or not the measles will be propagated.) 4. That the inmates of isolated dwellings, the bedrooms in which contain straw, may, under certain seasonal conditions, become affected with measles which apparently occur *de novo*, as they cannot be traced to a previous case. 5. That where palliasses or straw mattresses are used in some only of the bedrooms of a dwelling, the inmates who sleep in, or who are exposed to, the atmosphere of such rooms may be attacked with measles, whilst those who sleep in the rooms free from straw may be, and frequently are, unaffected. 6. That when the straw in bedrooms is kept dry—whether by ventilation, by the sun's rays, or by artificial heat—the inmates of such rooms do not take measles when the disease is prevalent.

These propositions have been suggested chiefly by the papers of Dr. Salisbury and partly by data collected here. These latter are too numerous to give in detail, but I may briefly allude to a few cases in illustration. The Australian summer of 1874-75 was remarkably dull, cloudy, and moist. Shortly after this unusual weather set in, thousands of families in and around Melbourne were attacked with measles, and before long the whole colony was involved. The epidemic was more extensive, though not so fatal, as that in Fiji; still, the mortality was such that it was publicly discussed whether national prayers should or should not be offered up for deliverance from the pestilence. I watched the progress of the epidemic, and took especial pains to search into exceptional, strange, or irreconcilable phenomena connected with origin and propagation. The results are shortly as follows:—Every shade and variety of measles was represented, from the mildest *morbilli mitiores* to the most malignant *morbilli graviores*. At Richmond, a suburb of Melbourne, three children in one family, who were playing about one day, died the next from black measles. In the Ballarat district a virulent roseolous type prevailed. All classes were attacked without distinction, but the wealthier and cleanlier orders suffered least. Numerous instances of relapses, or of second attacks rather, within a few weeks of the first attacks, occurred in and around Melbourne. Several whole families were down a second time. Some diversity of opinion existed as to the precise nature of the latter affection. It was held by some to be a hybrid or spurious form of measles, but from all accounts it was ordinary measles modified somewhat by the previous attack. A lad of eighteen, the son of a leading physician, who had been twice before, in different years, affected with measles, was attacked for the third time in this epidemic, and very severely. Dr. B., his father, informed me that he had not observed any differentiation in the symptoms of the three attacks. Throughout the epidemic I could not discover any instance of measles in a dwelling from which damp straw had been excluded, but in every house where measles occurred the presence of damp straw in the bedrooms was easily made out. The case of Dr. B.'s son was peculiar in this latter respect. I learned from him that his son not only slept on a palliasse in a room with a southern aspect, but that the palliasse was placed upon, instead of under, the hair mattress, and that this reversal of the usual order of things had obtained for years. As an illustration of exemption, I may mention that it was brought under my notice that in an hotel by the seaside, to which a number of children from the bush were taken by their parents, not one case of measles occurred throughout the summer, though the disorder was raging all around. On inquiry I soon ascertained that instead of the common palliasse each bed was supplied with a tick filled with the material called "flock." Numerous instances of part of a family only being affected came to my knowledge. In most of these instances I found either that the escapees had not slept on straw, or that, where they had, their bedrooms admitted the morning or mid-day sun freely. In one case a landlady of an inn in a village where several children had died was concerned about her only child, whose attack she expected daily, although the child had escaped for weeks after the local appearance of measles. Contrary to my first surmises, I learnt that this child slept on straw, and that her bedroom faced west; but I eventually elicited from the mother that, in view of the chance of infection from convalescent children taken to the inn, she had moved her child to a small room over a detached kitchen. The bed was close to the chimney, and the straw was thus kept dry. Groups of families in remote villages were attacked on the same day. A curious case was related to me by a medical friend. A boy turned a lot of musty canary-seed out of a box, and, shortly after playing with it on the floor, was seized with violent irritation of all the mucous surface of the air-passages, with coughing, sneezing, etc. This was followed by a rash over the forehead and face, and the boy passed through all the stages of a disorder which could not be distinguished from ordinary measles.

Measles was not present in the neighbourhood at the time. Other cases of a similar nature, supposed to have been caused by bran, pollard, chaff, etc., came under notice, but they were more obscure, or closely associated with measles epidemics. They are referred to, however, as they point to injurious effects from mildews on other forms of vegetation than straw.

The Abbotsford Nunnery and Reformatory, containing between 200 and 300 females, more than one-half of them children, was remarkable on account of its perfect freedom from measles during the epidemic. Having obtained permission to inspect the dormitories, I found that the principal of these are long rooms, with windows unshaded by verandahs or Venetian blinds on three sides. The other minor sleeping apartments do not admit such a flood of sunlight, but they are all airy and sweet, and unusually light and bright for this country, where people, unfortunately for themselves and their children, exclude the sun from their bedrooms. All the beds in the institution were of straw; the blankets, etc., had been neatly folded up, leaving the ticks freely exposed. In every room the straw in these ticks rustled and crackled under the hand as only thoroughly dry straw will. This was no doubt partly due to a wholesome regulation mentioned by the Lady Superior, by which it is provided that all the bedding shall be periodically removed from the dormitories and aired in the sun. It may be added that the immunity of the inmates of Abbotsford was not shared by those in kindred Catholic institutions, even though they were placed under similar excellent hygienic conditions except in the matter of sunlight.

An interesting and pregnant set of facts was supplied by the Kew and Varra Bend Lunatic Asylums, near Melbourne. One of these at the time of the outbreaks contained nearly 800, the other over 900 patients, including a number of idiot and epileptic boys and girls. At each Asylum resided families of children belonging to the medical officers, storekeepers, gardeners, and other officials. A few of these children at Kew were under the same roof with the lunatics, though in another part of the building, but the greater number lived in detached houses about the grounds. During the summer all the sane children, without exception, and some of the sane adults, were attacked with measles, but not one case occurred amongst either children or adults in the wards or cottages of the insane. The only possible cause I could discover for this sharply cut line between the sane and the insane was in the bedding. The general conditions affecting the two classes were the same, but all the lunatics except those on air- or water-beds had ticks filled with straw to lie on. These palliasses of the patients are not only exposed freely in the wards daily, and aired and dried in the sun as often as may be, but they are replenished with fresh straw once a fortnight. The staffs of the two Asylums, not having before them any obvious necessity for taking such measures in their own cases, followed the usual custom of the colony—kept their children's bedrooms cool and shady, and took no thought for the straw on which they lay. During the measles epidemic several cases of erysipelas and some of typhoid, diphtheria, scarlet fever, and dysentery occurred among the patients, and, strangely enough, on May 23 and 25, within a few weeks of our mid-winter, when measles had died out elsewhere, two cases of measles occurred in the Kew Asylum. They appeared in separate but adjoining wards, in adult males who had been a long time in the Asylum. Neither of the patients were "wet" or dirty patients. One was domiciled in a ward with thirty-five, the other with thirty-nine patients, not one of whom was attacked. (The measles patients were isolated at once.) These cases would be difficult to square with any etiological view of measles. I can only suppose that by accident the straw in the palliasses of the two patients had come from the store wet or mouldy from some cause.

It is submitted that the foregoing facts strongly support the inference reached by Dr. Salisbury. All the evidence put together, however, is but negative, and that now given of course wants confirmation. On this point I would observe that any and every epidemiologist in any part of the world may readily test my observations by inquiring into the facts connected with the incidence of measles in his own country, or in his own locality. Those facts should be on all-fours with these here recorded, and it should be an easy matter to determine whether straw is an accidental or an incidental element in the occurrence of measles. In England straw is so generally used in the bedding of children that it may be hard to find instances where it has been excluded for many years from bedrooms. Yet it is not unlikely that in some dwellings, schools, reformatories, or institutions, it may have happened that straw has been replaced by other material—flock, shavings, sawdust, oakum, etc. In juvenile prisons and reformatories I suppose the inmates sleep on canvas, and are supplied with blankets only. In some naval training-schools the boys probably have hammocks, and are free from straw. In all such cases, and under all similar or parallel conditions, the children should have escaped measles at epidemical seasons. Moreover, where straw has been used for bedding in asylums, hospitals, etc., in which either idiot or sane children are received, and has been kept dry and crisp at all seasons by means corresponding to those employed in the Lunatic Asylums and Abbotsford Nunnery here, there should be the same history in regard to measles. Furthermore, I suggest that in the sunny or chimney-heated bedrooms of private houses may be found the explanation of those exceptional cases in which one or more members of a family escape during a visitation of measles. Sir W. Jenner not long since referred to an example of this kind. Other observers have recorded like examples; and, indeed, most people have known children escape when their infection has been regarded as a certainty—*c.g.*, when a child with measles has been put to sleep with one who has not had them. These seeming aberrations from the laws of propagation are sometimes set down to the insusceptibility of the exempt; but as they may, more rationally perhaps, be ascribed to non-reception of the poison by the unaffected, it is possible that the absence of straw from bedrooms may help to account for them. Whatever doubt or obscurity may cling to these and other cases in the past, existing and future outbreaks in England will enable the inquirer to clear up. I leave it, therefore, to others to elicit the truth in this matter, merely observing that the question raised involves questions of far larger and higher importance than the mere suppression of measles—although this of itself would be no small boon to some nations.

That there will be many objections to the simple view of the causation of measles here taken, I am aware. Most of these, probably, have occurred to me; but as I have found them easily surmountable, I need not enlarge this paper by referring to and meeting them. One difficulty, however, may present itself to the epidemiologist, which I feel called upon to refer to. It may be asked how, if measles be caused principally by mildews on the straw of bedding, the natives of Fiji, a tropical island free from grain, should have suffered with such unexampled severity. I may premise that the Fijians live in cane huts, with high roofs and low entrances—the interior being dark. They lie on mats of grass, sedge, flax, or vegetable fibre of some kind, and the mats are mostly old and rotten. They are vegetable feeders, and the *débris* of their food is scattered about their huts. When the ex-King Cacobau and his son landed convalescent from measles from H.M.S. *Dido*, they returned to their own quarters near Levuka. Within three weeks most of the tribe about Cacobau were attacked with the disease, which flew like wildfire all over the islands, and within four months over 40,000 natives died—a third of the population. It will be observed that this rapidity of extension shuts out the supposition of propagation by direct contagion; for it is patent that the contagium of measles passes from body to body with less efficiency than that of plague, or small-pox, or scarlet fever. Therefore, since this measles epidemic involved a greater number in a given time than the Great Plague, or than any known epidemic of small-pox or scarlet fever, it is an inference that its propagation was not due to a *contagium vivum* transmitted from person to person. In fact, the rate of measles propagation here was such that it is not explicable except by the assumption of a cause common to certain areas. I suggest that when Cacobau and his son passed their excreta on the surface in the vicinity of their huts, the straw fungi contained in the excreta quickly reverted on exposure to the air to their original form. These parasites, modified by submergence in the fluids of the body, were no sooner released than they returned to their old shape of aërial mildews, and in this shape, under the favouring conditions of heat and moisture, rapidly overran every particle of available substrate. As there was abundance of decaying vegetable matter strewn about, the spores of the mildew soon found their way to the huts, and flourished on the sleeping-mats. Then, when the disease declared itself suddenly among the tribe living in close proximity to Cacobau, there was a panic and a flight. Every infected native who fled of course established an independent centre of infection by means of his excreta, from which other lines of infection radiated in a similar way.

Although the causes of the excessive mortality in Fiji are not in question here, I may allude to the fact that the epidemic was virulent in type. No doubt the natives died in great numbers from rushing into and remaining long in cold pools and streams, and from other errors; but, setting these aside, the disease itself was more severe than is common with European epidemics. There were no cases of the most malignant form, I believe, but the catarrhal and febrile symptoms would appear, from all accounts, to have run very high in the majority of cases. In many there was delirium. This intensity of type appeared in the commencement of the outbreak, and was indeed the cause of the alarm and demoralisation of the Fijians. As Cacobau and his son had mild attacks, and were, moreover, convalescent, it is clear that the morbillous poison must rapidly have acquired greater power somehow. It appears to me that tho phenomenon gives additional strength to the supposition that the infective agent did not pass directly from Cacobau to the tribe, but that it went through a transition stage outside the body before it became the efficient means of such extensive and virulent infection. The view that the straw mildews vary in toxical power as their substrates vary, has been glanced at. I conceive that the gradations of poison intensity are governed by the state of the straw or other material on which the mildews are grown; that the law is that the degree of virulence is as the nature and amount of the organic matters overspread by the mildew. In fact, I can see no other sufficient explanation of the wide differences of type met with in an European outbreak, than mildews grown on fresh straw, and mildews grown on straw sodden with filth and fæcal matter. In this Fijian outbreak, certainly there was no straw in the sleeping-huts, but the mats of the natives for the most part contained organic matter to such an extent as to enable straw mildews to luxuriate on them—at all events for a time. From the rapid dying out of the disease in Fiji, I infer that the vegetation of these islands will not long support the straw mildews. The climatic conditions and the abundance of decayed vegetation may conduce to their rapid extension when introduced; but the probabilities are that straw parasites will not permanently establish themselves. As with cholera in Europe, measles may not occur again in Fiji unless imported anew, although, as with cholera, it may be that some of the seeds of the disease may have been preserved, and may start into reproductive life once more. The chances are, however, that the European residents of Fiji will sooner or later communicate measles to the natives, for they follow the custom of sleeping on straw, and contract measles at certain seasons. It is therefore almost a certainty that the whites will convey infection to the blacks before many years pass. It will then be seen how little protection is given to a people by an epidemic of measles.

With regard to prevention, I would observe that although inoculation with straw mildews would appear to afford some protection against current outbreaks of measles, it is not likely to come into general use for many reasons. It is now perhaps almost superfluous to indicate the means by which I propose to attain the end. It is sufficiently obvious that my view is that the most effectual way for civilised people to avoid measles is either to discard straw altogether from their bedrooms, or to air palliasses in the sun, or dry them by the fire. This to some minds may appear too trivial a matter for serious notice. Others, however, will see that if straw mildew has a causal relation to measles, it follows that the only thing required to obviate the disease is to preclude the mildew. The whole question turns on the soundness or unsoundness of Dr. Salisbury's conception; and this corollary on prevention must stand or fall with his theory of causation. There I must leave it. It may be a long while yet before Dr. Salisbury's observations are completely refuted or fully confirmed by some one or more of the leading etiologists of Europe. Their important bearing on some of the great problems of the day will eventually force them into notice. I perceive that Mr. Spencer Wells, in the discussion on Puerperal Fever, referred to them shrewdly and appreciatively. In the debate on the Germ Theory of Disease, however, I found that none of the speakers mentioned either of the two diseases—measles and ague—about the origin of which more has, in reality, been made out (but not recognised) than about the origin of any zymotic disease. Pending the further elucidation of the nature of the infection of measles by experiment, I must adhere to the view I have arrived at by inference. I may mention that when the extensive epidemic occurred in this colony I gave the easy method of averting the disease here indicated as much publicity as possible. The suggestion was, of course, generally disregarded. Some persons, however, although they may have thought the notion fanciful or speculative, had yet common sense enough to argue that the drying and airing of their children's beds was a wholesome proceeding enough, and could at all events do no harm. They therefore took this precaution, and, in every instance in which I could learn the result, with the most complete success. To their own astonishment, their families enjoyed perfect immunity, whilst all their neighbours' children were down with the measles. That these instances of escape may not have been *propter hoc* is granted; still, they have their significance. In fine, all things considered, I venture to predict that twenty or thirty years hence no decently nurtured family will have the measles. It will be as shameful to get this "straw fever" as to catch the itch.

Melbourne, Victoria.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

DISEASE OF EAR, FOLLOWED BY THROMBOSIS OF THE LATERAL SINUS AND JUGULAR VEIN—PYÆMIC ABSCESSES IN THE LUNGS.

(Under the care of Dr. FREDERICK TAYLOR.)
[Reported by Mr. L. M. B. Jones.]

Frederick B., aged fifteen years, was admitted into Guy's Hospital on March 31, 1877. Patient is an ironfounder's apprentice, and was at work five days previous to admission. Family history good. He has always enjoyed good health, with the exception of a discharge from the left ear, which first appeared six or seven years ago without any obvious cause, and has continued off and on ever since, lately becoming more offensive. He had measles when two years old, but has never had scarlet fever or any other illness. Four days ago the patient was seized with severe pain in his left ear, accompanied by singing noises, which gradually became worse; intense frontal headache supervened, with shivering and feverishness.

On Admission.—He is a well-nourished youth. He lies on his back in a semi-comatose state, moaning occasionally, but can be roused to answer questions rationally. He complains of severe pain in his head, and begs for something to relieve it. The pupils are slightly dilated, the left more so than the right. The tongue is rather dry, and covered with creamy fur. The bowels have not acted for the last day or two, and he was very sick soon after being admitted. The lungs and heart appear healthy. The urine has a specific gravity of 1030, and there is a copious deposit of lithates. Temperature 104·4°; pulse 130, full and regular; respirations 38. Ordered pulv. jalapæ et hyd. subchlor. gr. x. statim. Ice-bag to head. Milk diet.

April 1.—The patient is very restless, and complains of great headache. The bowels acted freely during the night. Morning temperature 101°; pulse 124; respirations 35. Evening temperature 102·3°; pulse 112; respirations 36. Ordered one-sixth of a grain of acetate of morphia hypodermically night and morning.

2nd.—Passed a good night. Scarcely any headache. Bowels open once during the night. Eyelids red and swollen. Morning temperature 98·4°; pulse 84; respirations 34. Evening temperature 102·2°; pulse 120; respirations 24.

3rd.—The patient is very restless; talks incessantly, but is quite sensible, complaining of great pain all over him, but not much headache. He is very thirsty. The tongue is moist and furred, and there are sordes about the lips. Skin moist; great tenderness all over the abdomen, which is neither tumid nor retracted; gurgling in the right iliac fossa; bowels open without diarrhœa. The heart's impulse is distinctly visible all over its area, and there is marked pulsation of the carotids. The facial vein appears slightly distended. Temperature 103°; pulse 142, full and bounding; respirations 40. No skin eruption. Evening temperature 100°; pulse 104; respirations 28.

4th.—He is not nearly so restless. The face is flushed. The tongue dry and brown. The pupils are equal and slightly contracted, but he has internal strabismus of the right eye, and sees double. There is a well-marked *tache cérébrale*. There

is no diarrhœa, the stools being of a light clay colour. Morning temperature 98°; pulse 102; respirations 40. Evening temperature 100·4°.

5th.—He is much quieter, appears more stupid, and is slow in answering questions; has slight pain across the temples. Strabismus is not so marked, but there is still diplopia and photophobia. Morning temperature 97°; pulse 88; respirations 32. Evening temperature 99·2°; pulse 106; respirations 36.

6th.—Much the same as yesterday. Morning temperature 102°; pulse 140; respirations 36.

7th.—Still restless and talkative, but complains of no pain. No strabismus or diplopia. On ophthalmoscopic examination, the optic discs look prominent, blurred, and more uniformly red than normal; their outline is indistinct; the veins are full and tortuous. Nothing abnormal noticed on auscultating the chest in front. Morning temperature 101·6°; pulse 140; respirations 40. Evening temperature 99°; pulse 124; respirations 48.

8th.—He is sweating profusely, and cannot be roused to answer questions. Morning temperature 101°; pulse 136; respirations 44. Evening temperature 104°; pulse 144; respirations 48.

9th.—Is groaning continually; will put out tongue when asked, but does not answer when spoken to. There is well-marked strabismus of the right eye. The breathing is short and hurried. There is complete dulness over the right lung behind, and no air can be heard entering its lower portion; above, there is tubular breathing. Pulse 131. At 11 p.m. he died. Morphia injections were at first given to relieve pain, and ice was applied to the head; but the injections were discontinued in the last days of his illness.

The post-mortem examination was made sixteen hours after death. The brain itself appeared quite healthy, as well as its membranes. There was neither pus in the arachnoid cavity nor in the subarachnoid spaces. The only discoverable morbid appearance in the brain was on the under surface of the left lobe of the cerebellum, where there was a patch of greenish-black discoloration of the size of a half-crown; this was only on the surface. The substance of the cerebellum itself was, on section, found to be quite healthy. The left petrous bone was discoloured on the surface; and the tympanic cavity contained curdy pus. There was no obvious necrosis of the bone itself. The lateral sinus, where it was close to the bone, was partly filled by a greenish-black ante-mortem clot; the dura mater in the neighbourhood had its inner surface blackened. The left jugular vein was inflamed in its whole length, down to its termination in the innominate. It contained a blackish sloughy pus, and *débris* of thrombus; and its coats were sloughy. Below its junction with the left subclavian vein its channel was normal. There was no firm plug of clot at the mouth of the vein, and probably pus had freely mixed with the blood-current. The right pleura contained about half a pint of thin blackish putrid pus. Both lungs contained a large number of pyæmic abscesses, most of them sloughing, but none in an earlier stage. Over many of them the pleura was sloughing, but it was not observed that on the right side any one had ruptured or given way more than another. On the left side the parietal pleura over the pericardium showed a patch of black discoloration corresponding with one of these sloughing abscesses. The other organs were healthy.

Remarks.—The above case is interesting when taken in connexion with that under the care of Dr. Wilson Fox, recently reported (*Medical Times and Gazette*, April 14, 1877), and the same difficulties appear to have been met with in the diagnosis. The resemblance to meningitis was very close, and was especially noticeable in the intense headache, the drowsiness, the flushed face, the well-marked *tache cérébrale*, the strabismus, and the diplopia; while the duration of the case (thirteen days) was quite in accordance. The ophthalmoscopic appearances tended to bear out this view, since there was obvious interference with the retinal circulation, and the disc also was involved: the changes were, however, not so marked nor so rapidly developed as they are sometimes in meningitis. There were points in the case which might have suggested some complication of meningitis or some other disease in addition, and were, indeed, remarked upon as unusual. For instance, the temperature fluctuated considerably, varying from 97° to 104°, and on several occasions, though not constantly, presented a sudden morning fall and evening rise. The respiration was much quickened, the pulse was not noticed to be irregular, and the patient was slow in passing into a decided comatose condition. Since simple meningitis, tubercular meningitis, and pyæmia from jugular thrombosis may all arise in connexion with disease of the ear, the fact of otitis was of little service in diagnosis. More help should have been obtained from the enlargement of the superficial veins and the condition of the chest, which, however, were noticed late in the case; and even then it is doubtful if one could have excluded a co-existing meningitis. The decided cerebral symptoms must have been due to a disturbance of the cerebral circulation, different in kind, but like in its effects, to that which occurs in meningitis.

ROYAL FREE HOSPITAL.

TWO CASES OF OTORRHŒA—DEATH FROM CEREBELLAR ABSCESS.

(Under the care of Dr. COCKLE.)

[From the notes of Mr. W. J. PICKUP, Resident Medical Officer.]

Case 1.—George W., aged 21, was admitted March 12, 1877, with the following history:—During the last four or five months he had suffered from a cold in the head. About three weeks before admission he was confined to his bed with what was thought to be fever. He had, he stated, also a whitish discharge from the right ear, and he was told that it came from an abscess there. For some months he had great pain over the top and back part of the head. He had never suffered from sickness. His previous health had been very good. No injury to the head had ever occurred. When admitted, the temperature was 99·2°; pulse 80; skin hot; pupils equal and of natural size (and continued so); pain over the back part of the head severe; discharge from the ear slight. On the 15th the temperature rose to 102°; symptoms much the same. 16th. Temperature 99·4°. Complains constantly of the severe pain at the back of the head, extending down the muscles at the back of the neck, to relieve which a blister was applied. His nights were exceedingly restless; he was constantly tossing about, moaning and talking confusedly. During the last few days the discharge from the ear had been very slight. 17th: Poultices were applied over the ear, and the discharge became very profuse and most offensive. The pain in the head was now greatly relieved; he became much more calm and collected, and passed the best night since his admission. 18th, and to-day, 19th: The discharge has again stopped; he is again very restless, and complains of more pain in his head. Since his admission the pulse gradually got slower and fuller; 18th, it numbered 42; 19th, 46. At 8 p.m., whilst breathing loudly, and moaning with the pain in his head (he had been talking to his father and crying five minutes previously), his breathing suddenly became slower; he lay back, became very pale and pulseless, and died in about three minutes. The temperature now was 96·8°. The discharge from the ear had not reappeared. He had never any sickness; no rigor; neither was there any paralysis or loss of motion or sensation in any limbs; he had perfect control over them, and could get out of bed to the night-chair with a little assistance.

Temperature.

	Morn.	Even.		Morn.	Even.
March 12 . .	99°	99·2°	March 16 . .	99·6°	99·6°
„ 13 . .	100·2	100·8	„ 17 . .	99·4	98·8
„ 14 . .	100·6	101·8	„ 18 . .	98	97
„ 15 . .	102·2	99	„ 19 . .	96·8	—

Post-mortem Examination, eighteen hours after Death.—The body was well nourished; rigor mortis well marked. Upon removing the skull-cap, the dura mater presented no abnormal appearance. On cutting through the tentorium cerebelli and raising the cerebellum, pus escaped in large quantities from a circular opening, half an inch in diameter, situate underneath the outer border of the right lobe of the cerebellum. Upon removing the cerebrum and examining the opening named, it was found to lead to an abscess excavating nearly the whole interior of the right lobe of the cerebellum, and sufficiently large to contain a small-sized hen's egg. There was no lining membrane, the walls being formed by the softened sloughy tissue. The opening of the abscess was situate very near the internal auditory meatus. There was no appearance of meningitis or other abnormal condition of the dura mater in the vicinity. Upon sawing and chiselling out part of the petrous portion of the temporal bone, the internal

auditory meatus was found to open at its posterior part into the cancellous structure of the petrous portion, which latter was soft, carious, and sodden with pus. The cerebrum proper was very pale and anæmic ; the lateral ventricles filled with clear fluid. (The condition of the sinuses was unluckily not noted.) The lungs were much congested, otherwise healthy. The heart was healthy, firmly contracted, and contained no clot. The kidneys were both congested; in the left one was a cyst three-quarters of an inch in diameter, filled with clear fluid. The liver was greatly congested, but in other respects healthy.

Case 2.—During last year a somewhat similar case was also admitted under the care of Dr. Cockle, of which the following notes were taken by Mr. W. C. Jeffries, Resident Medical Officer:—Mary C., aged nineteen, was admitted from the out-patient department, May 21, 1876, suffering from chronic otorrhœa, originating in an attack of measles when nine years old. She was deaf in both ears, but the discharge was confined to the left. She stated that she was never wholly free from this discharge, but that the amount varied much. Latterly, pain of an acute character accompanied this condition, much aggravated occasionally by a diminution in the quantity of pus which came away. When admitted, the patient appeared very ill, had a foul tongue, constipated bowels, a high temperature, and a peculiarly dull, apathetic expression. She got progressively worse from the day of her admission, the pain in the head being of the most excruciating character; this pain was greatly influenced by the quantity of discharge, being invariably greater if it was small, and temporary relief following its return. Remarkable and very irregular elevations of temperature, with equally sudden returns to the normal standard, now took place, as seen by the annexed chart; they were unattended by rigors, but accompanied with profuse and exhausting sweats. The pulse was rapid, weak, and fluttering throughout. Only once (the sixth day after admission) did she have a complete subsidence of all her acute symptoms; this coincided with a profuse discharge from the ear, and her relief was such that she was able to sit up in bed and write a letter. Her temperature from this day forward is a fair index of her condition. Until nearly the end she was quite sensible, but answered questions slowly and with apparent effort. She always referred her pain to the back part and side of the head, and down the muscles just at the back of the neck; she held her head constantly between her hands, as if obtaining relief from pressure. About the nineteenth day she became insensible, and died comatose on the twentieth. There had been throughout neither vomiting, strabismus, defect of vision, disturbance of equilibrium, nor paralysis of either motion or sensation.

Temperature.

	Morn.	Even.		Morn.	Even.
Aug. 23 . .	105·2°	102°	Sept. 2 . .	100°	98·2°
„ 24 . .	—	104·2	„ 3 . .	106	—
„ 25 . .	100	101	„ 4 . .	106	100·4
„ 26 . .	99·8	104·2	„ 5 . .	104·2	100
„ 27 . .	—	101	„ 6 . .	104	101
„ 28 . .	98·4	98·4	„ 7 . .	101·4	105
„ 29 . .	100	101·8	„ 8 . .	98·4	99
„ 30 . .	102·4	106·2	„ 9 . .	99·2	102·8
„ 31 . .	104·2	98·2	„ 10 . .	101	102
Sept. 1 . .	98·2	101·2	„ 11 . .	100	—

Post-mortem examination revealed extensive disease of the anterior and posterior surfaces of the petrous portion of the left temporal bone; these were everywhere eroded, black, and covered with pus. The tentorium cerebelli was destroyed at its point of attachment to the superior border of the petrous portion, allowing a communication between the middle and posterior fossæ. Between these, and on the tentorium cerebelli, was about an ounce of very fetid pus, together with some large flakes of lymph. There was a circumscribed meningitis for a considerable area around the carious bone. The actual substance of the cerebellum was not diseased, but superficially, where it was in contact with the pus and diseased bone, it partook of the surrounding inflammation. All the other organs were healthy.

Clinical Remarks by Dr. Cockle.—From the symptoms noted in these cases, and from those also observed in another case resembling them, and recorded by me in this journal, December 18 and 25, 1858, I am only trusting to my own experience (though I think that other cases might be cited) in stating that purulent or sanious and fetid otorrhœa, attended with severe and long-continued pain extending from the ear to the region of the occiput and down the muscles of the neck—the pain being more or less paroxysmal, depending apparently upon the freedom or suppression of the discharge through the external meatus, occasionally with strabismus and double vision, but without either paralysis, convulsion, disturbance of the intellect beyond slight nocturnal sub-delirium, or disturbance of equilibrium and without vomiting,—would point to the probable existence of cerebellar abscess. At least, it was on these grounds that I ventured on such diagnosis in the cases detailed. Although in one case actual abscess of the cerebellum had not occurred, it is highly probable that, had the patient longer survived, the tissue of the organ would speedily have broken down. It is very important to note the changes that occurred when the discharge through the external meatus was copious, or when it was for the time suspended either by some obstructing crust, arrest of percolation in the diseased and porous bone, or by actual suppression. Another noteworthy point is the mode of death in such cases, which occurs either quite suddenly, or by coma of some few hours' duration, or from the supervention of a typhoidal state probably depending on septicæmia. There would appear reason to place these cases in a category apart; the discharge through the meatus lessening cerebral tension, and possibly preventing the occurrence of paralysis or convulsion which at times attend sudden hæmorrhage into the cerebellum, or the pressure exercised by a solid growth, unless absent in the latter case from the operation of the law of accommodation. For a very extended survey of such effects produced in these latter affections, Ladame's monograph on the symptoms and diagnosis of tumours of the brain should be specially consulted.

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Medical Times and Gazette.

SATURDAY, APRIL 28, 1877.

THE LATEST PHASE OF THE VIVISECTION QUESTION.

We have from time to time given select examples of the best anti-vivisection literature, mainly contributed, it must be said, by individuals who call themselves clergymen. But the whole subject has not of late been reviewed, especially the latest

phase of the agitation against vivisection. Those who are opposed out-and-out to what they call vivisection have now got some staunch supporters in Parliament, who are never weary of presenting petitions, it may be from one man and a woman, or it may be from the children collected for a school treat. The object of these people seems to be to create such a feeling all over the country as did the so-called Bulgarian atrocities, and to this end they have begun to carry out a practice of pasting horrible representations of animals in various uncomfortable attitudes in all the most public places about town and country. These are headed—"This is Vivisection," "This is a Living Dog," "This is a Living Rabbit," and so on. These placards pretend to be copied from the work of Professor Cyon, of St. Petersburg, on Physiological Operations, but they differ, we need hardly say, very much from the originals. Moreover, they imply a distinct *suggestio falsi*. Before the Royal Commission no evidence was given by the strongest opponents of vivisection of wilful cruelty to animals in this country, save a cock-and-bull story about some boys related by a gentleman who refused to give names. It may therefore be concluded that any such cruel exhibition as illustrated by the anti-vivisectionist placards is unknown in this country. It is useless to make laws in England against abuses which only exist elsewhere—say, on the Continent; and it is surely wrong to excite hatred against any class of men for the doings of others. But apparently these objections are mere trifles as far as the anti-vivisectionist societies are concerned.

It was recently stated by Mr. Cross, in reply to a question put to him in the House of Commons, that not more than ten or a dozen gentlemen were engaged in active physiological research requiring examinations on the living animal; and these were all men highly qualified for their work. Since that time addresses have been given, though not names. In many of the medical schools nowadays no experiments coming under the Act are performed. Instead, as far as possible, the animals are killed, when a trifling and altogether unimportant operation would alone have been necessary to save the animal's life. The gain is difficult to see. But the temper of the opponents of animal experimentation is, perhaps, best shown by a little periodical they circulate, appropriately called (if we remember aright) the *Home Chronicler*. In this all the most horrible stories which can be collected with regard to what is called vivisection are duly circulated—we suppose for the benefit of those who stay at home, especially women and children. To add to the delectation of these, the horrible placards referred to are reproduced on a smaller scale, and published week by week. It was by individuals of the stamp of those responsible for the publication of such-like productions that the remark was made that the names of the gentlemen certificated by Mr. Cross were not published because they were ashamed of their doings. We greatly suspect that, had Mr. Cross given them, they would have been duly placarded too, and the men's lives rendered miserable.

But no such agitation will suffice, we suspect, to move Government in the matter. They have had quite enough of it. The medical profession most unwillingly submitted to a compromise which they have not sought to disturb. If it is disturbed again, we trust it will be in the form of a clean sweep of the Vivisection Laws, and the extension of its principles of protection to all animals, wild or tame, whether used for food, sport, or even destroyed as vermin. If the principle is sound, let it be applied all round.

*** Those who are desirous of obtaining a good *résumé* of the whole subject will find it in a pamphlet by Dr. L. Hermann, Professor of Physiology, Zürich, and author of perhaps the most popular foreign text-book on the subject. This has been translated and annotated by Dr. Archibald Dickson (Williams and Norgate).

THE RESCUED MINERS.

In common with the general public, medical men have watched with intense interest the history of the Troedyrhiw Colliery tragedy; have rejoiced over the rescue of the long-imprisoned miners, and gloried in the long-sustained gallantry and bravery of the heroic little band of men who, working unflinchingly on in the face of such difficulties and dangers, at last had the glory of bringing the prisoners safely "to bank." We are very glad to see that her Majesty has decreed that the Albert Medal, hitherto bestowed only for gallantry in saving life at sea, shall be extended to similar deeds on land, and that the first medals struck for this purpose are to be conferred on the rescuers of the Welsh miners; and we hope that some judgment and discretion will be shown in the amount of pecuniary reward bestowed on those gallant men, so that it may not prove a curse rather than a blessing. But medical men, and men of science, feel also a special and great interest in the conditions under which the rescued miners were imprisoned. We know but little at present, and probably not much accurate information can be ascertained, as to the amount of the increase in the atmospheric pressure to which the entombed men were subjected; but it is certain that it was very great, and much speculation must arise on the question of whether, in what way, and to what degree, life was sustained by the compressed air. The space in which the men were confined must have been very small; and if the air was unchanged during the nine days of imprisonment it would, under ordinary circumstances, have become unfit to sustain life. There could not have been anything like "ventilation," in the ordinary acceptation of the term; but there must have been some (slight, perhaps) movement or interchange of air, as that known to chemists as the diffusion of gases; and this and the greatly increased compression may have supplied the required oxygen. But the men not only lived, but they were not so poisoned as to be rendered comatose, for they were alive to the danger of the rising of the water as the air-pressure lessened, and endeavoured to plug all holes by which the air might escape. The whole matter is one of high scientific interest, and we learn that Lord Lindsay has given notice of his intention to ask the Home Secretary if he can ascertain, from the medical attendants or otherwise, what physical effects were produced on the systems of the imprisoned men by the compressed air in which they were confined.

As Lord Lindsay is something of a scientific man, he might have taken the opportunity of inquiring elsewhere than from the Secretary of State for Home Affairs whether any information was to be had as to the effects of compressed air upon the body. It is now many years since compressed air baths, as they are called, were introduced by Tabarié; and the system was shortly after introduced into this country, where several of these so-called air-baths are now to be found, especially in connexion with one or two hydropathic establishments. They consist essentially of one or two air-tight chambers, comfortably furnished, and of such a size that six, eight, or a dozen people may sit in them at ease. The air is pumped into the chamber by steam power, the control of which is within the reach of the patients in the bath. Gradually, as the air is pumped in and the pressure increases, a kind of singing is felt in the ears, readily removed by swallowing, and thus opening the Eustachian tubes. When the pressure has reached that of two atmospheres it is usually stopped, and pumping is only kept up so as to maintain this rate of pressure in spite of necessary leakage. In this condition of atmosphere the most notable effect is the increased ease of breathing; the diminished frequency of respiration in those who had been struggling for want of breath, and a feeling of well-being to which some of them had long been strangers. The diseases in which these

air-baths have proved most useful are chronic bronchitis, with emphysema, and weak heart, especially, as too often happens, when they all co-exist. We have known of patients who, after such a course of treatment, have remained comparatively well for a long time.

Instances of much greater pressure than this, and even probably than that undergone by the Welsh miners, were familiar enough under the old system of submarine engineering by means of the diving-bell, especially when used in deep water.

SCIENTIFIC HYDROPATHY.

Dr. Schüller, who formerly investigated the influence of drugs on the vessels of the brain (*vide Medical Times and Gazette*, vol. ii. 1874, page 665), has again published a long essay in the *Deutsches Archiv für Klin. Med.*, xiv., page 566, in which the effect of the application of cold and heat to various parts of the body upon variations in the size of the vessels of the brain is treated experimentally. The animals used were rabbits, which were carefully trephined, so as to expose the dura mater without injury to the vessels. On one side of the body the cervical sympathetic nerve with its superior gangliou was removed. Uuder these circumstances the direct applicatiou of ice to the dura mater caused considerable contraction of the vessels, which was, however, much less marked on the side on which the sympathetic was removed than on the other. Cold applied to the abdomen immediately caused dilatation of the vessels on the uninjured side, but usually no alteration at all on the other. Warm moist compresses, on the other hand, when applied to the abdomen, caused contraction of the vessels; and the action of warm baths was as nearly as possible the same. Both cold and warm water caused dilatation of the vessels when injected into the rectum. When the animals were "packed" in wet compresses, after the hydropathic method, the sopor which was induced was accompanied by gradual contractiou of the vessels. If the animals were curarised, the only differeuce observed on the application of heat or cold as above described was that the dilatation of the vessels of the brain was less intense. Division of the spinal cord at the level of the second cervical vertebra was followed by considerable dilatation of all the vessels of the pia mater, which ceased any longer to be affected by heat and cold. The immediate application of cold to the trunks of certain cutaneous sensory nerves which were laid bare in the dorsal region caused contraction of the vessels of the pia mater on the same side; and, on the other hand, warmth applied in the same way dilated them. The fact that the pressure of blood in the carotid artery, as measured by a manometer, was much raised by the application of cold water to the abdomen, and diminished by warm compresses similarly used, has led Dr. Schüller to conclude that the alterations in size of the vessels of the brain are chiefly dependent on the enlargement or contraction of the vessels of the skin; that is to say, the more the latter dilate the more the former contract, and *vice versâ*. The reflex influence on the vessels of the pia mater of the stimulus of heat or cold, applied to the cutaneous nerves, appears to be of subordinate importance in producing these pheuomena, and tends to arrest rather than to promote them. The influence of the cardiac and respiratory movements on their production is also au indirect oue, and seems sometimes to increase them, and sometimes to diminish them.

With regard to the therapeutic use of heat and cold applied hydropathically to the human subject, Dr. Schüller draws the following conclusions from his experiments:— They may be employed (1) to restore their normal tone to the bloodvessels, and especially to those of the brain; (2) as a means of restoring a normal circulation of blood and lymph in the brain; (3) to diminish congestion of the brain; (4) to restore the normal nutrition of its nervous elements; and (5) to renew normal relations of a reflex nature between the brain and the cutaneous nerves.

Dr. Schüller's essay, though disfigured by hyper-enthusiasm in favour of hydropathy, and by a fantastic use of italics to enforce his opinions and conclusions, is still worthy of attention and respect, and we are glad to be able to call the attentiou of German readers to it.

FALSE CERTIFICATES OF DEATH.

As is now pretty well known throughout the profession, the chief object of the Medical Defence Association (which was founded about eighteen months ago) is the suppression of medical practice by unqualified persons; and, in pursuance of this object, many such have been successfully prosecuted by the Association and its branches. But in carrying out the above laudable object the Association does not confine its attention wholly to those who possess no legal qualifications; for we find that last week the East London Branch of the Association prosecuted a legally qualified surgeon, in the Southwark Police-court, under circumstances which deserve the serious attention of every member of the profession.

The defendant, Mr. Charles Downes, Member of the Royal College of Surgeons of England, of White-street, Southwark, keeps an unqualified assistant, who, it appears, attended a child suffering from convulsions. The child died after only one day's illness, and of course a certificate of death was wanted, but the assistant was unable to give one. Mr. Downes, however, although he had never seeu the deceased, signed the certificate, and it was doubtless not supposed that anything further would be heard about the case. By some means, however, the coroner of the district became acquainted with the facts, and ordered an inquiry to be held, and the jury censured Mr. Downes for giving a certificate when he had not seen the child alive. Thereupon, the East London Medical Defence Association, probably thinking that the censure of the coroner's jury would only make a temporary impression on Mr. Downes's mind, summoned him, under the Births and Deaths Registration Act, for giving a false certificate for the purpose of obtaining the registration of the death. The defendant did not deny the facts, but asserted that he did not know he was doing wrong. He afterwards learnt that he had made a mistake, and regretted very much that he had erred. The magistrate imposed a fine of £5 and costs, and hoped that the case would act as a caution to other practitioners. We hope so too, for such a practice cannot be too strongly reprobated. Of what use are the returns of the Registrar-General, if certificates of death are signed by persons who have not seen the deceased when alive? If it were permitted, there would, as the magistrate observed, be an opening for foul play and serious crime.

We believe that in the poorer parts of London, and in many mining districts in the provinces, the practice of signing certificates of death by medical men who have never seen the deceased persons is much more common than is generally supposed. Scores of such instances have, we are informed, come under the notice of the officials of the Medical Defence Association, and it is found that those medical men who do not scruple to give false certificates generally keep one or more unqualified assistants in branch practices. Doubtless many have given such certificates without thinking that they were rendering themselves liable to punishment. The Legislature, it should be known, regards it as a very serious offence, punishable with a maximum of two years' imprisonment. To many it may appear strange that the Defence Association should put the law in operation against a member of the profession, but we believe action was taken mainly with a view to check the employment of unqualified persons. In taking up this case, moreover, the East London Association has done

a public service, though we maintain that the Registrar-General is the proper person to interfere in such cases. We understand, however, that although he has repeatedly had his attention directed to cases where false certificates have been given, he has invariably refused to prosecute.

THE WEEK.

TOPICS OF THE DAY.

It is very satisfactory to learn that the question of the pollution of our rivers is not held to be settled by the very inadequate Act which the Government succeeded in passing last year. Last week, Earl Percy, M.P., introduced a deputation to the President of the Local Government Board, composed of representatives from England, Scotland, and Wales, who complained that the Rivers' Pollution Prevention Act, passed last session, was too slow in its operation to prevent the pollution of our rivers; and they asked that any person who chose should be allowed to institute proceedings against those guilty of pollution, without the intervention of local sanitary authorities. Earl Percy explained that, in the opinion of the deputation, Clause 6, providing that proceedings could be taken only by the local sanitary authority through the Local Government Board, rendered nugatory all the other provisions of the Act, for the pollutors in nine cases out of ten were themselves the local authority, or the local authority were the representatives of the pollutors. Mr. Sclater-Booth, in reply, said he thought it was too early to complain of the operation of the Act, which was already in force, though no prosecutions could be instituted under it until August. As the deputation were aware, there had been great difficulty in passing the measure; the question had been before Parliament for two years, and, imperfect as the present Act might be considered, it was yet a great step in advance. With regard to relegating the duties of carrying out the Act to other hands than those in which it was now vested, he had never concealed from himself that further legislation would have to be brought forward on that subject, and it was one of the things he looked to accomplish hereafter. But he was by no means of opinion that the 6th Section, if properly worked by those who would take the trouble to do what they could, would be without useful and important results. He hoped there would be a further measure to provide more effectually for pollution from manufactories, but he could not pretend to say that such a work could be speedily done. Time must be given to those important industries to adapt themselves to the requirements of the law. They might, however, rely on his doing all he could to improve its operation.

One of the many difficulties that may and will impede the carrying out of the Artisans' Dwellings Act was illustrated the other day. The agent for the contractors engaged in the demolition of Church-lane, St. Giles's, applied last week to the magistrate at Bow-street, for assistance to prevent their labourers being impeded and molested in the execution of their work. The street has long been noted as one of the lowest in London, and the houses have been condemned by the Board of Works as unfit for human habitation. The usual notice was given to the residents (chiefly Irish) to quit their lodgings, but they refused to go, complaining that the notice was insufficient. Some of them were present, and said that the cisterns and back walls had been pulled down, and that they were without water. The magistrate remarked that there were now great facilities for people industriously disposed to get cheaper and better lodgings by going a little way out of town; still he hoped the contractors would extend the time of notice by another week, so as to avoid any appearance of harshness in dealing with the poor people. After that time, of course, the workmen must be protected from molestation.

A very interesting paper was read last week before the Statistical Society by Mr. Frederick Martin, on "The Comparative Progress of Population." It was noted at the outset as a most singular historical fact that the system of registration and numeration now used among nearly all civilised nations is of quite modern growth. Mr. Martin gave the vital statistics for nine States—England, France, Prussia, Austria, Italy, Spain, Denmark, the Netherlands, and Sweden,—and remarked that, leaving out of view disturbing elements, such as emigration, the average increase of population is largest in England. While its birth-rate is not so high as that of some other States, its death-rate is amongst the lowest. It seems probable that, at the end of the present century, the population of England and Wales will have risen to thirty millions. Next in rank to England, in respect to increase of population, stand Sweden and Denmark, both with a moderate birth-rate, but an exceedingly low death-rate, that of Denmark being the lowest of the nine States. Next in order of increase stands Prussia. The leading German State has a very high birth-rate, but likewise a high death-rate, which latter, however, is steadily decreasing; while the former is ever increasing. Taking these elements into consideration, the population of Prussia may be expected to have risen to about 30,000,000 by the end of the century. It is known that the increase of population of the other German States, taking them as a whole, is not so large as that of Prussia; but it may be fairly calculated that the great Empire of Central Europe will have about 50,000,000 in the year 1900. The Netherlands stand fifth in the list of States as to increase; these five States—England, Sweden, Denmark, Prussia, and the Netherlands: all it will be noted, inhabited by Teutonic races—virtually comprise all out of the nine in which there is a tendency to marked increase of population. In three more—Austria, Spain, and Italy—the birth-rate is high, but the death-rate is still higher, with a tendency even to mount upwards, and the growth of population, therefore, will be comparatively slow. The only country among the nine enumerated, and probably the only State of Europe, showing scarcely any increase of population whatever, is France. The excess of birth-rate over death-rate in France was not more than 1·9 per 1000, while in England it was 12·7 per 1000. At the same time, the average annual marriage-rate of France was above that of Italy, Spain, Sweden, and the Netherlands, and very nearly as high as that of England and Wales.

A fatal case of small-pox has occurred at Ulverstone, and one illustrating how easily disease is spread. The aunt of a child lately deceased in that neighbourhood came from Preston to attend the funeral while suffering from small-pox. A neighbour, who had gone to render assistance at the funeral, took the disease, and has since died from it; whilst a sister of the infected woman has also fallen ill with it.

The Society of Apothecaries of London have been very successful in the proceedings recently instituted by them at Birmingham against certain persons for infringing their Act. At the County Court there, last week, Henry Barton Keeys, a herbalist, was sued to recover the penalty of £20 for practising as an apothecary without the necessary qualification. Evidence was given showing that the defendant was consulted by a detective for an imaginary ailment, and that he prescribed and sold a mixture for sluggish liver and nervousness. The jury gave a verdict for the plaintiffs; and in two other cases the defendants consented to verdicts against them for the full penalty.

The Town Council of Great Yarmouth, anxious to do honour to a fellow-townsman, recently moved that a congratulatory address be presented to Sir James Paget, Bart., on his appointment as Sergeant-Surgeon to the Queen. The address runs as follows:—"We, the Mayor, Aldermen, and

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Burgesses of the Borough of Great Yarmouth, in the county of Norfolk, in Common Council assembled, desire to offer to you our sincere congratulations on your appointment as Sergeant-Surgeon to the Queen, being the highest professional honour in her Majesty's power to bestow. We have, on former occasions, had the pleasure of recording our sense of the credit reflected on your native town by the great distinctions to which, from time to time, you have attained, and we earnestly hope that you may be spared for many years to enjoy the honour so deservedly bestowed upon you." It is somewhat singular that a former Sergeant-Surgeon, Sir Astley Cooper, was also a native of Great Yarmouth.

Two cases of criminal recklessness in the dissemination of infectious disease were recently heard at the Birkenhead Police-court. In the first case, a woman named Ellen Williams was charged with exposing infected clothing. A nuisance inspector visited the premises of the defendant, and found concealed in the coal-cellar a lad, the defendant's son, suffering from small-pox, who said he had been ill for three weeks, and that no doctor had attended him. The defendant had previously denied the existence of any infectious disease in her house. Five other cases of small-pox followed the illness of defendant's son. The defendant took in washing, and she continued to receive clothes and send them out again without carrying out disinfection on her premises. A fine of 40s. and costs was inflicted. In the second case, Mary Williams, proprietress of a milk and chandler's shop, was charged with a similar offence. When the inspector visited the house the defendant informed him that she had no infectious disease. He, however, found two of her daughters concealed, suffering from small-pox, and at once had the shop closed. The defendant had taken none of the precautionary measures prescribed by law before the visit of the inspector. A fine of 40s. and costs was inflicted, the magistrate remarking that severity was necessary for the sake of example.

A deputation of the residents of Isleworth parish attended last Friday week at the Local Government Board, to protest against the proposed erection of a small-pox and fever hospital by the Guardians of the Brentford Union in the workhouse garden. Having explained their views, Mr. Salt said the Government were very desirous that sanitary authorities should make provision for the isolation of infectious cases, but the Guardians had only to deal with pauper cases. He added that there would be no objection to reduce the size of the proposed building, and the deputation withdrew.

On Monday last a deputation from the British Medical Association waited upon Mr. Gathorne Hardy, the Secretary of State for War, to set forth some of the grievances of militia surgeons occasioned by changes initiated by Lord Cardwell when in office, which are now beginning to take effect. The deputation asked that compensation similar to that afforded to militia adjutants should be given to militia surgeons. Mr. Hardy regretted that he could give the deputation but little ground of hope that he should be able to grant what was desired, more especially as he was of opinion that many of the complaints of the militia surgeons were exaggerated.

A curious state of affairs has been brought to light by Mr. George Browning, the Medical Officer of Health to the Stockbridge Urban Sanitary Authority, in reference to forged certificates of death. In his last annual report he states that it has come to his knowledge that no fewer than fourteen deaths have been registered in the district by forged certificates; and that ten out of the fourteen related to the deaths of children under five years of age. It is not stated who forged the certificates, or how such laxity has arisen. Mr. Browning reports that he has brought the facts to the notice of the Registrar-General, but that up to the present time no action has been taken in the matter.

THE INDIAN MEDICAL SERVICE.

From private communications which have reached us from India we learn that the Indian Medical Service either have petitioned, or are about to petition, the India Office for increased rates of pension on retirement from the Service. The grounds on which they found their application are—the deterioration in the value of silver currency, which imposes a heavy tax upon them, equal to something like 12 per cent., in remitting money to their families, and in furlough pay; the falling off of remunerative practice through the depression of trade; and the increased expense of living, both at home and abroad, which has not been met by any corresponding increase in the scale of pensions awarded. In addition, they point out that the greater part of their lives is necessarily spent in exile, apart from their families and friends, while they are subjected to all the risks of a tropical climate, war, and other casualties. This latter portion of their grievances is decidedly the weakest, since the authorities are not likely to lose sight of the fact that these medical officers voluntarily took service with a full knowledge that they would be called upon to do duty exclusively in India. But it certainly is very hard upon them that, through the depreciation of the value of silver currency—a circumstance they could neither foresee nor control,—they should be called upon to submit to a depreciation in the value of their pay; and all thinking men will freely admit that this, at least, is a point worthy of the consideration of the authorities at home. We wish them every success in their appeal to the India Office; but, if certain rumours which have reached us prove to be correct, we imagine that a much greater change is in contemplation than has entered into their calculations. This change is nothing less than an amalgamation of the Army and Indian Medical Services; and if the interests of both are fairly considered in the scheme, the project would undoubtedly be a beneficial one for both Services. One result would certainly be the abolition of unending Indian service, and this would dispose of the grievance of a long expatriation, so forcibly dwelt upon by the present petitioners; and if the pensions in the Indian Service are felt to be so inadequate, and private practice in that country is really becoming a dead letter, it is clear that many of the advantages formerly possessed by the Indian over the British Army Service are rapidly fading out. At present, from what we learn, the scheme in question has not been finally decided on, but we have little doubt it will eventually be carried; and in the face of that opinion it would obviously be useless to comment farther upon the grievances of the members of our profession in the Indian Medical Service.

THE SUSSEX COUNTY LUNATIC ASYLUM.

A very satisfactory account is contained in the Eighteenth Annual Report, for the year 1876, on the Sussex County Lunatic Asylum at Hayward's-heath. Although it is admitted that there is some increase of insanity in the county of Sussex, arising from the growth of the population and the varied forms of excitement inseparable from modern life, it is stated to be rather to the constantly accruing residuum of patients in each year which remain over in the Asylum upon every hundred cases admitted, beyond those discharged and those who die, that one must look for the gradual increase of patients in the Sussex Asylum. Dr. S. W. D. Williams, the Medical Superintendent, has zealously devoted himself to counteract as far as possible this increase of numbers, and in the past six years he has recommended 200 chronic cases for discharge to the care of their friends. The committee of visitors cheerfully admit that the nice discrimination of Dr. Williams, with his readiness to assume responsibility in recommending the

discharge of chronic patients, and his skilful treatment of the patients generally, have materially conduced to the fact that the county of Sussex has not, like most other counties, yet been called upon to build a new asylum, or even to enlarge the present one. A most desirable addition to the Asylum, recommended by Dr. Williams, has been made, in the shape of a detached hospital for the treatment of infectious diseases. This building is situate in the Asylum grounds, and contains twenty beds, with offices, accommodation for nurses, etc.; it is nearly ready for opening, and when completed will afford ready means for the isolation of small-pox or fever patients. The total number of patients now in the Asylum is 793. During the past year the admissions amounted to 248; of these 39 were discharged cured, 16 have been confided to the charge of their friends, 3 were discharged to workhouses, and 16 died. The residuum of patients remaining in the Asylum on the admissions of the past year is 169. The profits obtained from the payments on account of out-county patients received into the Asylum have been considerable, and have been utilised in making improvements and alterations; by this means the county rates have not been called upon to assist in maintaining the building.

THE METROPOLITAN WATER-SUPPLY FOR MARCH LAST.

From the official report on the metropolitan water-supply for the month of March last it is satisfactory to glean that a considerable improvement in the filtered water supplied has taken place, consequent upon the subsidence of the floods, and the smaller amount of suspended matter in the water at the several intakes. But, notwithstanding this temporary improvement, the fact must not be lost sight of that the deterioration of the waters of the Thames and Lea by sewage pollution still continues, and points to the necessity of measures being adopted to prevent the contamination of these rivers and their tributaries (so long as they are the authorised sources of supply of the metropolitan water companies) by the people living in the upper reaches, who at the present time treat the tributary streams, as well as the rivers, as common sewers both at their sources and during their course. Another fact which should not be lost sight of is, that the country through which the Thames and Lea flow is rapidly increasing in density of population, thereby tending to increase the amount of pollution. All the metropolitan companies are reported to be actively proceeding with the various works which they have in hand for perfecting their respective systems. The Chelsea Company's new works at Molesey are progressing rapidly, the concreting and paving of the inner slopes having commenced; the erection of the necessary engine-power has been completed, and the last month's supply was taken from the new intake. Dr. Frankland's analyses for the water supplied during March call for no particular comment, but his remarks still sustain the opinion that the water supplied from artesian wells by the Kent Company, the Colne Valley Company, and the Tottenham Local Board of Health, is superior to that distributed by the other metropolitan water companies who draw their supplies from the rivers Thames and Lea.

LOCAL GOVERNMENT AND TAXATION OF TOWNS INQUIRY COMMISSION (IRELAND).

In pursuance of a warrant granted by his Grace the Lord Lieutenant, bearing date August 31, 1876, the Commissioners appointed to inquire into the Local Government and Taxation of Towns (Ireland), attended at the City Hall, Dublin, on April 24, to hold an inquiry strictly limited to the following points:—1. The conditions and circumstances under which leases of corporate property are granted. 2. The payment and duties of the High Constable, Water Bailiffs, and Officers of Commons. 3. The management of markets, and the position of the officers (including the weighmasters) connected therewith. 4. The management and expenditure of the Improvement Fund. We have not yet heard the particulars relating to this inquiry, but we shall take care to notice in due course those which are of medical or sanitary interest. Our object in mentioning the inquiry now is to draw attention to the exclusion of the consideration of sanitary affairs in Dublin. Are we to assume that the evidence given before the Select Committee of the House of Commons last year as to the wretched state of Dublin is regarded as convincing and as settling the question of the necessity for reform; or are we to look forward to the issuing of a special Sanitary Commission for Dublin? It should not be forgotten that the death-rate of that city for the first quarter of 1877 was 31·6 per 1000 of the population annually, while the death-rates of London, Edinburgh, and Glasgow for the same period were 23·5, 21·9, and 28·5 respectively. These facts alone should justify an inquiry into the health of the Irish capital.

MEDICAL OFFICERS OF HEALTH AND PATIENTS.

Some amount of opposition and ill-feeling appears to have been excited lately by the activity, and perhaps over-zeal, shown by Dr. Kelly, the Medical Officer of Health for the Rural Sanitary District of the Horsham Union; and he seems certainly to have made a mistake in visiting, without invitation or permission of the authorities, a patient in the Horsham Union Workhouse. The extent and the limits of power of an officer of health, in respect of visiting patients with infectious diseases, are as yet very far from being clearly defined, and every step that gives an authoritative ruling on the matter is of great importance. We therefore publish the following letter from the Local Government Board to the Rural Sanitary Authority of the Horsham Union:—

"Local Government Board, Whitehall, S.W.,
April 16, 1877.

"Sir,—I am directed by the Local Government Board to advert to the letter you addressed to them on February 23 last, inquiring whether the Medical Officer of Health for the Rural Sanitary District of the Horsham Union has the right to visit a person who is an inmate of the Workhouse of that Union, and alleged to be suffering from small-pox.

"The Board having given the subject their consideration, direct me to state that they are of opinion that a medical officer of health has no right to visit a patient in a workhouse against his wish or against the wish of those who have the charge of him. "I am, sir, your obedient servant,

(Signed) "J. F. Rolton, Assistant-Secretary.

"T. Bedford, Esq., Clerk to the Rural Sanitary Authority of the Horsham Union, Horsham."

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting on April 21, Dr. Lyons submitted a case in illustration of the benefits of paracentesis abdominis. A pluriparous woman, aged forty-five years, became the subject of extensive ascites in 1870. There was no albuminuria. In May, 1870, sixteen quarts of fluid were drawn off, with great relief to the patient. She was subsequently tapped on thirty-five occasions prior to December, 1871, and no less than 500 quarts of fluid altogether were evacuated. Her health then improved greatly, and the ascites almost disappeared until last March, when she met with an accident, one of her ribs being fractured. A circumscribed abscess formed, and led to secondary purulent pleuritis and pneumonia, which caused her death. There was no hepatic cirrhosis, although the liver had a specific gravity of over 1060; but the vena portæ was partially filled with an old-formed thrombus. The President (Dr. Hayden) showed morbid specimens from a case of diabetes mellitus, in which secondary tuberculosis of the lung and pulmonary abscess occurred. The left lung was transformed into a vast anfractuous cavity, with fibrous trabeculæ. Dr. Lyons presented an immense aneurism of the thoracic aorta, in which cirrhosis of the kidneys was the immediate

cause of death. Although the patient was only thirty-six years of age, the aorta afforded a remarkable example of atheromatous degeneration.

UNIVERSITY OF EDINBURGH.

The following medical and science degrees were conferred at the Graduation Ceremonial on April 21:—*Doctor of Medicine:* William Allan Jamieson, Scotland, M.B. and C.M. 1865—thesis, "On Acute Rheumatism"; and John Halliday Scott, Scotland, M.B. and C.M. 1874—thesis, "On the Nervous System of the Dog, with some other points in its Anatomy specially bearing on Experimental Physiology." *Doctor of Science* (Department of Public Health): Samuel Drew, England, M.D. Aberdeen, B.Sc. 1876; John William Taylor, England, M.D. St. Andrews, B.Sc. 1876; and William John Vereker-Bindon, Cape of Good Hope, M.B. and C.M. Edinburgh, B.Sc. 1876. *Bachelor of Science* (Department of Public Health): Peter Macpherson Grant, Scotland, M.B. and C.M. Edinburgh; Thomas Wilson Jackson, Scotland, M.B. Glasgow; and Stewart Aaron Lithgow, Scotland, M.D. Edinburgh (received the degree on November 25, 1876).

THE PATHOLOGICAL SOCIETY.

It was announced by the President, at the last meeting of this Society, that on the evening of Tuesday, May 1, Dr. Creighton, of Cambridge, will exhibit and describe a number of specimens illustrative of the physiological and pathological processes of the breast.

MEDICAL PARLIAMENTARY AFFAIRS.

Disinfection of Cattle Inspectors and of Milk-Cans.—Allusion having been made to the possible spread of cattle plague though infection conveyed from shed to shed by the inspectors appointed by the local authority, Lord Sandon referred to the precautions required by the Contagious Diseases (Animals) Act as to the disinfection of persons who have been in contact with the disease. The attention of local authorities had been again directed to the provisions of Section 61 of the Act, with a view to insure greater care in the disinfection of persons who have been in contact with diseased animals. The attention of the Government has also been directed to the very prevalent custom of removing milk-cans from premises where cattle plague has existed without proper disinfection, and instructions have been issued to the local authorities on the subject, to take all needful precautions against such a fruitful means of spreading the disease. It must not be forgotten, too, that the milk-can is not only the vehicle of communicating epizootic maladies, but too frequently other infectious diseases—such as scarlet fever—are propagated in this way. The motion for the appointment of a Select Committee to inquire into the cause of the present epidemic of cattle plague, and means for checking its spread, was introduced by Lord Sandon in the House of Commons on Tuesday, April 24.

Meat for the Poor.—To carry into effect the views of the Baroness Burdett Coutts, a public company—called the Columbia Meat Company (Limited)—has been formed, for the sale of American meat to the poor of the East-end. It commenced its operations on Saturday last. The supply was large and the demand brisk. The Baroness Burdett Coutts generously gives the market, and the Company take a profit of a halfpenny per lb.

The Geneva International Medical Congress.—The Committee for organising this Congress, which is to be held at Geneva from September 9 to 15 of the present year, has just published the regulations which it has adopted. It has decided that the Congress shall consist of seven sections—viz., Medicine, Surgery, Midwifery and Gynæcology, Public Medicine, Biological Science, Ophthalmology, and the exhibition of New Instruments and Apparatus employed in Medicine, Surgery, Physiology, etc. The complete programme will be published in June, and will be forwarded to all members of the late Congress at Brussels, and to those persons who announce their adhesion to the forthcoming Congress. All communications should be addressed to M. le Dr. Prévost, 8, Rue Eynard, Geneva.

SIR ROBERT CHRISTISON.

Medical graduates of Edinburgh University will have heard with regret that Sir Robert Christison has ceased to be Professor of Materia Medica in their *Alma Mater*. For several weeks Professor Christison has been seriously indisposed, and though he is again in an improved state of health he has felt called upon to relinquish his chair. For more than fifty years his face has been familiar to those who have pursued their medical education at Edinburgh, and it is to be doubted whether in recent times any professor at the University has commanded so much personal admiration and esteem as Sir Robert Christison. Others may have been brought for a time more fully and openly into the glare of notoriety; some by the exercise of the weaker parts of their dispositions may have made themselves more conspicuous; but the moderation and amiability of Sir Robert Christison, if they have generally excluded him from that repute which accompanies acrimonious disputes and personal cavilling in public, have secured for him the lasting esteem of all who have been engaged in personal relationships with him. Not, however, that Sir Robert Christison's name has not been a well-known one during two generations. On the contrary, at times when the public mind has been agitated to the utmost he has been able to show the medical profession at its best by the simple and modest solution of vexing difficulties, and throughout the length and breadth of Scotland he has long been held in reverence as one whose professional opinion was most prized by those who were best capable of forming a judgment on the value of it.

As a University Professor, Sir Robert Christison has his best monument in the memories of those who during the course of the past fifty-five years have studied at the Edinburgh School of Medicine. As a lecturer he never failed to give great interest to subjects which were often in themselves somewhat uninviting; and the clearness of his style and impressiveness of his delivery secured the retention in the minds of his students of the facts which he laid before them. Only those who have studied at Edinburgh can appreciate fully how much Sir Robert Christison has had the personal welfare of the students at heart, and how warmly they have reciprocated his sentiments by expressing in words and demonstrating in action the extent of their esteem for him. During those exciting scenes, which of late have been of somewhat frequent occurrence amongst Edinburgh medical students, when others were unable to restore peace by their inaudible exhortations and excited gesticulations, the calm demeanour and venerable aspect of Sir Robert Christison have always secured for him an opportunity of exercising that gentle persuasiveness and dignified reproach which never failed to melt the hearts of boisterous rioters. On more than one occasion he has had to assume the character, and almost the words, of Nestor, when he exclaimed—

> "Young as ye are, this youthful heat restrain,
> Nor think your Nestor's years and wisdom vain."

There is one particular feature of Sir Robert Christison's character which has secured for him the affection of every medical student who has had dealings with him. He has always been a warm advocate of healthy relaxation; and the boyishness with which he participated in the pleasures of his students, and the cheerful encouragement which he constantly held out to them in the direction of innocent amusement, secured for him, in return, a large amount of influence over the minds of his youthful followers, which showed itself in the willing performance of useful work. So thorough was his sympathy with the students, and so earnest his participation in their relaxations, that it has frequently seemed as if he were proud, not of being the leading medical jurist of the country, or of being Sir Robert Christison, or the Professor of Materia Medica of Edinburgh University, but because he was the Captain of the University Rifle Corps.

In the Senatus Academicus also Sir Robert Christison's absence must be much regretted. His great social influence, his lively interest in the welfare of the University, and soundness of judgment, must frequently have been of much service to that body. It is to be hoped that his health will be sufficient to enable him to hold a seat in the University Court, so that his experience and wisdom may not be altogether lost to the University. In conclusion, we hope that for many years

he will be able to enjoy that retirement which he has so nobly earned, and that he will derive much satisfaction from the reflection that the unselfish employment of his long life, and his honourable occupation of an exalted position, have enabled him, in all probability, to exercise more influence on the medical profession of the present time than has been exercised by any other teacher of the present or preceding generation.

FROM ABROAD.

The Trephine in relation to Cerebral Localisation.

In the sitting of the Académie de Médecine for April 3 (*Bulletin de l'Académie*, No. 14), Prof. Gosselin read the report of a committee to which had been referred two papers of considerable interest. The first of these, by MM. Proust and Testelin, is entitled "A Contribution to the Question of Cerebral Localisation," and consists in certain physiological conclusions based upon a recent surgical case. A man, nineteen years of age, was struck by a sabre-bayonet on the left side of the head. A deep wound with much bleeding ensued; but the man, after a short loss of consciousness, went on very well for twelve days. Then, however, important cerebral symptoms showed themselves, in the form of aphasia, monoplegia of the right arm, and almost complete paralysis of all the muscles supplied by the portion of the right facial nerve distributed below the palpebral orbicularis. Brought to the hospital four days later, the patient presented a contused, suppurating wound above the left ear, at the bottom of which was found a fracture, with obvious depression of the parietal. In the belief that the symptoms were due to this depression, the trephine was applied above and behind it, and by the aperture thus made three bony fragments were removed, some drops of pus mingled with blood also issuing. The dura mater was found intact and depressed, but soon rose to the level of the bony aperture. As soon as the operation was completed, some amelioration was observed in the symptoms of lesion of the nervous system; and this continued to increase, so that at the end of two months they had almost entirely disappeared.

The authors of the paper, having driven nails into the part of some skulls of subjects which was the seat of injury in their case, found the ascending frontal convolution and the adjoining portion of the third frontal convolution were the parts which were injured—these being, according to the researches of Ferrier and Broca, the central motors for the upper extremity and the face, and the seat of articulate language. M. Gosselin has himself lately met with a case from which analogous conclusions may be drawn. A man was brought in with fracture of the left parietal, with depression, and accompanied by hemiplegia and symptoms of slight concussion. The trephine was applied at once, and three pieces of bone were removed, one of which had wounded the brain. He soon died, and at the autopsy a large laceration of the brain was found on a level with the fissure of Rolando, implicating the upper part of the ascending frontal convolution, and the adjoining ascending parietal convolution. Facial hemiplegia and and aphasia were absent, probably on account of the very high position of these lesions. These cases are confirmatory, as far as they go, of the ideas lately advanced concerning cerebral localisation; but whatever may be the fate of these, it is certain, from a clinical point of view, that there are in the brain, in the vicinity of the fissure of Rolando, points at which lesions give rise to paralysis or contractions limited to one of the opposite limbs, the face, and the organs of phonation.

The other memoir, by M. Lucas-Championnière, is entitled "The Indications derived from Cerebral Localisation for the Employment of the Trephine." It is founded on the following case:—A man, twenty-six years of age, was brought into the Lariboisière, having been subjected to violence of unknown nature, and remained there during five days in a state of stupor, with paralysis of the right arm and aphasia, which were soon followed by epileptiform convulsions of the other arm and both lower limbs. Trephining was practised over a partly cicatrised wound in the left parietal region, a fracture with marked depression being discovered, together with a splinter of bone penetrating the dura mater. After the operation the epileptiform convulsions recurred but once; the paralysis of the arm disappeared on the fourth, and the aphasia on the sixth day. In both this and the former case there is no means of deciding upon the nature of the lesion, nor any assurance that recovery might not have taken place without the trephine. M. Lucas-Championnière is of opinion that his patient suffered from a lesion of Ferrier's motor centres, and that these researches on cerebral localisation will prove a powerful auxiliary to surgical practice. For, whenever these symptoms are developed, we may assume a lesion of some kind of the motor centres, for the removal of the cause of which the trephine may be applied, the point for applying which may be easily determined by the mensurations laid down by Prof. Broca, which enable us to recognise the situation of the fissure of Rolando, and of the frontal or parietal convolutions supposed by the symptoms to be in question.

Upon the conclusions drawn from these two cases by these authors Prof. Gosselin makes the following observations:—

1. In his opinion the researches of Ferrier and others are not likely to effect much change in the ideas which now guide surgical practice, our true guide in the use of the trephine being the existence of a compound fracture with depression, and that at whatever part of the cranium these may be present. In all cases of this kind, with grave symptoms, the prompt use of the trephine is indicated, because it can do no harm, as an open wound already exists, the enlargement of which does not increase the danger. It is of utility by favouring the issue of any blood that may be effused between the bone and the dura mater, and the removal of any splinters of bone that may be present, and by facilitating the discharge of any purulent collection that may form. So that its utility is based upon motives quite independent of functional disturbance of the motor centres, and which may operate in parts of the cranium which do not correspond in position with such centres. The surgeon is guided in its application by the wound and fracture, and requires no mensuration rules to enable him to find the fissure of Rolando.

2. But when there is no wound or fracture with depression, and symptoms indicative of lesion of Ferrier's centres set in, should the trephine be resorted to for their relief? Certainly not: for, in the first place, lesions of other parts of the brain—as the optic thalamus and the corpus striatum—may give rise to the same symptoms; and, secondly, recovery may take place without any operation at all, and is indeed more likely to do so when additional dangers have not been caused by making an aperture into the cranium.

3. The same abstention should be employed when there is fracture with depression without a wound. In two such cases in M. Gosselin's practice, the depression could be plainly felt in the parietal beneath the intact skin. In these cases there was neither hemiplegia nor aphasia, and both patients recovered. But supposing that in a similar case one or both of these symptoms were present, the trephine should not be applied, for the creation of a wound and exposure to the air always add to the danger, while it is never certain that the cure of the paralyses may not take place without such interference.

4. With respect to cases of fracture of the inner table of the skull alone, to which M. Sédillot has again recently called attention, they must be considered according to whether they are or are not accompanied by a wound. In the first case the signs are very obscure, for the denudation of the external table is not always present, and, when it is, does not always denote fracture of the internal table; and functional symptoms may be absent or not distinguishable from those produced by concussion or contusion of the brain. If the wound is in the parietal region, and accompanied by hemiplegia or aphasia, we may suspect lesions of the motor centres; but this is only conjectural, as the same symptoms may arise from more distant lesions. As this fracture of the inner table is almost exclusively produced by gunshot wounds, there is a strong presumption against its existence when the wound has been produced by an ordinary accident. Exploratory trephining, advised by M. Sédillot, is objectionable, as it creates a danger of suppurating osteitis, and may prove superfluous as well as dangerous. Two conditions alone would seem to justify the use of the trephine in these cases—viz., when the wound, situated at the parietal, is accompanied by symptoms referable to the motor centres; and at a later period, when symptoms arise indicative of a collection of pus between the

bone and dura mater. As both these conditions are only observed some days after the accident, the trephine should not even in these be employed early, but only consecutively. In the very exceptional cases in which fracture of the inner table is unaccompanied by a wound, the trephine should never be applied primarily, as a cure is possible without its agency.

"I have no pretension, in this short sketch of the indications of the trephine, to have passed under review all possible cases, and especially exceptional cases. I have only sought to examine to what extent the innovations derived by M. Lucas-Championnière are justifiable; and I sum up my opinion on this point by saying that the new physiological views will prove auxiliaries to the diagnosis and interpretation of functional symptoms, but will only very exceptionally be adjuvants to therapeutics. And, if I have made myself understood, that is the case, because trephining should be regarded as an operation far more useful in the prevention of septicæmia and the retention of pus within the cavity of the cranium than for remedying the lesions of the brain produced by fragments of bone or by other vulnerant bodies. In the present state of surgery, at least, we are sure of what we desire and what we do when we aim at fulfilling the first of these indications. But we do not know this, or only know it imperfectly, when we have the pretension of satisfying the second."

Cyanide of Mercury in Diphtheria.

Dr. A. Erichsen (*St. Petersburg Med. Woch.*, April 14), on the strength of twenty-five cases in which he has tried it, strongly recommends minute doses of cyanide of mercury (*hydrargyrum cyanatum*) in diphtheria. He believes in the efficacy of mercury abridging the duration of the diphtheritic process, while he knows of no other preparation except this which does not quickly disturb digestion and nutrition. Given in small doses, it scarcely disturbs the alimentary canal at all, even when continued for a long time. Indeed, syphilitic children from a year old may be treated for weeks without any such disturbance occurring, if it be given in doses of one-forty-eighth of a grain thrice daily. In diphtheritis Dr. Erichsen has used it at various ages—from seven months to fourteen years, as well as in adults,—and in all the cases it was well borne. In a short time the membranes became thinner and less adhesive, so that even where they had spread into the larynx and induced obstruction, with cyanotic colouring of the face, they still separated and rendered the larynx free again. This was the case in three of the instances occurring in young children, the symptoms which seemed to threaten death or to require tracheotomy yielding to the internal use of the cyanide and the local application of hot sponges. This mode of treatment has also the advantage of rendering the necessity of local applications to the fauces much less frequent; and pencilling the parts with tincture of iodine twice a day suffices, instead of the constant applications, which are so irksome. The dose varies with the age, children to their third year requiring only one-ninety-sixth of a grain, and older children and adults one-forty-eighth of a grain every hour during the day and every two hours during the night. The following is the formula employed:—Hydrarg. cyan. gr. j., aq. destill. ℥vj., syr. simpl. ℥ss.; half or a whole teaspoonful every hour. Most of these twenty-five cases were children from the third to the fourth year of age, in whom the prognosis is not so favourable as in older children and in adults. Of the twenty-five only three proved fatal—one from paralysis of the heart, a second from suppurating parotiditis, and the other from coinciding meningitis; but in all the cases—even in the fatal ones—the diphtheritic process was arrested.

Testimonial to Professor van Beneden.—Several old pupils of the learned Professor of Zoology and Comparative Anatomy at the University of Louvain have set on foot a proposition of a testimonial for the eminent services he has rendered during forty years to the cause of science and instruction. The testimonial, in which a large portion of the medical profession of Belgium will take part, is to consist in the presentation of a marble bust executed by Fraikin. It will be presented on the occasion of a banquet which is to take place towards the end of June. Any of our readers who may feel desirous of associating themselves with this manifestation should forward their subscription (which is limited to 10 fr.) by May 1 to Dr. van Baemdanck (Secretary), St. Nicholas (Waas), Louvain.

REVIEWS.

Traité de la Diphthérie. Par A. Sanné, Docteur en Médecine. Paris. 1877. Pp. 654.

The appearance of a complete treatise on diphtheria at the present day must be welcomed with the greatest satisfaction by the medical profession throughout the civilised world. There is so much confusion on the subject still existing, owing to the number of names under which this malady has been described in different ages and in different countries, that the conscientious inquirer after truth finds himself perplexed in his endeavours to arrive at definite ideas concerning the true meaning of the word "diphtheria"; while the nature of the disease, whether in its epidemic or sporadic form, and the causes of its fearful mortality, have always been, and still are, among the most mysterious enigmas of pathology. Until the year 1858 very few British practitioners of medicine had even heard of the word *diphthérite*, and still fewer had ever seen an instance of the disease which corresponded to the descriptions given by the French writers. Since that period, however, owing to the epidemic which reached our own shores about the time just mentioned, and which has continued with us ever since in a greater or less degree of severity, the word "diphtheria" has been acclimatised among us, and has been introduced without question into our current systems of nosology. Among the many points still to be determined are—the precise limits to be assigned to the term "diphtheria"; the rarity or frequency of the affection so denominated; the question whether it is a new disease, or only an old one under a different name; its distinction from, or its intimate relation with, other diseases; and its treatment, whether curative or prophylactic.

On all these points, and many others, Dr. Sanné gives us the most copious information. A pupil of Trousseau and Barthez (and the son-in-law of the latter), he has of course been thoroughly instructed in the doctrines handed down to those physicians by their common instructor Bretonneau; while Dr. Sanné's own extensive experience in private practice and in the wards of the Paris hospitals has enabled him abundantly to amplify and in many respects to correct the views of his predecessors. The literary composition of Dr. Sanné's work is no less conspicuous than his practical knowledge of the disease which he describes; and although it may be perhaps objected that he displays an imperfect acquaintance with the contributions made to the history and pathology of diphtheria by writers who are not of his own nation, yet this fault is so common with French writers that the imputation would be perhaps considered by themselves rather as a merit than a reproach; and moreover, the French materials on the subject are so copious as to supply an abundant field for even the most patient and laborious investigator. However, we may remark, *en passant*, that the English writers on diphtheria are almost entirely passed over, and that the memoirs of the Italian, and especially the Florentine, physicians, who have largely contributed to our knowledge, are equally ignored; and although the German views on the subject are more freely noticed and criticised, Dr. Sanné's acquaintance with the most recent writings of his Teutonic brethren appears to be very limited.

Here, *in limine*, we may observe that Dr. Sanné expresses his entire dissent from the use of the words "croup" and "diphtheritis," as applied by many of the German writers of the school of Virchow, who, as is well known, employs these words to designate not only the diseases of the throat and respiratory organs to which they originally referred, but also applies them to any or nearly all kinds of inflammation attacking the interior of the body, thus inventing such names as "croupal pneumonia," "croupal nephritis," etc., and referring such maladies as dysentery, typhoid fever, and even cholera, to the category of "diphtheritis." This use, or rather abuse, of terms is regarded by Dr. Sanné as a deplorable mistake, inasmuch as the words in question had originally a definite signification, which the modern German application of them tends only to render obscure. But Dr. Sanné omits to mention that the views of Virchow on this point are by no means shared even by his own countrymen; and that recent German writers, although admitting them on purely hypothetical grounds, pretty generally regard "croup" and "diphtheritis," when the words are applied to diseases of the throat and air-passages, as being the same disease, or at least to represent only

modifications or varieties, due to local circumstances, or to the anatomical peculiarities of the parts affected, or to other similar conditions. Such, certainly, are the views expressed by Bamberger, the writer of the articles "Croup" and "Diphtheritis" in Virchow's own Cyclopædia of "Pathologie und Therapie"; and similar views are entertained by Hueter of Rostock, by Oertel, by Stoerck of Vienna, and by others who are hardly noticed or are altogether ignored by Dr. Sanné.

Dr. Sanné's own opinion as to the pathology of diphtheria is very clearly expressed. He regards it as a general and septic disease, which, even in its mildest forms, leaves its mark on all parts of the system, no tissue or organ being free from invasion. Among the manifold lesions which it produces there is one which predominates over all others, characterises the disease, and gives to it a special feature—namely, the *false membrane*. Hence it results that the lesions of diphtheria are to be divided into two great classes—namely, (1) the fundamental or primitive lesions, or, in other words, the false membrane and the alterations of the tissues on which it is produced; and (2) the lesions of organs which, in addition to the false membrane, are observed in patients attacked with diphtheria and may be attributed to the influence of this disease.

In conformity with this classification, and, of course, rejecting the German view, which admits diphtheria and croup in such organs as the small intestines, the kidneys, the bladder, the womb, the gall-ducts, etc., Dr. Sanné places the seat of the disease on the mucous membranes and the skin, an exception being made *to those portions of the mucous membranes protected from the air*. Thus, the primary manifestation in most cases is in the back of the throat, where it constitutes the diphtheritic angina of the French writers. Thence the morbid process—namely the extension of the false membrane—is traced to the larynx and trachea, when it becomes "croup," and threatens the extinction of life by suffocation; to the bronchial tubes, when it assumes the characters of pseudo-membranous bronchitis; to the nose, when it is termed diphtheritic coryza; to the conjunctival surface, oculo-palpebral diphtheria; to the ear, diphtheritic otitis; to the cheeks, buccal diphtheria; to the general surface of the skin, cutaneous diphtheria; and, in addition, there are the forms of diphtheria which attack the mucous outlets of the lower parts of the body, as the vulva, the glans penis, the anus, etc.

In analysing the above catalogue it will be observed that "croup" is regarded by the author, as indeed it is by all French writers, as synonymous with tracheal or laryngo-tracheal diphtheria; and it is well known to all who read or speak French that when our medical brethren on the other side of the Channel make mention of "croup," they mean diphtheria affecting the larynx and trachea. Dr. Sanné carefully examines the question of the relations existing between "croup" and "diphtheria" in his chapter on Diagnosis, and he shows, in the first place, that the word "croup" is very frequently employed to designate the ordinary laryngitis of children, which is pathologically quite distinct from diphtheria, and is not attended by the presence of a false membrane. But he further asks, after eliminating the spasmodic and the ordinary inflammatory affections of the larynx and trachea, whether there are different kinds of croup, or, as it would be asked by British inquirers, whether there is a croup which is not diphtheritic, and another which is?—and he answers the question in the negative. It is true, he says, that diphtheria sometimes appears primarily in the larynx and trachea—a form fully recognised by French physicians as *croup d'emblée*,—but the false membrane which is developed is exactly the same as that of diphtheria in other parts, making allowance for the difference in structure of the mucous surface in different localities, the supra-glottic portion of this surface being covered chiefly with the pavement epithelium, and the sub-glottic by the columnar. As for the opinion expressed by some writers that the laryngeal mucous surface in a state of acute inflammation may be covered by a fibrinous exudation which is not diphtheritic, Dr. Sanné regards this view as wholly theoretical, for, although, he observes, it is possible to develope on the laryngeal mucous surface, by means of chemical irritants, pellicles resembling false membranes, yet nothing proves that nature spontaneously produces similar lesions independent of diphtheria. If there be two distinct diseases, both producing a false membrane in the larynx and trachea, Dr. Sanné supposes that the defenders of this view regard the one as simply inflammatory, and the other as resulting from a specific poison, but he inclines to the belief that the supposed inflammatory form is either the *croup d'emblée* or is only infantile laryngitis.

Our restricted limits necessarily prevent us from following Dr. Sanné throughout his interesting and elaborate volume, and we must confine ourselves to giving a general sketch of the manner in which he treats his subject. In the first instance, then, he gives an historical retrospect of the visitations of diphtheria which have occurred in former years up to the present time—a very laborious and difficult task, inasmuch as the epidemics, though very severe, have been capricious and often separated by long intervals, and moreover have been described under many different names. Nevertheless, it is quite impossible for anyone to entertain correct notions as to this very curious malady unless the history of its outbreaks be carefully studied, and to this part of Dr. Sanné's treatise we would therefore especially direct the attention of the reader of this book. In the next place, the characters of the false membrane, which is the essential feature of diphtheria, are carefully described, as well as the regions on which it is developed; and then the secondary lesions are detailed, which follow as the results of the specific poison. The symptoms and the diagnosis come next in order, and afterwards the etiology and the mode of transmission of the disease.

On the important question of treatment Dr. Sanné seems to us to leave very little to be desired. He boasts of no specific for curing the malady, and he states that therapeutic measures must be adapted to the peculiarities of each case. Some forms of the disease are so slight, that they may be cured spontaneously and without any unfavourable consequences, while others involve important organs and structures and require the most assiduous care. Speaking generally, the objects of treatment in diphtheria are to prevent the production of the false membranes, to destroy those which are produced, to counteract the morbid essence of the disease and its depressing influences; to employ appropriate medication for local manifestations, as in the nose, the bronchial tubes, the larynx; and to recognise and to combat the secondary complications, such as pulmonary affections, paralysis, and anæmia. When all other measures have failed, and asphyxia threatens the life of the patient, tracheotomy is the last and the only resource, and to this important branch of the subject Dr. Sanné devotes a large part of his treatise. It is needless to state how deeply the world is indebted to the French school for the successful performance of this operation in diphtheria, and in our own country the success is now much greater than in former years. The peculiar dangers of the proceeding arise not merely from the operation itself, which, when performed with ordinary skill, is not a hazardous one, but from the nature of the diphtheric membrane and the diphtheric dyscrasia, death usually resulting either from the mechanical obstacle presented by the former, or from sudden syncope due to the latter. The statistics of the operation, the mode of performing it, the instruments to be employed, and the after-treatment, are all admirably discussed by Dr. Sanné, and together constitute one of the most valuable features of the work.

La Corse et La Sardaigne: Étude de Voyage et de Climatologie. Par James Henry Bennet, M.D. Paris, etc. Paris: P. Asselin, Place de l'École de Médecine. 1876.

Corsica and Sardinia: a Study of Climate and Travel. By Dr. J. H. Bennet.

This work is mainly a reproduction in French of the chapters on Corsica and Sardinia in Dr. Bennet's well-known "Winter and Spring on the Shores and Islands of the Mediterranean," and may be useful to anyone requiring a concise and not uninteresting account of these two islands without going to the expense of the larger book. As Dr. Bennet's last visit to Corsica was in 1868, the information which he gives about Ajaccio is not very recent; or if changes have taken place, they must be of a very trifling character, since his description corresponds very nearly to our own experience a year later, namely, in the spring of 1869.

We rather gather from the advice which the author tenders to "ses amis Corses," to build some good hotels, and not drive people away by asking extravagant prices for building-land, so as to deter English people and others from settling there, that the Corsicans have not known how to avail themselves of the chance of making Ajaccio a good winter resort by providing proper comforts for visitors. Our own recollections of the misery of a week spent there in a dirty inn up a back street (the only really respectable hotel being already full) are

far from pleasant. Dr. Bennet's description of his countrymen as people who will grumble but stay—"ils se plaindront, mais *ils resteront*"—if made comfortable and charged accordingly, is perhaps as truthful as it is *naïve*.

In another edition the little narrative of his own life, which Dr. Bennet introduces into the "Avant-Propos" or preface of his work, might be admitted with advantage. Ill-disposed persons might be inclined to smile at a passage like the following:—"Je m'établis à Londres en 1843. Là j'exerçai la médecine, portant haut, dans l'atmosphère anglo-saxonne, la bannierè de l'Ecole de Paris, faisant connaître, partout in se parle la langue anglaise, les progrès scientifiques qui sont dus à cette célèbre Ecole."

In many respects the little work is one which may do good, and especially if it stimulates the French authorities, not only in Corsica, but also on the mainland, to vigorous progress in the path of social improvement. Travellers will find the plans which accompany it of use as a general guide to the topography of the islands, but it is a pity that the shading of the mountains has been made so dark that some of the names of places are nearly illegible.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

April 12.

THE DEATH FROM NITROUS OXIDE—PROCEEDINGS AT THE INQUEST—DETAILS OF THE POST-MORTEM APPEARANCES.

THE death from nitrous oxide at Manchester has necessarily excited great interest throughout the profession. I am able to-day to give you an account of the proceedings at the inquest, held on March 28, before the city coroner.

The first witness called was Mary Jones, servant to Mr. E. H. Williams, dentist, 28, Ardwick-green, Manchester. It appeared from her evidence that the deceased gentleman, Mr. G. Morley Harrison, called at the house of Mr. Williams, on the previous evening, to have a tooth extracted. Upon Mr. Harrison's requesting to have the gas administered, the witness was sent to turn it on. Having done this, she came back into the room, and heard Mr. Harrison say that he must have the gas until he snored. Mr. Williams told him to lift up his hand, that he might know how it was affecting him. The witness did not observe that anything was going wrong until after the operation was over, when Mr. Williams opened the window and sent her for medical assistance.

Mr. E. H. Williams, dentist, was the next witness. He said: I have known deceased and acted for the family for three or four years, and for his patients also. I use nitrous oxide for painless extraction when required. I tried to take one tooth out, but deceased, being sensitive, wished to have gas, which I administered in the usual way. I asked him to wave his hand when he had had sufficient. He seemed excited, but it must have been from pain. He said he had had nothing to eat that day, and could not live on stimulants. I tried, judging from his appearance that he was ready, to extract the tooth, and then deceased said he must have the gas until he snored. I gave him the gas until he snored, and extracted two teeth. Seeing that he was not coming round, I opened the window to admit air, flapped him, and sent for Dr. Noble.

The only other witness examined was Mr. Henry Worsley, surgeon, who, with Dr. Noble, was present at the post-mortem examination made by Mr. Jones, Pathologist to the Royal Infirmary. Mr. Worsley said: I was sent for at twenty minutes to eight, and found deceased dead. What I heard corresponded with what has now been said. I have made a post-mortem examination this afternoon. We found a great deposit of fat encumbering all the organs, especially the heart. There was enlargement of the liver, due to fatty degeneration, and commencing disease of the aorta and the valves of the heart. The cause of death was sudden failure of the heart's action. Great quantity of fluid within the cavity of the brain; general venous engorgement; and fluid condition of the blood. The gas gorges the lungs in the ordinary case, but there is no danger, as recovery is speedy.

The jury returned the following verdict:—"Died from syncope during the administration of nitrous oxide gas for the extraction of teeth, whilst labouring under fatty degeneration of the heart."

It will at once be seen that the inquiry was not of a very exhaustive character, and that it fell far short of satisfying the scientific requirements of the case. It must also be borne in mind that the depositions were taken down by non-medical persons, so that the same importance cannot attach to them as to a detailed account prepared for strictly professional readers.

I subjoin, however, a complete and trustworthy record of the post-mortem appearances, from which it will be sufficiently evident to your readers that I had good ground for calling in question, in my last letter, the accuracy of the verdict. In that letter I stated that, with the exception of the heart and lungs, the organs were healthy. On that point it appears that I had been misinformed. But of the morbid appearances met with in the other viscera, the greater number are only so many more evidences of the mode of death for which I was contending, while the remainder had no immediate connexion with the fatal event. So that the argument in favour of death having occurred from apnœa remains practically unaffected.

The examination of the body took place seventeen hours after death. Rigor mortis was well marked, and there was considerable post-mortem lividity. There was a good deal of fat beneath the skin, in the omentum, upon the external surface of the heart, and in the other usual localities. The heart and pulmonary artery were opened *in situ*. The right side of the heart was distended with fluid blood; the left side was empty. There were two or three slight patches of atheroma in the aorta, and upon one of the aortic valves. There was some little evidence of fatty changes in the slightly altered colour and consistence of the walls of the heart. The coronary arteries were examined, and found free from disease. The mucous membrane lining the trachea and bronchi was congested. Some mucus was found in these tubes, but no blood or other foreign body. There was distinct thickening of the aryteno-epiglottidean folds and of the vocal cords. The lungs on both sides were gorged with dark fluid blood; at the left apex there was an old fibrous cicatrix. The liver was enlarged; its tissue was very friable, and of a dirty yellowish-white colour. The kidneys were full of blood; otherwise perfectly healthy. The bones of the skull were of unusual thickness. The visceral arachnoid was thickened and opaque. On removing the brain a large quantity of cerebro-spinal fluid made its escape, and the cornua of the ventricles were found dilated. The brain-substance was healthy, and its vessels full of blood.

LIVERPOOL.

April 17.

HOSPITAL SUNDAY AND SATURDAY COLLECTIONS—TRADE IN DISEASED MEAT—HEALTH REPORT.

CONSIDERING the depressed state of trade, the Hospital Sunday and Saturday collections this year have been very encouraging. Their aggregate amount exceeded by £108 that of 1876, for although the church and chapel contributions fell short by £122, an excess of £230 from the working-classes more than made up the deficiency. The total amounts collected this year and last were:—On Hospital Sunday, £7538, against £7660 last year; on Hospital Saturday, £2413, against £2183 last year. If a sensible suggestion thrown out in one of the daily papers be carried out—viz., that of continuing the Saturday collections for two or more successive weeks—it is probable that future years may see the amount from that source considerably augmented. The writer urged in support of his suggestion the varying circumstances that sometimes concurred to make one Saturday as compared with another short-handed, and therefore comparatively unfruitful in its returns. The distribution decided on this year is as follows:—Royal Infirmary, £2991 10s.; Royal Southern Hospital, £1495 15s.; Northern Hospital, £1302 15s.; Dispensaries, £965; District Nursing Society, £675 10s.; Ladies' Charity and Lying-in Hospital, £675 10s.; Infirmary for Children, £482 10s.; Eye and Ear Infirmary, £386; Homœopathic Dispensaries, £241 5s.; Cancer Hospital, £48 5s.; Stanley Hospital, £96 10s.; Hospital for Infectious Diseases, £96 10s.; Consumption Hospital, £96 10s.; St. Paul's Eye and Ear Hospital, £48 5s.; Dental Hospital, £24 2s. 6d.; St. George's Hospital for Skin Diseases, £24 2s. 6d.

A letter of a somewhat startling character from its suggestiveness was read and commented on by the chairman at a recent meeting of the Health Committee, the burden of which is, firstly, that Liverpool is the destination of a very large supply of the carcases of cattle dead from various diseases; and, secondly, that the deaths of the cattle are often purposely

facilitated by drugs. The letter was written by the holder of some 3000 acres of land in Ireland to a merchant friend in Liverpool, and by this latter sent to the chairman. It stated that "there is a branch of the meat trade which has grown up so much lately that the chairman of the Midland, in his last address, speaks of it as a large source of profit to their line. . . . This is carried on in almost every town by the lowest members of the community. They formerly sold the sick and dead beasts they got to the poor in the neighbouring towns, but now they sew them up and send them to Liverpool. They buy all sorts, except those fit for human food. . . . They are sometimes fined, but if they escape imprisonment they are satisfied. From what I learn from the detective officer who was down here when my cattle died, I understand they pay the herd's-boy for early intelligence as to the death of animals, and I believe they will stop at nothing to procure what they want. One of the most extensive is a man named ——, and there are grave suspicions that he, through the herd's-assistant, could account for the deaths in my cattle. There is no doubt whatever that what is exported by such people—and I believe it is very large—has died from disease, and most likely has been drenched by herds with all sorts of dangerous, if not poisonous, medicines. I think, therefore, the inspection as to this sort of meat must be very lax indeed."

Whether the suspicions expressed in the above extract are justified by fact, I cannot say, but there is at any rate the very significant ground for believing that the importation of diseased meat into the town is increasing afforded by the greatly increased amount of fines levied year after year in cases where it has been seized. In 1869 these amounted but to 39*l.*; in 1872 the amount had risen to 50*l.*; in 1874 to 124*l.*; while last year it was 202*l.* As there is no reason for believing that there has been any increase in the vigilance of the officers employed in the work during those years, the only legitimate inference seems to be that diseased meat is introduced in continually increasing quantity.

The annual and highly interesting health report for Liverpool has just been issued by the Deputy Medical Officer of Health. It shows that during 1876 the deaths from small-pox in the borough amounted to 386. Of the total number 126 were of children below five years of age; 71 between five and fifteen; 109 between fifteen and thirty; and 80 above thirty. The rate of mortality from this disease was 0·7 per 1000 inhabitants. It caused 2·7 per cent. of the total mortality. As to vaccination the returns were very imperfect: 47 were reported to have been vaccinated; 80 not to have been vaccinated; while of 259 no information on the point was given.

Just as was found by Drs. Parkes and Sanderson some years ago, there is the greatest difference between the mortalities of various wards, the increased amount always having a close relation with the amount of overcrowding. Thus, while in Rodney-street and Abercromby wards (the least crowded of any) it was only 20·3 per 1000, in Vauxhall it reached 39·4; the mortality for the entire town being at the rate of 27·5 per 1000.

RUPTURE OF THE UTERUS AND SUCCESSFUL GASTROTOMY.—Dr. Hart, of Amsterdam, relates an interesting case of a lady, aged thirty-seven, who, with a narrow pelvis, was pregnant for the fourth time; the last two deliveries had been accomplished with difficulty by means of the forceps. After she had been on the present occasion in labour for some hours without the head making any advance, Dr. Hart was about to apply the forceps, when, after some violent pains, a discharge of blood took place, and the presenting part receded, the uterine contractions entirely ceasing. He resolved to perform gastrotomy, but was prevented by other engagements from doing so until seven or eight hours after the rupture had occurred, at which time there was very severe pain in the abdomen, and the pulse was 125, but with some power. The fœtus (weighing four kilogrammes and a half) and the placenta were both found in the cavity of the abdomen. The uterus was completely contracted, and presented at the supra-vaginal portion of its cervix a laceration measuring three centimetres. No suture was applied to this, as no blood issued; and a considerable quantity of coagulated blood and amniotic liquid was sponged out from the cavity of the pelvis. The external wound was united by means of two silver sutures and eleven pins, and the patient recovered without any bad symptom, being able to go out on the thirty-third day after the operation. —*Gaz. Hebd.*, March 30.

GENERAL CORRESPONDENCE.

THE DENTAL REFORM ASSOCIATION.

LETTER FROM MR. S. CARTWRIGHT.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg to enclose a copy of a letter of resignation which I have felt it necessary to place in the hands of the Committee of the Dental Reform Association—an association which, it is hoped, will conduce to the improvement of the dental branch of the profession.

The ground of my objection, and consequent resignation, is an amendment to one of the resolutions, considered carefully and passed at a meeting of the Executive Committee, and submitted to the General Committee, proposed by Mr. Tomes, and carried, to the effect that in the event of any legislative enactment having reference to registration of the dental licence, qualified surgeons engaged in dental practice, but who have not thought it necessary to take the *licentiateship*, shall be debarred by law, and under penalty, from styling themselves "surgeon-dentists, dental practitioners, or dentists." Such a measure would, to my mind, be inconsistent and illiberal, and one not likely to advance the profession socially or intellectually.

It has been strongly impressed upon members of the Council of the College of Surgeons that the suggestive resolutions which, some months since, were submitted to them for consideration by the Association of Surgeons practising Dental Surgery, to which I belong, were signed without authority. This is a mistake which, I trust, arises only from want of knowledge of the facts of the case. At a general meeting, at which a large number of members of the Association attended, the resolutions were drawn up and unanimously adopted, and it was equally unanimously carried that the names of the members should be appended. I deny, *in toto*, having an underhanded intention to degrade the licentiateship; but I feel that an attack has been made upon medical degrees, which seems to me to be short-sighted policy; and I do not think that vulgar journalism will mend matters.

With your permission, I may write further on this subject.

April 19. I am, &c., SAMUEL CARTWRIGHT.

"32, Old Burlington-street, April 17, 1877.

"Gentlemen,—I very much regret that the result of the votes on Mr. Tomes's amendment to the first resolution compels me to resign the Chairmanship of the Dental Reform Committee, and also to request that my name be withdrawn from that Committee. I feel assured that, if temperately and without prejudice carried out, the resolutions adopted by the Executive Committee, after long discussion and careful consideration, would have proved highly conducive to the best interests of our branch of the profession; and it would have been an agreeable duty to me cordially to have continued to assist in accomplishing so desirable an object. I should have thought that the object of all concerned in so important a movement would be to enlist the sympathies of *all* the profession. The course proposed and accepted cannot lead to unity, and will scarcely tend to advance the status of the dental branch of the profession.—I have the honour to be, gentlemen, yours faithfully, "S. CARTWRIGHT.

"To the Members of the Dental Reform Committee."

AMERICAN DIPLOMAS IN THE LAW COURTS.

LETTER FROM DR. R. H. S. CARPENTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your article of last week, under the above heading, you say "Mr. Knox dismissed the case [the case of Hamilton] on the ground that to pretend to be a medical graduate of a foreign university was not an offence within the Medical Act. Against this decision Dr. Carpenter appealed." Pray allow me to say that the appeal was not made for that reason, nor for any reason at all like it. I have always maintained—and that I have done so is well enough known amongst the members of our Association—that a person may even call himself, and practise with such a fictitious title as, Doctor of Medicine of the University of Moonshine, or Member of the Royal College of Surgeons of the North Pole, without in any way contravening the penal clause of the Medical Act, provided

that he does not at the same time either pretend to be registered or to hold a registrable qualification. We proved that Hamilton had written about his premises "Dr. Hamilton," "Dr. Hamilton, Accoucheur," and that there was no writing about his residence stating that he was a "Doctor of Medicine of the Metropolitan College of New York *only*."(a) We maintained that, that being so, Hamilton was using titles recognised by the Medical Act, and thus implying that he was a legally qualified and registered practitioner. Mr. Knox thought otherwise, and dismissed the case. Against his dismissal we appealed; and the rest, so far as it has gone, you know.

I am, &c., R. H. S. Carpenter, Hon. Sec.,
April 21. East London Medical Defence Association.

OPERATION DAYS AT ST. THOMAS'S HOSPITAL.

Letter from Dr. J. W. Gillespie.

[To the Editor of the Medical Times and Gazette.]

Sir,—I regret extremely that, owing to a mistake, the information forwarded to you in reference to our operation days was incorrect. The following is the present arrangement:—General operations on Wednesdays and Saturdays at half-past one; ophthalmic operations on Thursdays at 4 p.m. May I, therefore, request the favour of a correction in this week's *Medical Times and Gazette?* Apologising for having to trouble you, I am, &c.,

J. W. Gillespie, M.D., Secretary.
Albert-embankment, Westminster-bridge, S.E., April 23.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, March 23.

George W. Callender, F.R.S., President, in the Chair.

(*Continued from page* 406.)

Mr. Myers thought that Paquelin's cautery might be useful in the treatment of these cases; but it must be remembered that, in using a cautery at a white heat, one was likely to have secondary hæmorrhage. In using the cautery for piles, etc., it was always recommended to use the instrument at a dull red or black heat.

Mr. Hulke thought the cases very interesting in many points. The case in which epithelioma first occurred in the lip, and ten years afterwards in the tongue, the second growth being quite independent of the first, was very remarkable. He had rarely seen such an independent upspringing of epithelioma in two distinct parts. Operations done with the cautery were very liable to be followed by secondary hæmorrhage. This was not so disastrous in hospitals, where the house-surgeon was at hand, as in private cases. The eschar produced by the heat was usually thrown off after about a week, and hæmorrhage was then very likely to be induced. On the whole, he thought the best instrument was the écraseur armed with a thick rope. He gave particulars of a case now proving fatal, the patient being a member of the medical profession, aged forty, who originally had ichthyosis of the tongue. At first there was no epithelioma, and nothing for several years followed the ichthyosis; then a hardness appeared on the side of the tongue as a tiny point opposite the only remaining molar tooth, which had sharp front and back angles. Mr. Hulke thought the nodule was an epithelioma, and advised its removal. Another surgeon thought it was syphilitic; but the patient was married, his wife and children were healthy, and he had never had any secondary symptoms. He was advised to go home for two months and to take iodide of potassium. A third surgeon, however, upon being consulted, advised excision. The growth was consequently widely removed. Other knots of disease, however, recurred in all directions, accompanied by glandular enlargements. The surgeon should not yield to any entreaty upon the part of the patient, but should remove the whole tongue for cancer. Such certainly was the teaching which he had derived from his cases. As regarded the deligation of the lingual artery, Mr. Haward's case was not an unmixed one. Was not the benefit following the ligation of the artery perhaps partly caused by the attack of erysipelas? Mr. De Morgan used to think a sharp attack of erysipelas produced much benefit in a cancerous growth. In reply to questions, Mr. Hulke said that, in his case, the ichthyosis of the tongue formed a large thick patch, with a number of little filmy patches scattered here and there above and under the tongue. The patient had been a great smoker.

Mr. Bryant believed that, in half of the cases of cancer of the tongue, the return of the disease after operation was not in the tongue, but in the glands; and that was an advantage, as it then destroyed life in a manner less distressing to the patient than if it were in the tongue itself. In any case where the disease was far advanced, it was better to remove the whole tongue. He thought the écraseur, in one of its forms, was superior to the cautery, and he considered the galvanic better than the ordinary écraseur.

Mr. Morrant Baker said that he had been in the habit of removing a portion of the lingual gustatory nerve for the relief of cancer of the tongue. One simple procedure, generally very beneficial, he found to be often neglected; he alluded to the removal of all the teeth, in whatever condition they might be, from the lower jaw opposite the cancer. He had done this in the case of a man who had been greatly benefited thereby. In that man, he (Mr. Baker) had since tried to remove the lingual gustatory nerve, but had failed; and he would be glad of any hint enabling him to obtain his end more readily by varying his course of procedure.

Mr. Pick did not quite agree with Mr. Haward as to the best method of exposing the lingual artery. In one of his cases he had determined to remove the tongue and tie the lingual artery. The patient was fat, and the artery difficult to find. The external carotid artery was exposed, and an artery coming off from it, and which was thought to be the lingual, was ligatured; there the wire écraseur was applied and the tongue removed. Secondary hæmorrhage ensued, and the man died from pyæmia, as did Mr. Haward's patient. At the post-mortem examination, it was discovered that, instead of the lingual, the superior thyroid artery had been tied, the latter vessel in that case having come off higher than usual.

The President said that, as regarded the operation itself, he had never seen a case in which he was unable to remove the tongue through the mouth in the usual manner. That, he thought, was the best operation. He some time ago came to a decision in favour of the ordinary écraseur as the best instrument to employ. He had had no secondary hæmorrhage after the use of any instrument, but he believed it was rather the more likely to occur after the galvanic écraseur. After operations with the latter instrument an eschar was formed on the surface of the wound, the result of the great heat. That eschar had afterwards to be removed. Thus those cases took almost a week longer to recover than the cases operated upon with the chain écraseur.

Mr. Heath said, in reference to the tying of the lingual artery, that the method tried by Mr. Haward was not the best. The hyoid bone was not a good guide to that vessel. The best method of operating was to go into the digastric triangle and cut through the hyoglossus muscle. The surgeon must not, however, go too deeply, as only the mucous membrane of the pharynx lay beneath; and, although the opening of that was probably not productive of much harm, still it was well to avoid it. He agreed with Mr. Hulke as to the liability there was to secondary hæmorrhage in cases operated upon by the cautery. He had had such a case in his private practice last year.

Mr. Morris said that he had had occasion to tie the lingual artery three times; and he thought the operation beneath the hyoglossus was preferable to the ligature near the carotid. He had seen both the facial and superior thyroid arteries tied instead of the lingual. Mr. Haward had mentioned the enlarged glands found in his case beneath the jaw, in which there occurred abscess and sloughing. Was it not likely that the benefit that resulted was thereby produced rather than by the ligature of the lingual artery? The disease was at the base of the tongue, where several other arteries besides the lingual fed the parts. He was glad the term "ichthyosis," first suggested by Mr. Hulke, was being generally adopted.

(a) The Metropolitan College of New York has now no existence. It was simply a College of Botanists, and in about 1858 obtained a charter, which was withdrawn by the American Senate in 1862, for the reason that it was selling its "diplomas" in England and other places to persons who had received no medical education. Three persons holding only these "diplomas" are now on the Register, but a request has been made by this Association to the Medical Council that they be removed from it; and it is believed by the Association that steps are being taken for that purpose by the Medical Council.

He himself had had a patient with congenital ichthyosis. As regarded the mode of operating, the cases suitable for this or that operation must be selected. In the case of cancer in the floor of the mouth, the symphysis even should be divided. The needles devised by Mr. Croft passed well up through the tongue afforded much assistance to the operator.

Mr. Barwell then briefly replied, and mentioned that he should not again use the galvanic écraseur.

Mr. G. Brown also made some remarks; and

Mr. Haward said that he had only suggested that the lingual artery should be sought at its origin, where there was difficulty in finding it beneath the hyoglossus. That muscle and the adjacent parts might be so changed by disease as to be almost unrecognisable. As regarded his own case, the growth in the tongue had begun to diminish before the erysipelas supervened, also before the sloughing and the pyæmia which had produced the sloughing. Ligature of the lingual artery certainly had great effect on the vascularity of the tongue.

After some remarks, chiefly on anatomical points, from Mr. Heath and Mr. Morris, the meeting adjourned.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Wednesday, March 28.

S. Cartwright, F.R.C.S., President, in the Chair.

On some Untoward Results of Immediate Torsion of the Teeth.

Mr. Coleman read a communication as above. Alluding to the supposed value of this operation in certain cases of dental irregularity, he showed how unsatisfactory the results might be when performed on imperfectly developed teeth. In certain cases development was entirely arrested, or absorption took place, and the tooth never descended to a level with its fellows, or even receded beyond the dental line, as occurred in a case the model of which he showed to the members present. These results he ascribed to the severance of the pulp vessels by the operation.

Messrs. Cattlin, Edgelow, Stevenson, Gregson, and S. Cartwright joined in the discussion, there being a division of opinion as to the merits of the operation, though it was generally maintained that it was not justifiable before thirteen or fourteen years of age.

Cases of Alveolar Necrosis and Exfoliation following the Eruptive Fevers.

Mr. S. J. A. Salter exhibited a series of specimens of dental and alveolar necrosis and exfoliation following the eruptive fevers, scarlet fever, measles, and small-pox. He said that a few isolated specimens of this condition, preserved in our hospital museums, have been attributed to mercury, but that that explanation was refuted by modern evidence. Mr. Salter considered that they are among the specific sequels of the eruptive fevers; that the pulps and caps of the forming permanent teeth (members of the tegumentary system) are poisoned by the disease, die, and are shed in the only way in which they can be cast off—namely, by the necrosis and exfoliation of the capsule of bone which encases them, and to which the bone-necrosis is almost always strictly limited. Mr. Salter remarked that these cases usually occur in children about five years of age (a year or two more or less), when dental development is in its highest activity, and that the morbid condition is usually symmetrical on both sides of the jaw; that the bone-necrosis is limited to the alveoli and capsules surrounding the teeth; that he has never seen this condition excepting after eruptive fevers, and that he has had under his own care about eighteen cases after scarlet fever, eight after measles, and four after small-pox. In answer to some doubts expressed as to the correctness of Mr. Salter's pathological explanation of cause and effect, he observed, first, that we must acknowledge the fact that the teeth are members of the dermal system, and would be liable to diseases affecting that system; secondly, that at the time when these cases happen the jaws are the seat of intense nutritional activity (at five years of age there are forty-eight teeth in the jaws, the temporary commencing to be absorbed, and the permanent in active formation), and full of blood, which, if poisoned by an exanthematous fever, would then find a large mass of dermal material within the jaws; thirdly, that whereas in the skin and kidney the poison can be cast off by desquamation, no such relief can be afforded to the poisoned tooth-pulp encased in bone, and that the only method of eliminating the poison is that which occurs; fourthly, that no other part of the skeleton suffers, and that only so much of the jaw as is associated with the teeth dies and is exfoliated; and, fifthly, we already know, as a fact established beyond dispute, that a poisoned tooth-pulp may cause jaw-necrosis, for in phosphorus disease this is the method by which all the pathological changes of that one affection are initiated.

Dr. Wiltshire considered that the necrosis was owing to impaired nervous nutrition, and not owing to the localisation of the poison engendered in exanthematous fevers.

Mr. S. H. Cartwright suggested the analogy which seemed to exist between the symmetry seen in the pegged teeth of hereditary syphilis, and that seen in exanthematous necrosis. He ascribed both in part to trophic nervous influence, the local poison also having its effect.

Mr. Napier said that if the condition of blood was the cause of the local mischief, other parts of the system ought also to be affected.

On some Reflex Symptoms and Results of Irritation of the Dental Branches of the Fifth Nerve.

Mr. T. W. Nunn read a paper on this subject, giving an account of certain cases confirmatory of the statements made by the President (Mr. Cartwright) in his communication on "Teething and its Complications," made to the Society on November 22. The first case, which gave the key-note, as it were, to his subject, was a remarkable instance of delayed dentition in a woman between thirty and forty years of age, giving rise, by reflex irritation, to ulcer of the cornea. The ulcer, which had long obstinately resisted treatment, healed directly an upper bicuspid was cut. The following cases were—one of supra-orbital neuralgia in a young lady about eleven, immediately removed by lancing over the second or posterior molar; one of otalgia in a patient of the same age, cured by the same means after anodynes, etc., had failed to do good; two cases of keratitis with ulcer, connected with the eruption of the upper central incisors; one of chorea in a young gentlemen of twelve, in which the disorder disappeared with the completion of the eruption of the posterior molars; and another case, where, coincident with the eruption of the posterior molars, an abscess of the thigh, which had been supposed to have become obliterated, resumed activity. Further, the opinion was expressed by the author, that during the dentition of the dentes sapientiæ marked disturbance of the general health, especially in females, was common, most frequently in some form of gastric trouble, such as intense pain and vomiting after food; and he said that many instances had fallen under his notice in which these symptoms had been relieved by lancing over those teeth when as yet hidden under the gum. There was a different class of cases which the author believed had origin in the reflex irritation of teething, namely, deformities of the lower extremity, mainly of the foot. The deformity of the toes known as hammer-toes, and bunion, were really owing to faulty nutrition of certain muscles, a myotrophic consequent of impaired innervation, and that such impairment was usually synchronous with the dentition of the second or posterior molars. The author drew attention to the fact that writers on ophthalmic surgery made no mention of dental irritation as being a cause of ulcer of the cornea, neither was the simple operation of lancing the gums suggested in that affection in one of the most esteemed and recent works on the practice of surgery.

The President gave several examples which had come under his notice of reflex action connected with the teeth, as also with other portions of the body; notably, a remarkable case of double squint dependent upon curvature of the spine.

Mr. Salter mentioned a case in which the iris had changed colour as a result of dental lesion.

Dr. Wiltshire ascribed ulceration of the cornea to the action of reflex nervous irritation on nutrition.

Mr. Stevenson had seen good resulting from lancing the gums in cases of reflex disturbance.

Mr. Hamilton Cartwright showed a patient, aged thirty, who had suffered from neuralgia for many years, her case presenting some peculiar points of interest. The trigeminal nerve was chiefly involved, acute pain being experienced in the ear, eye, and supra-parietal region, whilst unilateral hyperæsthesia existed over the entire left side of the body from the head to the knee. Trousseau's test for idiopathic neuralgia by pressure applied to the spine resulted in a paroxysm of pain

when the fifth cervical vertebra was pressed, the patient starting as with an electric shock. Another hyperæsthetic spot was found in the left canine fossa, whilst pressure over the ulnar nerve also produced general pain. As all the teeth in her upper jaw were diseased, they were removed, with no relief to the symptoms, the pain over the canine fossa being evidently unconnected with them, this remaining so persistent that it was found impossible to wear an artificial denture which had been provided for her. Her general health being attended to, a course of phosphorus was tried with no effect, and subsequently arsenic, of the exhibition of which she was strangely tolerant, and under its influence and that of bromide of potassium she much improved; but the painful spot on the left superior maxillary bone still remained, and pressure on it of the slightest kind invariably resulted in a paroxysm of general pain. Though certain that no root was there, the gum was freely incised, and a portion of bone gouged away in some expectation of finding an impacted tooth. None was present, but from that moment—six months ago—she has been a new woman, the neuralgia having nearly entirely passed away. Mr. Cartwright could not explain the success of this treatment, but thought that these sudden cures of neuralgia somewhat discountenanced the late Dr. Anstie's views that in that disease the posterior roots of the spinal nerves were invariably in a state of atrophy.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 10.

Charles West, M.D., F.R.C.P., President, in the Chair.

On Direct Wounds of the Ureter.

Mr. T. Holmes described a case in which it was thought probable that the ureter was punctured from behind by a stab wound, implicating no other structure of importance. The injury occurred to a boy who was accidentally stabbed by a playmate. The wound was a very small one, and bled but little. Immediately on the cessation of the hæmorrhage a copious flow of clear fluid was seen to proceed from the puncture, and this continued for a fortnight, in quantity sufficient to soak three large draw-sheets in the course of a day. The composition of the fluid was extremely different from that of normal urine; but it differed also from that of the cerebro-spinal fluid, which seemed to be the only other secretion that could have been evacuated by a puncture of this kind; nor did the symptoms point to any lesion of the spinal membranes or nerves, while the urinary secretion was much altered in quantity and quality from the date of the injury. Various arguments were adduced to prove that the lesion in this case was really a direct wound of the ureter—an injury not hitherto treated of in our surgical works, though direct wounds of the kidney have been carefully described. The possibility of the occurrence was illustrated by a preparation made on the dead subject, which accompanied the paper.

Mr. Thomas Smith said Mr. Holmes had not suggested one possible source of the fluid—that was the peritoneal cavity. Then there was no proof of wound of the ureter, and the fluid examined had not the characters of urine. It was not very likely that urine from a wounded ureter would reach the surface; it would rather make its way into the loose connective tissue. The same difficulty applied to peritoneal fluid, but cerebro-spinal fluid might escape more easily. Cases of hydrocele communicating with the peritoneum showed that much fluid might be formed by that membrane.

Mr. Howse narrated a case where a lad had been run over by a heavy van, fracturing the os innominatum. After a time, without rise of temperature, a swelling appeared, and gradually increased on the right side. This Mr. Howse tapped with a large trocar and canula, and three or four pints of fluid with the characters of urine escaped. It was tapped again and again, the quantity of urea in the fluid gradually diminishing, as also the quantity of fluid removed. The boy was still under treatment. He did not think the fluid in Mr. Holmes's case to be peritoneal, and had it been cerebro-spinal nervous symptoms would probably have arisen.

Mr. Barwell thought the chemical characters of the fluid in Mr. Holmes's case against the notion of its being urine. Besides, the peritoneum was much more easily reached than the ureter. He had seen cerebro-spinal fluid escape in considerable quantity without nervous disturbance.

Mr. Rivington thought that if the ureter had been wounded the urine would have escaped into the connective tissue and set up irritation, whereas escape of peritoneal fluid might do no harm. He too thought the case one of wound of the peritoneum.

Mr. Howse asked if in any instance the peritoneal fluid had been found of the specific gravity described by Mr. Holmes.

Mr. Pollock asked whether the urine was examined as well as the fluid. He understood that as the wound closed the quantity of urine increased; but that might be accounted for by arrested discharge of fluids. He could not understand why urine from the bladder could be of higher specific gravity than that from the wound.

Dr. John Harley suggested that the irritation of urine might have set up a discharge of serous fluid.

Mr. Holmes, in reply, said that the notion of a wound of the peritoneum, which had first suggested itself, was untenable. A wound of the peritoneum would not be followed by the discharge of such a large and constant quantity of fluid as in this case. He did not know of any instance of peritoneal fluid without albumen, as was the fluid in this case. It was, he allowed, difficult to account for the absence of urinary constituents from the fluid—if urine it was. There was, moreover, a remarkable difference between the fluid discharged and the urine in point of specific gravity.

OBITUARY.

WILLIAM NORRIS, M.D.

One by one the race of aged medical practitioners who were in the bloom of youth, full of vigour, enthusiasm, and activity at the commencement of the present century, is fast disappearing from amongst us. The few who remain have long been in the sere and yellow leaf. We shall soon see the "last of the Mohicans," and then they will all be gone. Now we have to record the death of another of these veterans, Dr. William Norris, of Stourbridge, one of the oldest medical men in the Midland Counties, in his eighty-fifth year, on the 23rd ult., from hemiplegia and apoplexy. Born in 1792, he became a student of St. Bartholomew's in 1810, and of the London Infirmary, and subsequently of the University of Edinburgh, travelling there and back by the old stage-coaches. In 1816 Norris was admitted Licentiate of the Society of Apothecaries, London. He commenced practice at Stourbridge shortly afterwards, and resided there up to the time of his death, a period of over sixty years. In 1823 he became M.D. of the University of St. Andrews; in 1851 he was elected corresponding member of the Epidemiological Society of London, after reading before its Council a paper on Fever, and received its diploma. He was the author of a pamphlet on Melanosis, and papers on Diaphragmatic and other Internal Herniæ (*Provincial Transactions*), and read before Council, Royal College of Physicians of London, a paper on Cholera. Norris leaves behind him a mass of unpublished writings, both general and medical, which bespeak a fine and intellectual mind. He retained almost to the last a keen love of his profession. He married in 1828, Anne Lascelles, youngest daughter of Captain George Henry Blake, R.N., by whom he had three sons and two daughters. The eldest son, William Lascelles Norris, surgeon, of Brierley Hill, died in 1872; the other sons are dead, and the daughters alone survive.

JOHN KERSLEY LIPSCOMB, L.R.C.P. Edin., M.R.C.S. Eng.

Our obituary of to-day records the death of John Kersley Lipscomb, a practitioner well known in Hampshire for his accurate professional knowledge, and esteemed and liked equally by his medical brethren and by the general community of and around Alresford with whom he had been thrown in contact. Educated at University College Hospital, he started in practice in Alresford immediately upon obtaining his qualifications, and for a period of forty years laboured hard by night and day, prompted by the noble feeling which to so large an extent permeates the healing faculty—"to do good by stealth, and blush to hear it named." Kind to the poor, and as circumspect in his treatment of them as he would be of a wealthier patient, he gave an example we may all be ambitious to follow. Indifferent to his own bodily ailments,

he frequently exposed himself by night in a condition of health which, had it occurred in a patient, he would have chided; but to himself it acted as a goad, from his inherent sense of duty. As a companion, his *bonhommie* was well recognised; as a friend, he was sincere and warm-hearted. He was an energetic supporter of the Volunteers. In 1859, when the movement first commenced, he became an Assistant-Surgeon in the local branch of the corps, and continued in it to the time of his death, regularly attending the regimental camps, having obtained the rank of Staff Surgeon to the administrative battalion. John Kersley Lipscomb leaves a gap in our ranks which his juniors may not recognise, but which those of his own age and standing will feel is one not readily to be filled up.

MEDICAL NEWS.

University of St. Andrews.—The following gentlemen, having passed the required examinations, obtained the degree of Doctor of Medicine on April 20:—

Arminson, John, M.R.C.S., L.S.A., Preston.
Chisholm, Edwin, M.R.C.S., L.S.A., Sydney, New South Wales.
Furnell, Michael Cudmore, F.R.C.S., Surgeon-Major H.M.'s Indian Service, Principal and Professor of Medicine, Madras.
Gaye, Henry Searle, M.R.C.S., L.S.A., L.R.C.P. Lond., Newton Abbott.
Larkin, Henry William, L.R.C.P., M.R.C.S., L.S.A., L.M., Bilston.
Marriott, Peter William, M.D. Giessen, M.R.C.S.E., L.S.A., Mentone, France.
Miller, Matthew, L.F.P.S.G., Glasgow.
Pickett, Jacob, L.R.C.P. Edin., M.R.C.S.E., L.A.C., London.
Powell, George Denniston, L.R.C.S.I., L.A.H. Dub., Dublin.
Thompson, John, M.R.C.S., L.S.A., L.R.C.P.E., London.

At the same time, Donald Roderick Morrison Murray, North Leith, received the degrees of M.B. and C.M.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 19th inst., and when eligible will be admitted to the pass examination:—

Bernays, Adolphus E., student of St. Thomas's Hospital.
Bowe, Francis, of St. Bartholomew's Hospital.
Butler, Herbert P., of St. Thomas's Hospital.
Coward, R. Courtenay, of St. Thomas's Hospital.
Cuthbert, Charles F., of St. Bartholomew's Hospital.
Forsbrook, W. H. Russell, of the Westminster Hospital.
Griffiths, Ernest E., of the Middlesex Hospital.
Gubbin, George F., of the Westminster Hospital.
Gulliver, George, B.A. Oxon., of St. Thomas's Hospital.
Higgs, Alfred, of the London Hospital.
Jacob, H. Garrard, of the Charing-cross Hospital.
Jones, Albert E., of the London Hospital.
King, David A., of St. Bartholomew's Hospital.
King, W. H. Tindal, of St. Mary's Hospital.
Leadbeater, Thomas E., of the London Hospital.
Runnalls, H. Boyle, of St. Mary's Hospital.
Smyth, Sydney, of the Westminster Hospital.
Watkins, Sydney C., of the London Hospital.

Twenty-seven candidates out of the 187 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their Anatomical and Physiological studies for three months.

The following gentlemen having undergone the necessary examinations, were admitted Members of the College at a meeting of the Court of Examiners on the 24th inst., viz.:—

Baker, Frederick Grenfell, Cambridge-gardens, W., student of St. George's Hospital.
Bourke, William, M.B. Edin., Jamaica, West Indies, of the Edinburgh School.
Brook, John, Northwich, of Guy's Hospital.
Calder, Augustus Barclay, Leith, of the Edinburgh School.
Chapman, James Milne, Edinburgh, of the Edinburgh School.
Corsack, Robert Oriel, L.R.C.P. Lond., Bedford, of Guy's Hospital.
Crook, Herbert David, Keynsham, near Bristol, of the Leeds School.
Douglas, Arthur Latham, Liverpool, of the Liverpool School.
Giffard, Henry Edward, Horsham, of St. Bartholomew's Hospital.
Gillibrand, William, L.K.Q.C.P.I., L.S.A., Wigan, of the Liverpool School.
Jones, James Thoresby, Ruthin, N. Wales, of University College Hospital.
Jones, Edward Owen, M.B. Edin., Surbiton, of the Manchester School.
MacDonnell, Richard Lea, M.D. McGill, Montreal, Canada, of St. Thomas's Hospital.
Marsh, Frank, Stafford, of King's College Hospital.
May, Edward Percy, Russell-square, of University College Hospital.
Morton, Albert Samuel, L.S.A., Kennington, of the London Hospital.
Nicoll, Thomas Vere, Charterhouse-square, of St. Bartholomew's Hospital.
Payne, Henry, L.R.C.P. Edin., Salisbury, of St. Bartholomew's Hospital.
Pugh, John Hopkins, L.S.A., Birmingham, of the Birmingham School.
Plumbe, Samuel Thomson, Maidenhead, of St. Bartholomew's Hospital.
Ransohoff, Joseph, M.D. Ohio, Cincinnati, U.S.
Rhodes, Clement, L.R.C.P. Edin., Halifax, of St. Bartholomew's Hospital.
Robson, Edward Sheddon, L.R.C.P. Edin., Durham, of Guy's Hospital.
Sawyer, Henry, Rugby, of the Manchester School.
Shard, Oliver Cromwell, Chesterfield, Derbyshire, of the Edinburgh School.
Smith, William Barron, L.R.C.P. Edin., Manchester, of the Manchester School.
Smith, Ferdinand Clarence, L.S.A., Brentford, of University College Hospital.
Verteuil, Ferdinand Aimé de, Trinidad, West Indies, of St. Thomas's Hospital.
Warliker, Damodar Purshotam, L.S.A., Bombay, of University College Hospital.
Williams, William Roger, Felixstowe, Suffolk, of University College Hospital.

Three gentlemen passed in Surgery, and, when qualified in Medicine, will be admitted Members of the College; only two candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. At the same meeting of the Court, Mr. Henry Cass, of St. George's-road, Eccleston-square, a student of University College Hospital, having completed his examination for the Fellowship, will be recommended to the Council to receive that distinction. Dr. George Murray Humphry, F.R.S., of Cambridge, the recently elected member of the Court of Examiners, took his seat on this occasion.

The following gentlemen passed on the 25th inst., viz.:—

Bury, Judson Sykes, Manchester, student of University College Hospital.
Cripps, Edward Charles, Cirencester, of St. Bartholomew's Hospital.
Eccles, Friend Richard, M.D. New York and M.B. Toronto, Warwick, Ontario, of St. Thomas's Hospital.
Hemsted, Arthur, L.R.C.P. Lond., Ickford, near Thame, Oxon, of University College Hospital.
Hughes, David Arthur, Westbourne-park, of St. Bartholomew's Hospital.
James, Alfred, Merthyr Tydfil, of University College Hospital.
Joll, Boyd Burnet, Devonport, of University College Hospital.
Kay, William, L.S.A., Coatbridge, Lanarkshire, of St. Bartholomew's Hospital.
Lyddon, Richard, Folkestone, of St. Bartholomew's Hospital.
Mayne, Walter Furlong, Honiton, Devon, of St. Bartholomew's Hospital.
McGeagh, William, M.D. Belfast, Belfast, of the London Hospital.
Prowse, William Byass, L.S.A., Wallingford, Berkshire, of the London Hospital.
Sugden, D'Arcy, L.R.C.P. Lond., Finsbury-park, of St. Bartholomew's Hospital.
Tidswell, Herbert Henry, Bayswater, of St. George's Hospital.
Wilson, Edmond Munkhouse, Gilston-road, S.W., of St. George's Hospital.
Worgan, Thomas Edward, Balham, of St. George's Hospital.
Wright, Adam Henry, M.B. Toronto, Toronto, of St. Thomas's Hospital.

Two gentlemen were approved in Surgery, and, when qualified in Medicine, will be admitted Members of the College; and five candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 19:—

Cant, William John, Nickle's-park-road, Birmingham.
Gardiner, Bruce Herbert John, Rectory-grove, Clapham.

The following gentlemen also on the same day passed their primary professional examination:—

Boughton, William Bockley, Glasgow Royal Infirmary.
Tritton, William Parsons, King's College, London.
Coates, William Henry, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Churton, T., M.B.—Lecturer on Materia Medica and Therapeutics, Leeds School of Medicine.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in her Majesty's Fleet, with seniority of the 14th inst.:—Donald MacIver, M.D.; Alfred William Whitley; John Thomson Comerford, M.D.; Robert Hay, M.D.; Matthew Trevan, Alexander McDonald, M.D.; Alexander Goodall, M.D.; Thomas D'Arcy Bromlow, M.D.; Jas. Dear Smith, M.D.; Peter Burgess, M.B.

War Office—Medical Department.—Surg.-Major John Henry West, M.D., retires upon temporary half-pay; Surgeon-Major Richard William Meade retires upon temporary half-pay; Surgeon-Major Henry Bowles Franklyn, M.D., retires upon half-pay; Surgeon John Norman Davis, M.D., to be Surgeon-Major; Surgeon John Vicary Thatcher Malcolm, M.D., to be Surgeon-Major. Surgeon-Major Henry Bowles Franklyn, M.D., who retires upon half-pay, to have the honorary rank of Deputy Surgeon-General.

Militia Medical Department.—The undermentioned Surgeons of Militia to be Surgeons-Major of Militia under the provisions of the Royal Warrant of July 12, 1876:—John Morris, Hereford; George Curme, Dorset; Charles Sawer, Suffolk Artillery; George Borlase Childs, Royal London; John Caporn Smith, East Norfolk; William Williams, M.D., Royal Flint; Edward Waylen, Essex Rifles; Henry James Paine, M.D., Royal Glamorgan; Charles Cory Aldred, the Prince of Wales's Own Norfolk Artillery; Joshua Ingham Ikin, 4th West York; Charles John Sandford, 2nd Royal Cheshire; Lawrence Bramley, 6th West

York; Michael James M'Cormack, M.D., Bedford; George Wilson, Royal Monmouth; John Laird Gaussen, M.D., Antrim; Joseph Marshall Lynn, Armagh; Thomas Ducket Maybury, M.D., Kerry; William Day Murphy, Limerick City Artillery; Henry Wilson Reed, M.D., Royal Berks; George Mitchinson, Royal North Lincoln; Samuel Swain Scriven, M.D., Royal North Gloucester; George Augustus Hartlebury Hepworth, Royal South Gloucester; George Scott Mansfield, Fermanagh; Alexander Dickson, M.D., Forfar and Kincardine Artillery; William Henry Franklin, M.D., Leitrim; Henry Muscroft, 1st West York; Walter Humphries, M.D., Royal Anglesey; William Alexander Barr, M.D., Northampton and Rutland; William Malcolmson, Cavan; Charles Creed, West Cork Artillery; Edward Tweddell Atkinson, North York; John Hughes, Royal Carmarthen Artillery; William Nassau Irwin, M.D., Monaghan; Eusebius Drought Dickson, M.B., Royal Dublin City; Thomas Brittain, 1st Royal Cheshire; Henry Thomas Hartnoll, 1st Devon; Thomas Mills Beaumont, 5th West York; Edward Jackson, M.D., 2nd York; William Kaylet Curtis, East Kent; Richard Allen, 3rd Royal Lancashire; George Morison, M.D., The Royal Aberdeenshire Highlanders; William Batley, Royal Sussex; David Simpson Penrice, 1st or West Norfolk; John William Williams, Westmeath; James Walkinshaw Bell Alder, Hampshire Artillery; James Chambers Ferguson, M.D., Royal Lancashire Artillery; William Taylor, Yorkshire Artillery; Robert William Woollcombe, Devon Artillery; James Dunlop, Haddington, Berwick, Linlithgow, and Peebles Artillery; Frederick John Butler, Hampshire; Thomas Armstrong, The Royal South Wales Borderers; Frederick Goodchild, M.D., 1st Warwick; Cooper Hayes Crawford, M.D., 2nd King's Own Stafford; Charles Dycer, M.D., The Duke of Edinburgh's Own Edinburgh Artillery; James David Brown, Royal Pembroke Artillery; Michael Green, M.D., Clare; Alexander Maxwell Adams, 2nd Royal Lanark; Temple Chevallier Paley, 2nd West York; Charles Thomas Carter, 2nd Middlesex; Thomas Woods, M.D., King's County; John Oldman, Huntingdon; John Walter, Kent Artillery; Charles White, 4th Royal Lancashire; William Scott, Scottish Borderers; Fergus Armstrong, M.D., Royal Westmoreland; David Michael, 2nd Somerset; Edward Alfred Rawsons, M.D., Carlow; William Falkingham Footitt, Nottingham; George Edwin Hyde, Worcester; Richard Turner, Royal Sussex Artillery; William Gibson, Argyll and Bute Artillery; Thomas Smith Maccall, M.D., 1st Royal Lancashire; William Twigg, M.D., Mid-Ulster Artillery; Charles Orton, 3rd Stafford; John Kilner, West Suffolk; John Briscoe, Oxford; Edward Thomson Devereux Harrison, Royal Montgomery; John R. A. Douglas, 4th Middlesex; Thomas Quiller Couch, Royal Cornwall Rangers; Frederick Fawssett, M.D., Cambridge; Henry Cooper Rose, M.D., Royal East Middlesex; Richard Hamilton Cross, Royal North Down; Hugh Brady Brew, Wicklow; Thomas Agmondisham Vesey, M.D., Royal South Down; Charles George Lyster, M.D., Kilkenny; John Edward Thornburn, Royal Cumberland; John Parks, 7th Royal Lancashire; James Rawlings, Durham Artillery; Edward Allan Waterworth, M.D., Hants, Isle of Wight Artillery; George William Shipman, Royal South Lincoln; Alfred Oliphant Francis, 1st Derby; Richard Thomason, Hereford; Patrick Enright, M.D., Royal Limerick County; William Bulmer, 5th West York; William M'Cheane, Royal Lancashire Artillery; John Pleydell Wilton, Royal South Gloucester; Robert Pakenham Walsh, Fermanagh; Metcalfe Johnson, 1st Royal Lancashire; Richard Henry Rogers, Waterford Artillery; Morris Jones, Royal Cardigan; Philip Lavery, Armagh; William Ord Mackenzie, M.D., The Highland Rifles; Thomas Beath Christie, The Queen's Own Royal Tower Hamlets; William Vernon Russell, North Tipperary; Robert Wilson, Northumberland; Henry Charles Garde, M.D., West Cork Artillery; William Taylor, M.D., Royal Glamorgan; Mark Farrant, 1st Devon; Richard Commander Kibbler, The King's Own Royal Tower Hamlets; David Jacob, M.D., Queen's County; Charles Brook, Royal North Lincoln; David Redmond Taggart, M.D., Antrim Artillery; Edward Cripps, Royal North Gloucester; John Hodgson Wright, 6th West York; Charles William Marriott, 2nd Warwick; David Wield, M.D., Royal Ayr and Wigtown; Wavill, Arundel Dene, 1st Somerset; Charles Mitchell Macquibban, M.B., Royal Aberdeenshire Highlanders; Mark Moore, Cavan; Charles Stoney, King's County; Connell Whipple, 2nd or South Devon; Matthew Owen Coleman, M.D., 3rd Royal Surrey.

The undermentioned Assistant-Surgeons of Militia to be Surgeons of Militia, under the provisions of the Royal Warrant of July 12, 1876:—Richard Thomason, Hereford; Patrick Enrigbt, M.D., Royal Limerick County; William Bulmer, 5th West York; William M'Cheane, Royal Lancashire Artillery; Robert Pakenham Walsh, Fermanagh; John Pleydell Wilton, Royal South Gloucester; Philip Lavery, Armagh; Henry Charles Garde, M.D., West Cork Artillery; William Taylor, M.D., Royal Glamorgan; Mark Farrant, 1st Devon; David Jacob, M.D., Queen's County; Charles Brook, Royal North Lincoln; Edward Cripps, Royal North Gloucester; John Hodgson Wright, 6th West York; Charles William Marriott, 2nd Warwick; Charles Mitchell Macquibban, M.B., Royal Aberdeenshire Highlanders; Mark Moore, Cavan; Charles Stoney, King's County; Connell Whipple, 2nd or South Devon; William Cullinan, Clare; Henry Wright, Yorkshire Artillery; Stephen John Frederie Stafford, Norfolk Artillery; Thomas Starkey Smith, 4th Royal Lancashire; Herbert Braithwaite Spurgin, Northampton and Rutland; Decimus Curme, Dorset; Robert Bradshaw, Leitrim; James Munro, M.D., 1st Durham; Thomas Graham, Renfrew; William Smith Kerr, M.D., Scottish Borderers; Benjamin Baker, Essex Rifles; J. Mumford Percival, Royal Sussex; Herbert Goldingham Budd, Worcester; Charles Edward Eliot Welchman, 1st Stafford (since deceased); Metcalfe Johnson, 1st Royal Lancashire; Francis Bonney, M.D., 1st Royal Surrey; Rowland Hill Coombs, Bedford; Robert Lucas, M.D., Edinburgh Light Infantry; Alexander Somers, 6th Royal Lancashire; John Brierley Hughes, 2nd Royal Cheshire; George Murray Sinclair, Cambridge; John Holmes Jephson, Royal East Middlesex; James Walker, 4th West York; Henry Nelson Edwards, Shropshire; Thomas Frederick Greenwood, Nottingham; Thomas Francis I'Anson, Royal Cumberland; Thomas Dodson Palmer, M.D., Sligo; Clement Cuthbert Walter, Kent Artillery; John S. C. Yule, 7th Royal Lancashire; Fitz John Robert Irwin, M.B., Monaghan; Thomas Allman, South Mayo; Alfred Ashby, Royal South Lincoln; Charles Harwood, 1st Derby; James Joseph Nolan, North Mayo; William Sproule Love, Royal Tyrone Fusiliers; Alexander Skipton, Londonderry; James Ramsey, M.D., 2nd West York; Duncan M'Fadyen, Highland Light Infantry; George Allen Norman, Royal Monmouth; Thomas Carter, North York; and Robert Vandeleur Kelly, Westmeath.

BIRTHS.

Woodfull.—On April 14, the wife of Surgeon-Major S. P. Woodfull, M.R.C.S. Eng., of a daughter.

MARRIAGES.

McBride—Hunt.—On April 21, at St. Andrew's Church, Bath, Alexander McBride, M.D., Fleet Surgeon R.N., to Ellen Maria Elton, eldest daughter of R. Elton Hunt, Esq., of 18, Marlborough-buildings, Bath.

Maine—Holmes.—On April 17, at the parish church, Marylebone, Walter Maine, M.R.C.S. Eng., of Clacton-on-Sea, Essex, to Rosalinda Elizabeth, the youngest surviving daughter of W. H. Holmes, Esq., of 36, Beaumont-street.

Ramsay—Eyre.—On April 5, at St. Nicholas Church, Brighton, James Ramsay, M.D., of York, to Frances Williamson, youngest daughter of the late Rev. W. T. Eyre, vicar of Padbury, and J.P. for the county of Bucks.

Shipton—Green.—On April 19, at All Saints, East Clevedon, Surgeon-Major John Noble Shipton, M.R.C.S. Eng., to Laura, eldest daughter of the late Alfred Green, Esq., of Holland-park-terrace, Notting-hill.

Smith—Pascoe.—On April 18, at Cheltenham, W. R. Smith, M.B., of Sheffield, to Mary Eleanor, only daughter of the late Major R. Pascoe, R.M.L.I., of Falmouth.

Tilt—Hibbert.—On April 17, at St. James's, Spanish-place, Edward John Tilt, M.D., to Georgiana Charlotte, third daughter of Thomas Hibbert, Esq., of Birtles Hall, Cheshire.

Whistler—Ionides.—On April 17, at St. George's, Hanover-square, William McNeill Whistler, M.D., to Helen Euphrosyne, second daughter of E. C. Ionides, Esq., of 6, Addison-cres cent, Kensington.

DEATHS.

Haden, Harry Lee, youngest son of Francis Seymour Haden, F.R.C.S., of 38, Hertford-street, Mayfair, at Brisbane, Queensland, on January 18, aged 22.

Hawett, Thomas, M.R.C.S.E., L.S.A., of Standishgate, Wigan, Lancashire, on April 14.

Lipscomb, John Kersley, L.R.C.P. Edin., at Alresford, Hants, on April 17, aged 61.

Lloyd, Henry James, M.D., of 30, Margaret-street, Cavendish-square, second son of the late Henry Lloyd, Esq., of Hastings, on April 22, aged 44.

Luther, Isabella Maria, wife of Waldemar H. Luther, M.D., at Notting-hill, on April 9, aged 56.

Smith, John Prince, M.R.C.S. Eng., at 75, King's-road, Chelsea, S.W., on April 18, aged 72.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Beckett Hospital and Dispensary, Barnsley.—House-Surgeon. Candidates must hold a diploma from one of the recognised universities of the United Kingdom, or from one of the Royal Colleges of Surgeons, and must also be a Licentiate of the Apothecaries' Company in London, and unmarried. Applications, with testimonials, to the Secretary, not later than May 1.

County and County of the Borough of Carmarthen Infirmary.—House-Surgeon. Candidates must be registered to practise both in Medicine and Surgery. Must be unmarried, and free from the care of a family. Applications to Mr. H. Howells, Secretary, 58, King-street, Carmarthen, on or before May 2.

Donoaster General Infirmary and Dispensary.—House-Surgeon. Applications, stating age, previous experience, etc., with testimonials, to Captain A. S. Leatham, Hon. Sec., on or before May 5.

General Hospital, Nottingham.—Resident Surgeon-Apothecary. Candidates must have the following qualifications, viz.:—Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Dublin, or of the Faculty of Glasgow; Licentiate of the Society of Apothecaries in London; duly registered under the Medical Act. Applications to Thos. W. Bush, Secretary to the Hospital, on or before May 9.

Leicester Infirmary.—Honorary Ophthalmic Surgeon. Candidates must be Fellows or Members of one of the Royal Colleges of London or Edinburgh, or of the Royal College of Surgeons in Ireland, and registered under the Medical Act. Applieations, with testimonials, to the Secretary, on or before May 4.

St. George, Hanover-square, Provident Dispensary, 59, Mount-street, W.—Physician-Accoucheur. Candidates must be Members or Fellows of the Royal College of Physicians of London, or, if not, then of some other like College in the United Kingdom. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before May 5. Candidates are requested to attend the meeting of the Managing Committee on Tuesday, May 15, at 4 p.m.

Victoria Hospital for Sick Children, Gough House, Queen's-road, Chelsea, S.W.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons of England. Applications, with diplomas and original testimonials, to the Secretary, on or before May 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Alresford Union.—The First District is vacant; area 18,521; population 3734; salary £80 per annum. Also the Workhouse; salary £30 per annum.

Bosmere and Claydon Union.—Mr. J. C. Norman has resigned the West Needham District; area 13,978; population 2558; salary £59 per annum.

Chippenham Union.—Mr. H. M. Jay has resigned the Workhouse; salary £50 per annum.

Woodbridge Union.—Mr. Wm. Mumford has resigned the Sixth District; area 3112; population 1871; salary £15 per annum.

APPOINTMENTS.

Coventry.—Edward H. W. Swete, M.D., as Analyst for the City.

Faversham Union.—Wm. E. B. Atthill, L.R.C.P. Lond., M.R.C.S. Eng., to the First District. Frederick A. Gange, M.D., M.R.C.S. Eng., L.S.A., to the Workhouse.

Newport Pagnell Union.—John A. Macdonald, M.D. Queen's Univ. Ire., F.R.C.S. Edin, to the Eighth District.

Norfolk.—Francis Sutton, F.C.S., as Analyst for the County for one year.

Ormskirk Union.—Wm. Anderton, L.R.C.P. Edin., L.R.C.S. Edin., to the Workhouse. George Morris, M.R.C.S. Eng., L.S.A., L.R.C.P. Edin., to the Seventh District.

On April 19 a grace passed the Senate of the University of Cambridge, affirming the report of the Lodging-house Syndicate, which recommends the appointment of a responsible officer (by preference a resident member of the Senate) to inspect all houses for which licences are desired, and to report thereon to the Syndicate, taking account chiefly of the accommodation and sanitary state.

The Convention of the Kentucky State Medical Society, at their last day's session, on the motion of Dr. Baker, of Shelbyville, unanimously adopted the following resolutions:—"Resolved, that this Society is in full accord with the American Medical College Convention, seeking to elevate the standard of medical education in this country." "Resolved, that summer schools which enable students to graduate after from eight to nine months' study are exerting an evil influence on the profession." "Resolved, that a winter and summer course by the same school, and graduation at the end of each, tends to deteriorate the standing of the medical profession."

Administering Iodine through a Nurse.—Dr. Gemmel, of Birnbaum, relates the case of a feeble, rickety child a year and eight months old, to whom it was thought of great importance that iodine should be administered, which, however, in any form tried, had induced vomiting and irregular action of the bowels. It was then resolved to try giving it through the milk of a nurse, and in a few days after she had begun taking it her milk was sufficiently impregnated with it. It was found also that a cow's milk could be similarly affected by giving the animal ten grammes of iodide of potassium per diem for a fortnight. The child under the use of the nurse's milk bore the iodide very well and soon recovered.—*Berlin. Klin. Woch.*, April 9.

Hypodermic Employment of Colchicin in Chronic Rheumatism.—Dr. O. Heyfelder, of St. Petersburg, having seen in the Spanish journals an account of the advantage which Dr. Badia derived from the hypodermic use of colchicin in a case of chronic rheumatism, was induced to try its effect in seven cases, two milligrammes in a gramme of water being employed. Upon the whole the effects have been remarkable; and Dr. Heyfelder regards it as an efficient and speedy means of treating chronic rheumatism of the joints and rheumatic neuralgia, and well deserving of notice. Wherever febrile action prevails, and in parts exhibiting local inflammatory action, it is contraindicated. Its first application sometimes induced a moderate, and in one case considerable, local irritation. This irritation in different degrees was produced in nine out of the twenty-eight injections that were made in the seven cases. In persons with very sensitive skins the dose might probably be diminished. Where also there is local inflammation the injections should be made at a distance; and the vicinity of large lymphatic vessels should be avoided.—*Berlin. Klin. Woch.*, April 9.

The Royal Society.—Fifty-seven candidates have offered themselves for election into this learned Society: of this number fifteen have been selected by the Council for election into that body this year, of these five belong to the medical profession—viz., Sir Joseph Fayrer, M.D. Edin., K.C.S.I., F.R.C.P. Lond., F.R.S. Edin., Honorary Physician to the Queen, President of the India Medical Board, etc.; Thomas R. Fraser, M.D. Edin., F.R.S. Edin., etc.; W. Carmichael McIntosh, M.D. Edin., F.R.S. Edin., etc.; William Roberts, B.A. and M.D. Lond., F.R.C.P. Lond., etc.; and William Turner, M.B. Lond., F.R.S. Edin., late Lecturer on Anatomy and Physiology at the Royal College of Surgeons of England, etc. Two others—viz., H. Nottidge Moseley, M.A. Oxon., etc., and Robert McLachlan, F.R.S., etc.—are biologists; two are chemists—viz., James Dewar, M.A. Cantab., etc., and John W. Mallet, Ph.D. University of Virginia, etc.; two are geologists—viz., John W. Judd, F.G.S., etc., and Henry B. Medlicott, M.A. Dub., F.G.S., etc.; two are physicists—viz., Osborne Reynolds, M.A. Cantab., Professor of Engineering at Owens College, etc., and James Thomson, M.A., LL.D., Professor of Civil Engineering in the University of Glasgow, etc.; one a mathematician—viz., the Rev. N. Macleod Ferrers, M.A. Cantab., etc.; and the last the well-known oriental scholar, Brian H. Hodgson, F.L.S., etc. Several of the remaining candidates have, we believe, had their names before the Society for many years; one of them (a member of our profession) as many as eleven.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Bayes.—As in the meantime we intend to take no notice of the prospectus, an excuse is quite unnecessary.

Onimus.—Yes; Dr. John Ayrton, Paris, founded the Royal Geological Society of Cornwall, one of the earliest geological societies in the Kingdom. He wrote a "Guide to Mount's Bay and Land's End," which contained an account of the geology and objects of natural interest in that part of Cornwall.

A Deceased Surgeon's Son.—The climate of Victoria (Australia) is comparatively mild. The mean temperature of summer is 65°, of winter 48° of the whole year 57°.

A Provincial Teacher.—It is stated that 187 candidates were examined at the recent primary examination for the diploma of Membership of the Royal College of Surgeons, and only twenty-seven were rejected.

Dr. Williams.—Sir William Blizard, Surgeon to the London Hospital, was born in 1743, and died August 28, 1835.

Solitaire.—Dr. Beattie's lament of Dr. J. Gregory is in the concluding stanzas of the "Minstrel," thus—

"Art thou, my Gregory, for ever fled,
And am I left to unavailing woe?
When fortune's storms assail this weary head,
Where cares long since have shed untimely snow,
Ah! now for ever whither shall I go?
No more thy soothing voice my anguish cheers;
Thy placid eyes with smiles no longer glow,
My hopes to cherish, and allay my fears.
'Tis meet that I should mourn—flow forth afresh my tears."

An Explanation.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—A case having been reported in the daily papers, in which an act of carelessness on my part was, by the solicitor for the Medical Defence Association, attributed to paltry and dishonourable motives, I ask the favour of a short space in your columns to totally deny any such intentions. I will only ask you to allow me to state that the evidence given before the magistrate fully corroborated my assertion—that, while I admitted that in the hurry of business I had acted without proper caution, I had neither motive for, nor intention of, doing anything derogatory to my name and calling. I am, &c., Chas. Downes, M.R.C.S.

"John Hunter-street."

"The house said to have been built by John Hunter" was built by his brother William, who there founded the medical school—so well known afterwards as the Windmill-street School of Medicine—where Wilson, Brodie, and others established their fame. Considering the present state of this neighbourhood, the less we revert to its past glories the better.—D.

Women-Students and the University of Calcutta.

This University has at length resolved to admit female students. It is now almost certain that the example of Calcutta will be followed by Madras and Bombay, and what has been done in Art may probably be carried out in Medicine. Hindoo women may in time become doctors, and perform work in zenanas and palaces, from which all doctors of the male sex are rigorously excluded.

Open Spaces.

On Monday last the final decision was given by the Master of the Rolls in the Epping Forest case, granting an injunction against the continuance of the fences on the waste lands belonging to the lords of the manors. Among the places this decree will open to the public are several beautiful portions of the Forest.

Deservedly Punished.

The case of hardship which Mr. P. Taylor endeavoured, in the House of Commons, a few nights since, to make out on behalf of a Mr. Pearce, of Andover, on account of the frequent prosecutions against him for refusing to obey the Vaccination Act, elicited from Mr. Sclater-Booth the pertinent remark that—"It is said that Mr. Pearce is an active member of the Anti-Vaccination Society, and that, not content with declining to observe the law himself, he stimulates others to do the same, and, moreover, that his fines are paid by the Association." Some persons have an uncontrollable desire for notoriety, even if it be an unenviable notoriety. But the inciting others to break the law is a misdemeanour. It would, therefore, be well for the anti-vaccination agitators to know that the means they employ, by circulars and otherwise, to effect their purposes render them amenable to the law.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Chicago Medical Journal and Examiner—Home Chronicler—La Province Médicale—Medical Eclectic—Leisure Hour—Sunday at Home—Richmond and Louisville Medical Journal—American Journal of the Medical Sciences.

BOOKS AND PAMPHLETS RECEIVED—

E. L. Keyes, A.M., M.D., The Tonic Treatment of Syphilis—James B. Hunter, M.D., General Index to the New York Medical Journal, from 1865 to 1876—P. L. Simmonds, Animal Products, their Preparation, Commercial Uses, and Value—Henry C. Burdett, The Cottage Hospital, its Origin, Progress, Management, and Work—Otto Hehner, F.C.S., and Arthur Angell, F.R.M.S., Butter, its Analysis and Adulterations—Richard Metcalfe, F.S.S., Sanitas, Sanitatum, et omnia Sanitas—Andrew Wilson, Ph.D., etc., Zoology: A Description of Types of Animal Structure—W. C. Coles, M.D., An Account of the Bourton-on-the-Water and Cotswold Village Hospital—Report of the First Congress of the International Osteological Society, New York, September, 1876—W. Bathurst Woodman, M.D., and Charles Meymott Tidy, M.B., F.C.S., A Handy Book of Forensic Medicine and Toxicology—Charles Thomas Kingzett, The History, Products, and Processes of the Alkali Trade.

COMMUNICATIONS have been received from—

Sir Chas. Trevelyan, London; Dr. Sparks, Mentone; Mr. B. Anningson, Cambridge; Dr. Sturges, London; Dr. J. Spencer Cobbold, London; The Secretary of the Harveian Society; Mr. R. H. S. Carpenter, London; Messrs. J. Millikin and Co., London; Dr. Miller, Southsea; Mr. J. W. Gordon, Clapton; Dr. Gillespie, London; Mr. Jas. Dixon, Dorking; Mr. A. F. Greenshaw, Shepherd's-bush; Messrs. Ellis and Co., London; Messrs. Carnick, Kidder, and Co., London; Mr. Thos. Walker, Dudley; Mr. Fulton Conelly, Burford; Dr. William Bayes, London; Dr. R. Lawson; Banstead; Dr. J. Wickham Barnes, London; Mr. Chas. Downes, London; Dr. Edis, London; Dr. Bruce, London; Mr. W. E. Poole, London; Dr. Barlow, London; Mr. John Chatto, London; Mr. C. J. Cullingworth, Manchester; Dr. Frederick Taylor, London; Mr. S. Hamilton Cartwright, London; Dr. F. Churchill, London; Mr. T. M. Stone, London; The Registrar of Apothecaries' Hall.

APPOINTMENTS FOR THE WEEK.

April 28. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Royal Institution, 3 p.m. Rev. A. H. Sayce, "On Babylonian Literature."

30. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Boyd, "On Medical Relief, and a Comparison of the Results in Patients treated at their own Homes and in the Parish Infirmary." Dr. Percy Boulton, "On Inflammation and Ulceration of Os and Cervix Uteri."

May 1. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Creighton—Results of Anatomical Researches on the Etiology of Cancer. Dr. Vandyke Carter—Memorandum on Leprous Nerve-Disease. Mr. Barker—Some Unusually Large Vesical Calculi. Dr. F. Semon—Aneurism of the Thoracic Aorta. Mr. Woodhead—Coil of Intestine passed per Vaginam. Dr. Barlow—Gummata on Cranial Nerves and Changes in Vessels from a Case of Congenital Syphilis. Mr. Nunn (for Prof. Charcot)—Sections of Spinal Cord connected with Muscular Atrophy; also Sections of Phrenic Nerve. Dr. Mahomed—Syphilitic Lung. Mr. W. Haward—Epiphysial Disease from a Case of Inherited Syphilis. Mr. Spencer Watson—Melanotic Sarcoma of the Choroid. Dr. Greenhow—Lymphoma of the Mediastinum. Mr. Butlin—Chondroma of the Submaxillary Gland. Mr. Lennox Browne—Primary Cancer of the Larynx. Dr. Greenfield—Atrophy of Kidney, Hypertrophy of Heart, and Diseased Vessels, from a Boy aged fourteen years. And other Specimens. (Dr. Creighton's Specimens on view at 8 o'clock.)

Royal Institution, 2 p.m. Annual Meeting.

2. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Obstetrical Society, 8 p.m. Specimens. Dr. James Braithwaite, "On a New Mode of Treating certain Cases of Retroflexion of the Unimpregnated Uterus." Dr. Geo. Roper, "On a Difficult Case of Labour." And other Communications.

3. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Harveian Society, 8 p.m. Mr. Geo. Field, "On the Graver Aspects of Otorrhœa."

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

4. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Rev. W. H. Dallinger, "Researches on the Origin and Development of Minute and Low Forms of Life."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 21, 1877.

BIRTHS.

Births of Boys, 1209; Girls, 1266; Total, 2475.
Average of 10 corresponding years 1867-76, 2283·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	805	727	1532
Average of the ten years 1867-76	762·0	712·8	1474·8
Average corrected to increased population ...	...	...	1578
Deaths of people aged 80 and upwards ...	...	...	52

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	4	9	...	4	1	1	2	3
North... ...	751729	36	3	5	1	14	1	2	1	2
Central ...	334369	...	10	1	...	2	...	2	1	...
East	639111	10	10	2	3	15	...	3	...	3
South... ...	967692	20	14	8	2	11	2	9	1	3
Total	3254260	68	41	25	6	46	4	17	5	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·691 in.
Mean temperature	42·5°
Highest point of thermometer	59·3°
Lowest point of thermometer	32·1°
Mean dew-point temperature	35·2°
General direction of wind	E. & N.E.
Whole amount of rain in the week...	0·35 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 21, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending April 21	Deaths Registered during the week ending April 21.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2475	1532	59·3	32·1	45·7	7·61	0·35	0·89
Brighton	102264	43·4	64	38	53·0	34·0	42·0	5·56	0·40	1·02
Portsmouth ...	127144	28·3	65	43	55·3	34·6	45·5	7·50	0·52	1·32
Norwich	84023	11·2	50	40	58·0	33·5	41·6	5·34	0·01	0·03
Plymouth	72911	52·3	40	35	58·5	34·5	45·2	7·33	2·42	6·15
Bristol	202950	45·6	147	89	55·7	28·4	43·4	6·33	0·93	2·36
Wolverhampton ...	73389	21·6	45	34	52·3	31·0	39·4	4·11	0·56	1·42
Birmingham ...	377436	44·9	330	186	54·2	33·8	41·7	5·39	0·45	1·14
Leicester	117461	36·7	91	58	61·0	36·2	43·3	6·28	0·46	1·17
Nottingham ...	95025	47·6	64	48	58·2	35·9	42·9	6·06	0·20	0·51
Liverpool	527083	101·2	365	224	53·0	33·7	42·5	5·84	0·39	0·99
Manchester ...	359213	83·7	286	216	...	...	...	...	...	...
Salford	141184	27·3	147	100	57·5	29·0	42·0	5·56	0·36	0·91
Oldham	89796	19·2	92	66	...	...	...	...	...	...
Bradford	179315	24·8	132	68	54·0	35·0	41·1	5·06	0·25	0·63
Leeds	298189	13·8	223	125	57·0	34·0	42·5	5·84	0·17	0·43
Sheffield	282130	14·4	197	125	56·0	36·0	42·2	5·67	0·57	1·45
Hull	140002	38·5	129	58	54·0	32·0	41·1	5·06	0·67	1·70
Sunderland ...	110382	33·4	81	43	58·0	37·0	43·4	6·33	0·01	0·03
Newcastle-on-Tyne	142231	26·5	94	74	...	...	...	...	...	...
Edinburgh	218729	52·2	158	96	59·2	30·5	43·0	6·11	0·28	0·71
Glasgow	555933	92·1	431	289	...	...	...	...	...	...
Dublin	314666	31·3	216	221	59·3	32·2	45·6	7·56	1·69	4·29
Total of 23 Towns in United Kingdm	8144940	38·3	5922	3808	61·0	28·4	42·8	6·00	0·56	1·42

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·69 in. The lowest reading was 29·40 in. on Tuesday evening, and the highest 30·07 in. on Friday morning.

* The figures for the English and Scottish towns are the nnmbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ABSTRACT OF

THE LUMLEIAN LECTURES

ON THE

MUSCULAR ARTERIOLES:

THEIR STRUCTURE AND FUNCTION IN HEALTH AND IN CERTAIN MORBID STATES.

Delivered at the Royal College of Physicians of London.

By GEORGE JOHNSON, M.D., F.R.S.,

Fellow of the Royal College of Physicians; Professor of Clinical Medicine and Senior Physician to King's College Hospital; etc.

LECTURES I. AND II.

THE chief anatomical distinction between the large and the small arteries is to be found in their middle coat. The middle coat of the largest arteries is composed almost entirely of elastic tissue, with a very slight admixture of muscular fibres. As the arteries diminish in size, the proportion of muscular tissue increases, until, in the smallest arteries, the middle coat is composed entirely of muscular tissue. These smallest arteries are commonly designated "muscular arterioles," to distinguish them from the large elastic arteries. The muscular arterioles, varying in diameter from the one-hundredth to the one-three-thousandth of an inch, have their middle coat composed of muscular fibre-cells, without the slightest admixture of connective or elastic tissue. The muscular fibre-cells, which, when separated, are seen to be elongated and spindle-shaped, with an oblong nucleus in the centre, are arranged in a circular manner round the arteries, forming contractile muscular lamellæ. The circular muscular coat in arteries between about the one-hundredth and the one-three-hundredth of an inch in diameter possesses two or three layers of muscular fibres. In the smaller arteries the muscular coat consists of only a single layer of fibres, whose elements become shorter and shorter, until, in the smallest arteries approaching the capillaries, the muscular elements separate from each other, and at length completely disappear.

The muscular coat has on its inner surface the tunica intima, and on its outer the tunica adventitia. The tunica intima consists of two layers: an inner epithelial layer, and a shining membrane which Kölliker calls the *elastic inner coat.* The tunica adventitia consists of connective tissue and fine elastic fibres with elongated nuclei, having their long diameter parallel with the axis of the vessel. The tunica adventitia is generally as thick as, and often thicker than, the muscular coat; and it is readily made to swell up under the influence of certain reagents. My colleague Dr. Beale and other microscopic observers have demonstrated the presence of minute nervous ganglia and extremely delicate nervous fibres ramifying upon the minute arteries and the capillaries.

Since the great field of research as regards the vaso-motor nerves and their operation was opened up by Claude Bernard and Brown-Séquard, numerous experimenters have laboriously entered upon it, and the result has been the accumulation of many interesting facts and the construction of a tolerably consistent, though not as yet an entirely complete, theory of the vaso-motor system.

The vaso-motor nerves may be said, in a general way, to belong to the great sympathetic; but, by means of communicating branches, they are also connected with the spinal nerves and with the spinal cord. In fact, there is reason to believe that all the vaso-motor fibres are derived from the cerebro-spinal axis, from which they pass out chiefly by the anterior roots of the spinal nerves; and that the chief centre of vaso-motor nerve action is the medulla oblongata, near the floor of the fourth ventricle. Injury to this part of the nervous centre or division of the cord in the upper cervical region, cutting off the communication between the centre above and the vaso-motor nerves, causes general relaxation of the arterioles and a fall of blood-pressure throughout the body. On the other hand, electrical stimulation of the centre excites general contraction of the arterioles and an increase of blood-pressure.

The nerves which, when divided, cause arterial paralysis, and, when stimulated, excite arterial contraction, have been designated *vaso-constrictor* nerves. There are other nerves having a different, and in some respects an antagonistic function: these are designated *vaso-dilators.* Of this class of nerves, the *chorda tympani* is a conspicuous type.

The chorda tympani is a branch of the facial nerve, which joins the lingual branch of the fifth nerve, and is distributed to the tongue and the submaxillary gland. Bernard discovered that electrical stimulation of the peripheral end of the divided nerve causes great dilatation of the bloodvessels of the submaxillary gland, and a rapid and profuse secretion of saliva.

Many experiments of various kinds have proved that the vessels may be made to contract or to dilate by an influence conveyed through incident nerves to the centre, and thence reflected through other fibres to the arterioles. But when a sensitive nerve such as the fifth, or a mixed nerve like the sciatic, has its central end stimulated, a reflex contraction of the arterioles occurs throughout the body, and the blood-pressure rises. On the other hand, Ludwig and Cyon discovered that one branch of the pneumogastric, when its central end is stimulated, has a reflex influence on the vaso-motor nerves, which causes a general relaxation of the arterioles and a consequent fall of the blood-pressure. This nerve, therefore, is called *the depressor nerve.*

There is now a very general agreement amongst physiologists with respect to the influence which the heart, the large elastic arteries, and the muscular arterioles respectively assert upon the circulation. The force which propels the blood through the systemic arteries is derived entirely from the contraction of the muscular walls of the left ventricle of the heart. The elastic walls of the large arteries, distended by the injecting force of the ventricle, contract and pass the blood onwards during the diastole of the ventricle. This forcible resiliency in the walls of the arteries is as obviously derived from the muscular contraction of the heart as the elastic power of an archer's bow has its source in the contracting muscles of the arm which bends the bow. The resiliency of the arterial wall, reacting upon the blood during the diastole of the ventricle, gradually converts the interrupted jet of blood from the heart into a continuous current in the minute arteries and capillaries. The muscular arterioles, under the influence of the vaso-motor system of nerves, regulate the blood-supply to the various organs and tissues.

There is no evidence of a *peristaltic* muscular contraction of the arteries, as some writers—amongst others, MM. Legros and Onimus—have supposed. Anyone who has carefully watched the circulation in the web of the frog's foot, or in other transparent parts of a living animal, must have observed that, so long as the circulation is active, a blood-stream in the terminal arterioles is as continuous and uniform as it is in the capillaries, and there is no appearance of an alternating contraction and relaxation of the arterioles.

The phenomena of what is commonly called *asphyxia*—death, that is, by suffocation or suspension of the respiration—could not be completely and satisfactorily explained before the structure and functions of the muscular arterioles had been revealed.

The immediate cause of death from suffocation is the arrest of the circulation through the lungs. The obvious and indisputable evidence of this is found in the fact that, when the chest is opened immediately after death, the right cavities of the heart and the large branches of the pulmonary artery are found to be greatly distended with blood, while the left cavities are flaccid and comparatively empty. This elementary fact in the pathology of *apnœa*—a term which I use in preference to *asphyxia*, which literally means pulselessness—was first demonstrated by our own illustrious Harvey. Harvey says, "I have several times opened the breast and pericardium of a man within two hours after his execution by hanging, and before the colour had totally left the face, and in presence of many witnesses have demonstrated the right auricle of the heart and the lungs distended with blood—the auricle, in particular, of the size of a large man's fist, and so full of blood that it looked as if it would burst. This great distension, however, had disappeared the next day, the body having stiffened and become cold, and the blood having made its way through various channels." (Second Disquisition on the Circulation of the Blood, *Sydenham Society's Transactions*, page 127.)

This great distension of the right cavities of the heart, with comparative emptiness of the left, is now very generally admitted and believed to result from some impediment to the passage of the blood through the lungs, consequent on the suspension of respiration. The question then arises, What is the mechanism of the process by which the flow of blood through the lungs is impeded and finally arrested? It was formerly supposed that

the arrest of the circulation through the lungs might be explained by the cessation of the respiratory movements. It is, of course, indisputable that the movements of the ribs greatly influence the amount of blood within the chest, and especially in the large veins. In inspiration the blood is sucked into the venæ cavæ, and the superficial veins in the neck may be seen to collapse; while in expiration the intrathoracic trunks are compressed, and the jugulars and other affluent veins are distended. But the hypothesis that the arrest of the blood-stream through the lungs is due mainly to the immobility of the chest is completely disproved by the fact that when an animal is made to breathe nitrogen gas unmixed with oxygen, although the movements of the chest continue as in ordinary respiration, the passage of the blood through the lungs is arrested as speedily and completely as when the chest is motionless. It is evident, then, that the arrest of the pulmonary circulation is in some way caused by the suspension of the chemical changes in the blood and the respired air which are effected by the inhalation of oxygen.

The most complete and entirely satisfactory experiments tending to throw light upon the phenomena of apnœa are those which have been performed upon dogs under the paralysing influence of curara. I am indebted to my friend and former colleague Dr. Rutherford, now Professor of the Institutes of Medicine in the University of Edinburgh, for the opportunity of witnessing some experiments with regard to this, the results of which I will endeavour as briefly as possible to describe.

Into the trachea of a dog a tube was introduced and connected with a bellows for the performance of artificial respiration. The voluntary muscles were then paralysed by the injection of curara, and the animal was kept alive by artificial respiration. The sternum and portions of the ribs were removed and the pericardium was opened, so as to expose the whole of the anterior surface of the heart. The common carotid artery was divided, and a dynamometer-tube connected with a kymograph was introduced into the proximal end. In making all these preparations, much time and labour and great skill were required. Artificial respiration was now suspended, and immediately the colour of the left auricle changed from crimson to purple, and the kymograph indicated a continuous increase of pressure in the systemic arteries. After the increase of pressure had continued for about a minute, the left cavities of the heart became much distended; the auricle, in particular, became expanded into a tense globular ball with a smooth surface. In the next period the pressure in the arteries began to fall, and at about the same time the right cavities of the heart, which had hitherto remained of the normal size and form, began to expand, while the distension of the left began rapidly to subside. Meanwhile, the right cavities became more and more distended, and now the *right* auricle assumed the appearance of a round tense ball, while the left auricle had become nearly empty and flaccid. The right ventricle also became so distended that it projected above the level of the left.

This was the condition of the heart's cavities when the animal died by the final arrest of the circulation; but, more than once, when the circulation was nearly at a standstill, artificial respiration was resumed, and then all the phenomena rapidly changed. The blood at once passed freely through the lungs, the distension of the right cavities of the heart subsided, and the systemic arterial pressure became first excessive and then normal, when the blood had become thoroughly oxygenised and its passage through the terminal vessels was no longer resisted.

We now return to the consideration of the mechanism of the process by which first the systemic and then the pulmonary circulation is impeded when the respiration is suspended.

The respiration being suspended, unoxygenised black blood at first passes freely to the left side of the heart and the systemic arteries and capillaries. Arrived there, either by its direct stimulation of the muscular arterioles or, more probably, by a reflex influence through the vaso-motor nerves and centre, the arterioles are excited to contract, and by this action of the arterial stopcocks the blood-pressure in the arterial trunks is increased and the left cavities of the heart become distended and dilated, as seen in the exposed heart of the living dog. The circulation through the systemic arterioles is thus impeded, but not arrested; some black blood passes through the capillaries without undergoing the usual chemical changes, and in this abnormal state it arrives through the veins at the right side of the heart and the pulmonary vessels. Reaching the pulmonary arterioles and capillaries, it excites there the same arterial contraction and resistance as had before occurred in the systemic vessels. The resistance offered by the contracting pulmonary arterioles, while, on the one hand, it tends to empty the left side of the heart, and so to lessen the blood-pressure in the systemic arteries, on the other, it causes that great distension and dilatation of the right cavities, more especially of the auricles, which are invariably found to exist when the chest is opened soon after death from apnœa, and which, in Dr. Rutherford's experiment, was plainly seen to occur during the lifetime of the animal.

Some additional facts which were observed during the progress of this experiment are worthy of remark. It was noted that the increased arterial pressure, which commenced as soon as black blood began to pass into the systemic vessels, had existed for some seconds before the left auricle and ventricle began to dilate, and continued for some time after the dilatation of those cavities had reached its height; then, while the distension of these cavities persisted, the arterial pressure began to fall, and it was just at this time that the right cavities, which had heretofore retained their normal size and form, began to be distended and dilated.

The question arises, What was the immediate cause of the diminished arterial pressure which began while the left cavities were still distended? It might possibly be due to diminished contraction of the terminal arteries, but this is not a probable explanation. It was more probably a result of diminished power of the left side of the heart consequent on over-distension of its cavities. It is not unlikely that the heart's contraction may be in some degree enfeebled by the circulation of black blood through its nutrient vessels, but this obviously does not explain the dilatation first of the left cavities and subsequently of the right: a phenomenon which can be accounted for only by excessive contraction, first of the systemic and then of the pulmonary arterioles. We have additional evidence that the weakening of the left side of the heart, and the consequent diminution of the arterial pressure, are due to over-distension of the cavities, in the fact that, when, in consequence of the increasing resistance to the circulation through the pulmonary vessels, the blood-supply to the left side of the heart is diminished, the contraction of their muscular walls speedily restores the cavities to their normal size.

It is manifest from the phenomena which we have been considering—the great distension, first, of the left cavities of the heart, then of the right, and the final rapid arrest of the circulation through the lungs, notwithstanding the forcible contraction of the right ventricle—that the active contraction of the systemic arterioles throughout the body is more than equal to the contractile power of the left ventricle, and the force of contraction in the pulmonary arterioles is more than equivalent to that of the right ventricle.

It is evident that the immediate cause of death from apnœa is the arrest of the current of blood in the lungs; and this is confirmed and illustrated by the curious fact which was first observed by Buffon, that the young of certain warm-blooded animals—for example, the dog, the cat, and the rabbit—may, within a few days after their birth, be immersed in water of moderate temperature for a period of sometimes half an hour before life is extinct. The explanation of this interesting phenomenon is without doubt to be found in the fact that, in these animals, the foramen ovale and the ductus arteriosus remain patulous for a few days after birth, so that when, in consequence of the exclusion of air from the lungs, the pulmonary circulation is impeded, the blood passes directly from the right to the left side of the heart and to the aorta, the same as during fœtal life, and the circulation consequently continues much longer than in older animals, where, the foramen ovale and the ductus arteriosus being closed, all the blood has to pass through the pulmonary vessels, and is thus subjected to the regulating and retarding influence.

With reference to the exact seat of the impediment which arrests the flow of blood through the lungs, I may remark that the extreme anæmia of the minute tissue of the lungs, when examined immediately after death in cases of acute apnœa, is evidence that the stoppage occurs before the blood has reached the capillaries. If, in accordance with the hypothesis of Alison and Reid, the blood were attracted into the capillaries and retained there, in consequence of its not having undergone the normal chemical changes, the capillaries would be in a state of engorgement, and not in that nearly bloodless state in which they are actually found to be.

In the phenomena which attend the inhalation of nitrous oxide gas, when given as an anæsthetic, we have a very

interesting confirmation of the results obtained by experiments on animals; and, on the other hand, the records of physiological experiments enable us more completely to understand and interpret the facts of nitrous oxide anæsthesia. On several occasions I have availed myself of the opportunity afforded me by the courtesy of the authorities at the Dental Hospital to watch the phenomena which attend the inhalation of the gas, and I will now briefly describe them.

In most cases, during the first few seconds the pulse and the breathing are quickened, as a result probably of emotional excitement. In the next stage, the breathing becomes slow and shallow and the pulse full and firm. Then, after a period which varies in different cases from forty to eighty or ninety seconds, the pulse suddenly becomes almost, or even quite imperceptible, the features become livid, the pupils are widely dilated, there is a state of general muscular rigidity; in short, all the phenomena of the first stage of an epileptic fit are present. The mouth-piece being removed, the morbid phenomena quickly pass away, the features regain their normal colour, the pulse returns, and for a few seconds has again a full and throbbing character, but quickly regains its normal condition.

The explanation of the phenomena appears to be sufficiently obvious. It is admitted on all hands that, at the temperature of the body, the nitrous oxide gives up no oxygen to the blood or the tissues. The gas becoming rapidly diffused and replacing the oxygen in the lungs and in the blood, black unoxygenised blood passes into the systemic arteries, and excites, through the vaso-motor nerves and centre, contraction of the muscular arterioles. The resistance thus offered to the passage of unaërated blood through the terminal arteries explains the temporary fulness and tension of the radial pulse. The unoxygenised blood, passing through the systemic capillaries without the usual interchange of materials between it and the tissues, returns to the lungs in an abnormal condition, and there excites contraction of the pulmonary muscular arterioles. The resistance thus offered to the passage of blood through the lungs explains, on the one side, the systemic arterial emptiness, with feebleness or even complete disappearance of the pulse, and, on the other, the systemic venous fulness with lividity of the skin. The epileptiform condition is explained by the sudden and extreme diminution of the blood-supply to the brain, the blood at the same time being unaërated.

If the inhalation were continued, death would occur from the complete arrest of the pulmonary circulation and consequent over-distension of the right side of the heart; and this is the mode in which death occurs when an animal is killed by the continued inhalation of the gas. A year ago, my friend and colleague Mr. Hamilton Cartwright assisted me to kill two rabbits with the gas. In both animals, convulsions preceded death; and, the chest being opened immediately after death, the heart was found still beating. The right cavities and the systemic veins were greatly distended with blood, while the left cavities and the aorta were comparatively empty and flaccid: the blood on both sides of the heart being equally black. The lungs were anæmic and collapsed to an extreme degree.

It will be seen that the phenomena observed during life and the appearances after death from the inhalation of the nitrous oxide gas are precisely similar to those which result from suspension of the respiration in the human being and in the lower animals.

It is evident, from the many thousands of cases in which the gas has been given, and from the extreme rarity of a fatal accident from its use, that, in the hands of a skilled and careful operator, no great risk attends the employment of the anæsthetic; but it is also obvious that, to a patient with a feeble fat heart, the distension of the right cavities which accompanies the disappearance of the radial pulse and the general lividity of the features must be attended with some degree of risk, and the danger must be increased when, the muscles of the trunk and limbs being convulsed, the pressure of the contracting muscles upon the veins drives the blood forcibly towards the right cavities of the heart, and so adds to their distension.

I propose now to discuss the state of the circulation in cases of Bright's disease, and the influence of the muscular arterioles in the causation of the phenomena.

Dr. Bright was the first to point out the frequent association of disease of the kidney with disease of the heart. In a paper published in the first volume of the *Guy's Hospital Reports*, while passing under review the chief morbid appearances observed in one hundred cases of renal disease connected with albuminous urine, he refers to the subject of cardiac disease in the following terms:—"The deviations from health in the heart are well worthy of observation; they have been so frequent as to show a most important and intimate connexion with the disease of which we are treating; while at the same time there have been twenty-seven cases in which no disease could be detected, and six others which, from not having been noted, lead to the belief that no important deviation from the normal state existed. The obvious structural changes in the heart have consisted chiefly of hypertrophy, with or without valvular disease; and, what is most striking, out of fifty-two cases of hypertrophy, no valvular disease whatever could be detected in thirty-four, but in eleven of these thirty-four more or less disease existed in the coats of the aorta; still, however, leaving twenty-three without any probable organic cause for the marked hypertrophy generally affecting the left ventricle. This naturally leads us to look for some less local cause for the unusual efforts to which the heart has been impelled; and the two most ready solutions appear to be, either that the altered quality of the blood affords irregular and unwonted stimulus to the organ immediately, or that it so affects the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system."

Now, the problem to be solved is the relation between disease of the kidney and hypertrophy of the left ventricle, when there exists no disease of the valves or of the large arteries to account for the hypertrophy. This subject has been much discussed of late; and, although I have nothing absolutely new to bring forward on the present occasion, I shall endeavour so to arrange the facts and arguments which bear upon the question as to assist in the formation of a definite opinion with regard to some hitherto debated points.

It is generally admitted that the hypertrophy of the left ventricle in the cases under consideration is the result of some impediment in the course of the circulation, to overcome or counterbalance which the heart has been impelled to unusual efforts; and when the arterial trunks and the larger branches are in a normal state, it is evident that the impediment must exist somewhere beyond, in what Dr. Bright calls the "minutest subdivisions of the vascular system."

One hypothesis may be mentioned and dismissed in a few words as being utterly inadequate. I allude to Traube's ("Ueber den Zusammenhang von Herz und Nierenkrankheiten," Berlin, 1856) suggestion that when the kidney is in an advanced stage of atrophic degeneration a diminished quantity of blood passes through it; there is, therefore, increased tension of the renal artery and aorta, and consequently more forcible contraction of the left ventricle, with resulting hypertrophy. This explanation is obviously insufficient. The diminished circulation through the kidney alone, even in the most advanced stage of granular degeneration, would not give rise to the great amount of hypertrophy of the left ventricle which is commonly found in these cases; nor would it cause the high arterial tension throughout the system which is associated with the cardiac hypertrophy.

In the thirty-third volume of the *Transactions* I described for the first time the remarkable hypertrophy of the muscular walls of the minute renal arteries in the advanced stages of chronic Bright's disease. In that paper I correctly described and represented in drawings the hypertrophy of the arterial walls; but my physiology was at fault, and I wrongly interpreted the phenomena. The paper in question was read and published in the year 1850—a year, that is, before the publication of Bernard's first memoir describing the results of his experiments on the vaso-motor nerves. Later it occurred to me that we must look to the influence of the muscular arterioles, and what I have ventured to call their stopcock action, for the explanation of that peripheral impediment to the circulation which results in the arterial tension and the cardiac hypertrophy of Bright's disease.

The course of the argument was this: It is an established physiological doctrine that the contraction of the muscular arterioles diminishes the blood-stream, calls forth more forcible contractions of the left ventricle, and so increases the blood-pressure in the arterial trunks. It is a physiological law that increased muscular contraction leads, within certain limits, to increased growth—hypertrophy—of muscular tissue; and this is especially true of the involuntary muscles. If, therefore, in the course of chronic Bright's disease, the morbid quality of blood excites such forcible and long-continued contraction of the muscular arterioles, and thereby so increases

the work of the left ventricle as to cause great hypertrophy of its walls, it is probable that the muscular walls of the arterioles would be found to have become simultaneously and in a corresponding degree hypertrophied. The next step was to make a microscopic search for the arterial hypertrophy in other tissues than the kidney, where I had discovered and described it years before; and the result was, that the arterioles in various tissues, more especially in the subcutaneous and the submucous tissues, in the muscles, and in the pia mater of the brain, were found to have their muscular walls thickened by a true hypertrophy—by an increase, that is, of their muscular tissue, without structural change or degeneration. The general results of these observations are recorded in a paper which was published nine years ago in the fifty-first volume of the *Medico-Chirurgical Transactions*. I have the satisfaction of knowing that the publication of that paper has had the effect of directing the attention of many competent observers to the condition of the minute bloodvessels in connexion with Bright's disease; and, although some of my statements and conclusions have been disputed, I believe that, in the main, my record of facts and my inferences will be found to bear the test of time and criticism.

Some writers have gone so far as to deny the existence and even the possibility of hypertrophy of the muscular coat of the arterioles; but, on the other hand, very competent observers have confirmed my observation of this change in the arterial walls. Amongst these, some have asserted very strenuously that not only is the muscular coat thickened, but the other coats also. I have never denied this, but, on the contrary, I have looked upon it as a matter of course. Just as in the hypertrophied left ventricle there is an increased growth not only of the muscular fibres, but also of the connective and other tissues which constitute the walls of the ventricle, so in a hypertrophied arteriole there is a duly proportioned increase of the outer and inner as well as of the middle muscular coat.

We have now to inquire—What are the conditions in which this arterial hypertrophy occurs? What is the physiological explanation of its occurrence? And what are the results of this arterial change?

The associated renal and cardiac hypertrophy are found to occur in the last stages of all the forms of chronic Bright's disease—most constantly and conspicuously in cases of the small red granular kidney; but very frequently, too, as the observations of Dr. Grainger Stewart, Dr. Dickinson, and others have shown, they are found to occur with the large white kidney which has passed on to the stage of more or less advanced granular contraction. My own observations have led me to the conclusion that there is a direct relation between the destruction of the renal gland-cells and the cardio-arterial hypertrophy; and I will presently suggest an explanation of this relationship. I must here once more insist upon the fact that the primary and essential structural changes in the small red granular kidney are not interstitial, as the term "interstitial nephritis" implies, but glandular. There is no form of Bright's disease in which the gland-cells are so constantly and extensively destroyed as they are in this. The microscopic evidence of the destruction of the renal cells is to be found during life in the numerous granular casts, composed of disintegrated renal epithelium, which appear in the urine, and after death in the more or less general appearance of transparent tubes denuded of their epithelium and in various stages of atrophy.

The *clinical evidence* of the destruction of the essential secreting tissues in this form of disease is afforded by the notorious fact that symptoms of uræmic poisoning—poisoning, that is, from the retention within the system of various kinds and combinations of urinary excreta—are more common in this than in any other variety of Bright's disease.

On the other hand, in the cases of chronic Bright's disease associated with a large white kidney, the enlargement of the organ up to a certain point is mainly the result of a kind of hypertrophy of the glandular tissue, and with this there may be little or no evidence of uræmia, of arterial tension, or of cardio-vascular hypertrophy. But when the renal disease passes on to the stage of atrophy, with coarsely granular contraction of the cortical portion of the gland, uræmia and resulting structural changes in the heart and arteries are commonly found to be associated therewith.

There is yet another class of cases which have an important bearing upon the question of the relationship between renal disease and the associated cardio-vascular changes—I mean cases of acute Bright's disease. In these there may occur, as a temporary and transient condition, increase of arterial tension, felt by the finger and demonstrated by the sphygmograph, distension and incipient hypertrophy of the left ventricle, doubling of the first sound of the heart, and an intensified metallic second sound over the aorta,—these modifications of the normal cardiac sounds being results and indications of high arterial tension.

The observations of Drs. Galabin and Sibson are entirely in accordance with my own daily experience, and they have been confirmed by many other physicians. What, then, is the explanation of the systemic arterial tension of acute Bright's disease? Without doubt it is a result of uræmic poisoning; and I believe it to be precisely analogous to the arterial tension, with distension and dilatation of the left cavities of the heart, which have been demonstrated to occur in the early stages of apnœa, when, as I endeavoured to show in my last lecture, the passage of unaërated black blood into the systemic arteries excites, through the vaso-motor nerves and centre, contraction of the muscular arterioles, and thus causes distension of the arterial trunks and of the heart's cavities. We have additional evidence of the close analogy between the uræmic and the apnœal conditions in the fact that, amongst the results of advanced emphysema of the lungs with chronic bronchitis, and the consequent passage of imperfectly oxygenised blood into the systemic arteries, we find, not uncommonly, a full, tense radial artery, and after death more or less considerable hypertrophy of the left ventricle. In one case of emphysema with chronic bronchitis and hypertrophy of the left ventricle, the subcutaneous arterioles, of which I have a preserved specimen, are very decidedly hypertrophied.

Obviously, then, there are striking analogies between the phenomena of uræmic poisoning and those which attend the passage of unaërated blood into the systemic arteries.

Before I pass on, it may be well to refer briefly to two suggested explanations of the impeded circulation in Bright's disease different from that which I have here given.

One theory is, that the thickening of the vessels which I describe as hypertrophy of the muscular coat is not hypertrophy at all, but a degeneration of the coats of the arteries. The question is one of microscopic observation, and can be decided only by an appeal to the anatomical facts. But I may remark, in passing, that degeneration of the muscular arterioles would not explain the phenomena. Since it is certain that the contraction of the muscular arterioles exerts an influence which, by limiting and retarding the blood-stream, antagonises the heart, it is obvious that degeneration of their muscular walls would involve, not an increase, but a decrease of resistance; and so, on this hypothesis, the increased arterial tension and the cardiac hypertrophy are inexplicable. It is evident, too, that degeneration of the arterial walls would not explain the rapid onset and the passing away again of the high arterial tension in cases of acute Bright's disease.

The other hypothesis to which I just now referred is that which attributes the impeded circulation in cases of Bright's disease, not to the contraction of the muscular arterioles, but to "an impediment in the capillaries, due to a modification of capillary attraction between the blood and the walls of the vessels; and, the arterial pressure being thus increased, the muscular walls of heart and arteries are both hypertrophied in concert, since both have to act against greater resistance." The obvious objection to this hypothesis is, that an imaginary "capillary force" is substituted for the demonstrated physiological function of the muscular arterioles. There was a time when the theory of a capillary force served the useful purpose of linking together a number of facts regarding the circulation through the terminal vessels; but Henle's demonstration of the muscularity of the arterioles, and the physiological discoveries of Bernard and Brown-Séquard, have rendered that hypothesis as untenable as the theory of phlogiston was made by the discovery of oxygen gas.

And now, having, as I believe, adduced sufficient evidence to show that the arterial tension in Bright's disease is a result of the resistance to the blood-stream caused by the contraction of the muscular arterioles, this undue contraction being excited by the influence of contaminated blood upon the vaso-motor nervous system, I pass on to the consideration of some of the results of the increased blood-pressure and arterial tension.

I have already referred to the hypertrophy of the left ventricle as an intelligible physiological result of the more forcible muscular effort required to propel the blood through the resisting arterioles. During the progress of the cardio-

vascular changes it happens not unfrequently that the walls of the large arteries undergo more or less of structural change. They become thickened and indurated, and, as a result of these textural changes, their elasticity is more or less impaired. These structural changes in the walls of the larger arteries may be partly caused by the excessive strain to which they are subjected under the influence of the high tension resulting from the antagonism between the resisting arterioles and the hypertrophied ventricle. It is a matter of common observation, that the walls of the arch of the aorta not unfrequently have their texture injured and their elasticity impaired by the forcible distension to which they are subjected when, in consequence of incompetence of the aortic valves, the left ventricle has become much dilated and hypertrophied.

In part, perhaps, the arterial degeneration in cases of Bright's disease may be excited by the morbid quality of the blood which they are continually transmitting—the same morbid quality of blood as that which not uncommonly sets up inflammatory changes in the lining or the investing membrane of the heart itself. Whatever may be the determining cause of the structural changes in the larger arteries, it is certain that, since the elasticity of the large arteries is a force which aids the heart in propelling the blood onwards, the loss or impairment of that elasticity must add to the work of the heart, and thus tend to increase the hypertrophy of the left ventricle. Hence the resistance to the blood-current resulting from the excessive contraction of the muscular arterioles is still further increased by the not infrequent complication of degeneration of the walls of the large arteries.

In the advanced stages of renal degeneration, some of the muscular arterioles may undergo degenerative changes, partly perhaps due to the impure blood which they transmit, and partly to the excessive strain to which they are subjected by the forcible contraction of the hypertrophied heart. In the so-called lardaceous form of renal disease, the muscular arterioles very early undergo this degenerative change, and, their contractile power being thus impaired, they are unable to regulate or to impede the circulation. Hence it happens that hypertrophy of the heart it rarely associated with this lardaceous form of disease.

Amongst the accidental injuries which result from the high arterial tension associated with renal disease, one of the most frequent and most serious is the occurrence of *rupture of one or more intracranial arteries*, and consequent hæmorrhage into the substance or on the surface of the brain. It has been a debated question with some writers on cerebral hæmorrhage, whether the occurrence of that accident is favoured by hypertrophy of the left ventricle. When hypertrophy of the heart is a result of disease of the aortic valves, or of degeneration with impaired elasticity of the walls of the large arteries, it is generally no more than sufficient to overcome the impediment thus offered to the circulation. The strength of the left ventricle, therefore, in such cases is not a true measure of the force with which the blood is sent into the distal arteries. On the contrary, it is a measure of the difficulty with which the blood is transmitted through the primary branches, and, therefore, through the entire system of arteries. When hypertrophy, thus originating, is associated, as it sometimes is, with cerebral hæmorrhage, the reason is that the hypertrophy and the hæmorrhage are joint results of one common cause, namely, degeneration pervading more or less extensively the arterial tree. The hypertrophy of the left ventricle is a consequence of degeneration of the aorta and its primary branches. The cerebral hæmorrhage is a consequence of a similar degeneration of the arteries of the brain.

The state of the circulation is very different when the left ventricle has become hypertrophied, in consequence of the impediment resulting from contraction of the hypertrophied muscular arterioles in connexion with degeneration of the kidney. In this state of things, while the arterial stopcocks are resisting the passage of the morbid blood, the strong left ventricle is forcibly driving it onwards. There is thus an excessive strain upon the whole length of the arterial pipes, between the stopcocks and the cardiac forcing-pump. One of the bits of arterial tubing being overstretched, becomes brittle, and breaks; then the powerful ventricle forces the blood through the ruptured artery into the yielding tissue of the brain, and a rapidly fatal sanguineous apoplexy is the result. It is a well-known fact that some of the most formidable cases of cerebral hæmorrhage are those which are associated with granular contraction of the kidney.

Here it may be convenient to discuss the phenomena called *reduplication or doubling of the first sound of the heart*, which many observers have noted as being one of the most frequent results of the high arterial tension associated with various forms and stages of Bright's disease. Dr. Sibson devoted much time and labour to the investigation of this physical sign of arterial tension, and he discussed it at length in his Lumleian lectures. He explains the reduplication of the first sound by stating that the left ventricle, owing to the resistance offered by the right arteries to the expulsion of its contents, continues its contraction later than the right, which has expelled its blood into the pulmonary artery with comparative ease. The shock of the first sound is heard at the end of the contraction of the ventricle. Hence, in consequence of the left ventricle contracting more tardily than the right, there is a doubling of the first sound.

Dr. Sibson admits that there is a difficulty in reconciling this explanation of doubling of the first sound with the absence of doubling of the second sound in the same cases. If the left ventricle contract more slowly than the right, so that the sound of the two ventricles is separated by an appreciable interval, it would seem that the aortic valves must close later than the pulmonary, and there should be a double second as well as a double first sound. Dr. Sibson endeavoured to meet this difficulty by the following argument:—"In these cases the systemic arteries are always in a state of great tension. When the blood ceases to be sent into the right aorta, the instant contraction of the walls of the arteries sends the blood back upon the aortic walls and valve. The pulmonary arteries, at the commencement of the systole, are comparatively flaccid, but become tense at the end of it. The walls of the pulmonary artery begin to contract and send back a return wave again upon the trunk of the artery; but, as these walls are not always in a state of tension, they take a longer time to contract than those of the aorta and its branches. Owing, therefore, to the slowness of the pulmonary and the quickness of the aortic contraction, the latter, which is already heavily handicapped, makes up in speed what it loses in time; and the two systems of arteries deliver their back-stroke at the same instant."

Now, it seems to me that this explanation, while it apparently removes one difficulty, raises another of a very formidable character. If the greater tension of the aorta, in the cases of renal disease under consideration, enable it to overtake the earlier but less rapidly and forcibly contracting pulmonary artery, it seems obvious that, in the normal condition, when the aorta and the pulmonary artery commence their elastic contractions at the same instant, the much greater tension of the aorta, with its thicker and stronger walls, should react upon and close its valves before those of the more feebly contracting pulmonary artery are closed, and the result would be reduplication of the second sound as a constant and normal condition. During the last two years, since my attention has been particularly directed to this subject, I have met with numerous instances of an analogous doubling of the first sound in cases of general emphysema of the lungs, with impeded pulmonary circulation and resulting fulness and hypertrophy on the right side of the heart. In these cases the increased tension of the pulmonary artery consequent on the obstruction in the lungs can never equal the normal tension of the aorta. However great may be the hypertrophy of the right ventricle in cases of emphysema, the thickness of its wall is never equal to that of the left ventricle. If, then, in accordance with Dr. Sibson's theory of asynchronous ventricular contraction, the right ventricle, in consequence of increased tension in the pulmonary artery, complete its contraction later than the left, and thus cause the doubling of the first sound, the closing of the pulmonary valves must inevitably be effected later than that of the aortic, and the second sound must also be doubled. The reverse, however, is the case. The second sound is single in these cases of emphysema, while the first is distinctly reduplicated.

There are anatomical difficulties in the way of accepting the theory of an asynchronous contraction of the ventricles in explanation of doubling of the first sound. The muscular fibres of the two ventricles pass from one side to the other and interlace in such a manner as appears to render the synchronous contraction of the ventricles a physical necessity. And, in watching the exposed heart of a living animal in the different stages of apnœa—first, in the stage of systemic obstruction, with distension of the left cavities, and later, during the period of pulmonary obstruction, with great distension of the right cavities and comparative emptiness of the left—I have

particularly observed the uninterrupted exact synchronism of the contractions on the two sides.

A consideration of the difficulties which present themselves in relation to Dr. Sibson's theory of reduplication of the first sound in connexion with Bright's disease led me to seek for another explanation of the phenomena;(a) and last year I ventured publicly to suggest that the true explanation is to be found in the fact that *the contraction of a dilated, and especially of an hypertrophied auricle becomes audible, and thus the first division of the double first sound in the cases under consideration is the result of the auricular systole.* I believe that this explanation of reduplication of the first sound will be found consistent with all the ascertained facts. I was led up to this explanation by observing that the rhythm of the heart's sounds in cases of reduplication is precisely the same as that of the triple pericardial friction-sound which may often be heard in cases of pericarditis, the first element of the triple friction-sound being caused by the systole of one or both auricles roughened by lymph.

This triple pericardial friction-sound may require here a few words of explanation. For some years past, when describing the friction-sound of pericarditis, I have been in the habit of speaking of it as not merely double—to-and-fro—but, in a large proportion of cases, as triple, a third sound often intervening somewhere between the other two. I said "somewhere," because until recently I could not tell at what period of the heart's revolution the third sound occurred. I got the first hint towards the solution of the problem from a very interesting clinical lecture published by the late Dr. Hyde Salter (*Lancet*, July 29, 1871, page 151). In that lecture Dr. Salter described a case of rheumatic pericarditis, in which a friction-sound double over the mid-sternum became triple over the right third intercostal space, close to the sternum; and, as this triple character of the friction-sound was most marked when the stethoscope was placed directly over the right auricle, Dr. Salter said: "I feel no doubt that the third element of the sound, on passing from the surface of the ventricle to that of the auricle, is due to auricular pericardial friction." This patient recovered.

In a second case of renal pericarditis related by Dr. Salter, a single pericardial friction-sound of distinctly presystolic—that is, auricular systolic—rhythm was heard over the third costal cartilage, about an inch to the left of the sternum; and, the patient dying a few days afterwards, the left auricle was found covered and roughened by lymph. "The roughening was confined to the surface of the auricle, and, therefore," Dr. Salter remarks, "the friction-sound coincided with the movements of the auricle."

Not long after the publication of Dr. Salter's lecture, a man was admitted under my care with granular kidney in an advanced stage. A few days after his admission I noted a presystolic friction-sound, most distinct between the left nipple and the sternum; and, as the sound was evidently synchronous with the auricular systole, I stated at the bedside that it was probably caused by recent lymph on the surface of one auricle. Three days later, in addition to the presystolic friction before noted, there was a systolic friction-sound heard most distinctly over the apex of the heart, just to the left of the mammary line, the heart being enlarged. I then expressed my belief that, besides the roughening of the auricle by lymph, there was a patch of lymph near the apex of the ventricle. In the course of about a month, first the presystolic friction ceased to be heard, and then the systolic friction ceased and was replaced by a systolic blowing murmur at the apex. The patient died after being rather more than two months in the hospital; and at the inspection we found, as we had expected, that the right auricle and the apex of the right and left ventricles were covered by lymph, the smoothing down of the surface of which by friction accounted for the cessation of the friction-sounds which were distinctly audible when the surfaces were roughened by recent exudation. The margins of the mitral valve were thickened by lymph, and thus the regurgitant mitral murmur was explained.

And now, having learned from the study of Dr. Salter's recorded cases, and from the observation of this one case under my own care, that an auricle covered by lymph may cause a friction-sound of presystolic rhythm, I saw that in this sonorous influence of the contracting auricle was to be found the interpretation of the triple friction-sound of pericarditis with which I had long been familiar as a clinical fact, although I had not heretofore been able to explain it.

When the general surface of the heart, including both auricles and ventricles, is covered by recent lymph, the friction-sound is distinctly triple, *rub-rub-rub*, reminding one, as Dr. Salter says, of the triple sound of a canter. The first two divisions of the triple sound occur in quick succession, the third after a longer interval; then follows a pause, and again the *rub-rub-rub* occurs. Now, if, while we are listening to this triple sound, we place our finger over the heart's apex, or over one carotid artery, and at the same time bear in mind what we have seen of the rhythmical contractions of the exposed heart of a living or a recently dead animal, we can readily perceive that the first element of the triple sound is auricular systolic, the second ventricular systolic, and the third ventricular diastolic; while the silent interval which follows coincides in time with the post-diastolic pause. The relation of the triple friction-sound to the heart's movements may be represented as follows:—

Rub	Auricular systole.
Rub	Ventricular systole.
Rub	Ventricular diastole.
Rub	Auricular systole.
Rub	Ventricular systole.
Rub	Ventricular diastole.

I have thus briefly referred to the triple friction-sound of pericarditis, for the purpose of pointing out that the rhythm of the heart's sounds in a case of reduplication of the first sound is precisely the same as that of the triple friction-sound. The triple friction-sound being represented by *rub-rub-rub*, the triple sounds in a case of reduplication may be expressed by *rat-tat-tat*. The cantering character of the sounds may be imitated by bringing down sharply upon the table in quick succession the ends of three flexed fingers, making the two first taps nearer together than the second and third. The friction-sounds are longer and more nearly continuous, but I repeat that the rhythm is precisely the same in the two classes of cases. The relation of the triple sound to the heart's movements may be represented as follows:—

Rat	Auricular systole.
Tat	Ventricular systole.
Tat	Ventricular diastole.
Rat	Auricular systole.
Tat	Ventricular systole.
Tat	Ventricular diastole.

The reduplication of the first sound in cases of Bright's disease is usually heard most distinctly between the mamma and the sternum in the third left intercostal space; that is, about the line of junction between the auricle and ventricle. The sound may be single or indistinctly double at the apex, while it is decidedly double at the third interspace, and again single over the aorta. This statement of the position in which the reduplication is best heard accords with Dr. Sibson's account; but our explanations differ essentially. He states that in this position the asynchronous contraction of the two ventricles is best heard, while I maintain that the contraction of the tense, dilated, and often hypertrophied auricle is there heard immediately before the sound of the ventricular systole.

The question then arises, Does the contraction of the auricle afford a satisfactory explanation of the first division of the reduplicate sound? I believe that it does. It is of course admitted that in the normal state the contraction of the auricle, contrary to Laennec's original theory of the heart's sounds, is inaudible; but we have positive evidence of sound resulting from the auricular systole in two distinct morbid states. First, as a result of constriction of the mitral orifice, we have the now well-known presystolic—or, as Dr. Gairdner happily designates it—the auricular systolic mitral murmur. In these cases the impediment resulting from mitral constriction causes a slow but forcible auricular systole with a resulting presystolic, that is, preventricular systolic murmur, followed by a short first sound, the result of rapid contraction of the partially filled left ventricle. Second, when the surface of an auricle is

(a) "A Clinical Lecture on Triple Pericardial Friction-Sound, and on Reduplication of the First Sound of the Heart" (*Lancet*, May 13, 1876).

roughened by lymph, there occurs the presystolic, or rather the auricular systolic friction-sound. Third, as a result of obstruction in the systemic arteries, and consequent distension of the left auricle, either with or without hypertrophy of its walls, we have, as I believe, an audible auricular systole, constituting the first division of the reduplicate first sound in cases of Bright's disease. The rhythm of this auricular systolic sound—its place in the heart's revolution—is precisely the same as that of the auricular systolic mitral murmur, and of the auricular systolic pericardial friction-sound; and this identity of rhythm in the three classes of cases affords one of the strongest proofs that the sound in each case is caused by the auricular systole. The triple friction-sound of pericarditis, and the triple sound associated with doubling of the first sound, are alike suggestive of a canter.

I have before stated that the reduplication of the first sound occurs not only in connexion with Bright's disease, but it is very commonly associated with the impeded pulmonary circulation resulting from advanced general emphysema of the lung. I have observed it frequently in elderly persons with degeneration and rigidity of the arterial walls; also very distinctly above and to the right of the left nipple in some cases of mitral regurgitation. There is one feature which is common to all these cases, and that is an impeded circulation, either pulmonary or systemic; and the obstruction acting backwards causes distension, and by degrees hypertrophy of one or both auricles. It is obvious that an impediment commencing in the systemic arteries, or on the left side of the heart, may by a retrograde influence extend through the lungs to the right cavities of the heart.

In some cases of co-existing emphysema of the lungs and chronic Bright's disease, both sides of the heart become simultaneously hypertrophied, and the reduplication of the first sound is distinctly heard over an extensive surface. During the last year I have seen several examples of this complication. It is obvious that the theory of asynchronous ventricular contraction entirely fails to explain the reduplication which results from a simultaneous—equal or nearly equal—impediment in the systemic and in the pulmonary vessels. An equal retardation of the two ventricles would not throw one behind the other. But the auricular theory completely explains the phenomena. That a distended, and especially an hypertrophied, auricle should produce sound by its contraction, is quite consistent with what we know of the causation of the normal sounds of the heart. While the first sound is caused by the tension of the ventricular walls and the auriculo-ventricular valves during the systole of the ventricle, the second sound results from the sudden tension and vibration of the arterial valves and walls during the diastole of the ventricle. In like manner, it is maintained that when, in consequence of excessive arterial pressure, there is great distension of the heart's cavities, the tense auricle contracts audibly, and causes the earlier division of the double first sound, the double sound being the result of the auriculo-ventricular systole.

That the contraction of the terminal muscular arterioles, excited by blood-contamination, the result of renal disease, should act backwards through the systemic arteries and the left ventricle and auricle, so as to cause an appreciable modification of the heart's sounds, and ultimately hypertrophy of the muscular tissue of the propelling heart and of the resisting and regulating arterioles, is an interesting illustration of the correlation of physiological forces and of the intimate relation between physiology and pathology.

The reduplication of the first sound, upon the interpretation of which I have dwelt so long, is not without its practical prognostic significance and value, in so far as it affords undoubted physical evidence that the impediment to the circulation, whether in the pulmonary or in the systemic vessels, is acting backwards through the ventricle upon its associated auricle, and is causing some degree of auricular dilatation and hypertrophy; and, on the other hand, the cessation of the reduplication—as, for instance, in some cases of acute and transient Bright's disease—is evidence of returning freedom of the circulation, and is thus far of favourable omen.

Again, it is obviously important to observe and study this peculiar modification of the heart-sounds with sufficient care to distinguish it from any form of valvular murmur. I do not doubt that a modification of reduplication, by which the two first elements of the triple sound are blended together, so as to give the first sound of the heart a prolonged character, has often been mistaken for the murmur of mitral regurgitation; and this error of observation has been made the basis of an alarming but wrong prognosis. I scarcely need add that our interest and our duty alike prompt us to avoid so serious a mistake.

ORIGINAL COMMUNICATIONS.

PERNICIOUS ANÆMIA.(a)

By JAMES ANDREW, M.D., F.R.C.P.

The subject I propose to treat of—Idiopathic or Pernicious Anæmia—is one to which much attention has lately been given; indeed, since I selected it, perhaps rashly, as the subject of a paper, several valuable contributions to our knowledge of it have appeared. At the same time, it is a subject of such interest in itself, and also as bearing on many important questions of medical diagnosis and treatment, that I do not regret my choice, although I must ask forbearance for what must be of necessity a very slight discussion of such an extensive problem.

It may be as well to state, first, briefly the object I have in view, so that my statements may be regarded with reference to the use I wish to make of them, and thus a basis for discussion may be obtained:—(1.) My subject is pernicious or idiopathic anæmia. (2.) My object is to prove that no such disease exists. I do not, of course, mean to say death never results from anæmia; on the contrary, I shall bring forward some such cases from my own experience, and that of some of my friends. What I mean is this,—that there is no special form of anæmia, depending upon some special lesion of some nervous centre, some special form of blood-poisoning, or some special affection of any blood-making organ, as yet to be discovered. That we cannot, in short, talk of these cases in the same way as we do of those of leukæmia splenica, or of morbus Addisonii.

1st. What are the symptoms of so-called pernicious anæmia, of which no adequate explanation has yet been given, or none, at least, with which I am disposed to be contented? The following is the common outline of such cases, and is drawn chiefly from personal observation:—

The patient, it may be a young man of nineteen or twenty, and of more than average mental and bodily vigour, gets gradually "out of sorts"; he cannot tell how or why, nor can his medical adviser himself even conjecture. As time goes on he loses flesh and strength and colour; he is generally troubled more or less with gastric or intestinal indigestion, but these troubles begin only when his anæmia has made a certain amount of progress,—they are clearly secondary to it, and in no way account for its beginning. After, it may be only a few months, or it may be three or four years' illness, he dies. He sees many doctors, gives rise to much ingenious speculation, to much confident assertion, but the one certain fact is the anæmia, and the post-mortem discloses nothing more. Each organ in turn, from nervous centres to bones, will have been regarded as the seat of the disease. Morbid anatomy declares them all, so far as our knowledge goes, to be either healthy or the seat of nothing more than some slight degree or form of degeneration, generally fatty, to which it is all but absurd to attribute the grave symptoms observed during life. During the course of his illness little or no benefit is got from any mode of treatment, rest from work, change of air. Drugs of all sorts, from phosphorus to blue-pill, all give the same negative, the same hopeless results. Here is a case that was under the care of Dr. Bennett in the Victoria-park Hospital:—

Anæmia Idiopathica.

Henry E. B., labourer, married; aged forty-two; height, 5 ft. 10 in.; weight, 12 st. 12 lbs.; admitted May 18, 1875; died July 18, 1875.

History.—Mother died from breaking a bloodvessel at seventy-two. Patient never had any illness until the present. Three months ago began to feel shortness of breath in carrying any weight, as he had been in the habit of doing, upon the shoulder. This was followed by increasing feeling of weakness, and gradual loss of colour. Has had no cough, pain, or unpleasant sensation, except of weakness, until the last month, when he has had pain in the right hypochondrium on walking any distance. He now presents the appearance of

(a) Read before the West Kent Medico-Chirurgical Society on March 2, 1877; Dr. Thomas Creed in the chair.

intense anæmia. Tongue pale, clean; appetite good; bowels confined. Dyspnœa on movement; slight cough last few days. Pulse 84, firm, regular; sleeps well; micturition free; urine, specific gravity 1010, no albumen, pale straw-coloured, acid. Physical signs: Thorax large and well-formed; hypochondriac regions distended; hepatic dulness extending a full inch below the ribs. Aspect sallow and anæmic. Heart's impulse extended; systolic bruit heard under the nipple, at the base, and along the sternum, where it becomes somewhat ringing in character. Respiration everywhere heard, somewhat feeble in right apex. Pulse not mitral in character, not distinctly refluent, but somewhat thrilling. Sphere of cardiac dulness somewhat low down. Apex-impulse not visible, nor very perceptible to touch.

May 25.—Occasionally feels pain on lying down in one spot in the right hypochondrium; otherwise going on well, except that the bowels are rather confined. He is becoming weaker; some dyspnœa on waking in the morning. Appetite good; skin somewhat yellower, but with no tinge in conjunctivæ.

June 22.—The patient has been going on much the same as before, getting weaker and weaker, and at last unable to get up. He complained that he felt as if his head were larger than natural, and that it ached. This was relieved by sleep. He was at this time able to get out of bed, but in doing so was troubled with giddiness. He ate his food much the same as usual, and his bowels acted fairly regularly every other day.

29th.—Still complains of great weakness, but no headache; slept well.

July 8.—His headache last night was severe; kept him awake. Temperature 99·4°; pulse 96.

9th.—He complained of a sensation of clockwork in his head, and his sleep has been much interrupted during the night; he slept in short dozes. He continued to take his food, but for some days past his tongue has been furred. Dr. Bennett examined him, and found that the heart's impulse was not deficient; but almost everywhere over the chest a systolic murmur was heard; it was conducted to the axilla, and was audible even in the back; but the murmur was loudest at the base, and was thought anæmic. The second sound also was altered; it was indistinct and prolonged, but was unlike an aortic regurgitant murmur. He breathed quietly; of course, being in bed, there was no action to disturb it. Abdomen felt normal. Pulse very feeble and small, 84.

15th.—Early in the morning he got out of bed to go to the closet; he almost reached it, when he was taken with giddiness, and was obliged to lie down on the floor in the corridor. The resident medical officer was called to him, and found him in that position, and he had just vomited some curdled milk. He said he had a great deal of pain in the abdomen, and a great desire to have his bowels moved. He was removed to bed. He retched several times during the day; nothing but a little watery fluid and some bile-stained mucus. His headache still continued, and though at times less it was evidently severe, and he was glad to use cold applications and bind his head tightly round to ease the pain. In the afternoon he slept; no noticeable change in his breathing; pulse 104; temperature 99·1°. Towards evening his headache had increased, and the retching continued. About seven next morning he remarked that the pain in his head was so severe that he thought he should go mad, and in the night the pain had been intense. At this time he was exceedingly restless, turning himself from side to side, frequently carrying his hand to his head, and wishing to get out of bed and roll on the floor. He moaned a good deal. When questioned, no intelligible answer could be obtained from him, nor did he seem capable of understanding. Pupils rather contracted. Even at this time no marked embarrassment of respiration, nor any signs of lividity. He continued in this condition until 3 p.m., when stupor set in, and he soon became comatose, stertorous, and died about 2 a.m. on July 18.

Post-mortem, forty hours after Death.—Body large and well-developed, not appreciably wasted; on the contrary, owing to subcutaneous fat being unusually thick, the body looked well nourished. Scalp, skull, and membranes of brain normal. No appreciable wasting of convolutions, but the grey matter very pale, and the whole brain was paler than usual; in other respects it appeared healthy. The pleuræ were healthy, but there was about half a pint or more of fluid in each cavity. Lungs were pigmented on the surface, œdematous throughout; otherwise healthy. The pericardium was normal, but the outer part of the sac had an unusually large quantity of fat about it; the usual quantity of fluid in the pericardium (red stained from decomposition). Heart larger than usual; ventricles a little dilated; the right looked normal in other respects; the left was stained by decomposition; but a number of transverse yellow markings were seen lying across the columnæ carneæ and the other portions of the muscle—indicative of fatty degeneration. The muscle was seen to be pale, drabbish-yellow in colour, and softer than natural. With the exception of a little atheroma along the attached portion of one aortic cusp, the valves were not unhealthy. Liver discoloured by decomposition, but it seemed pale, soft, and somewhat fatty. Kidneys larger than normal, somewhat blood-stained; but surface smooth, and presenting no signs of acute nephritic change. Spleen larger than normal, much softened, otherwise healthy. Supra-renal capsules healthy. Stomach much decomposed, but presenting no signs of gross disease. Intestines normal. One testicle was examined, and found healthy.

What is the nature of these cases? Are they caused by some as yet undiscovered lesion? Do they point to some pathological or physiological secret destined to make the reputation of some future Bright or Addison, but which our eyes are held from seeing? My belief is that they do not; that the manner of their production may be explained by facts relating to the physiology of the blood, with which we are all familiar, although it is no doubt difficult, perhaps impossible, to determine the exact nature of any single case. I have no new facts to bring forward; but my argument requires that I should point out in what way well-known facts give, in my belief, a sufficient explanation of cases which there is some tendency to regard as inexplicable.

What is Anæmia?

The word has so many different meanings that I could wish it had never been invented. It has such a scientific sound about it, it seems to make such a definite assertion, carries with it such large promise, is at first sight such an admirable generalisation of so large a number of particular cases, that we are constantly using it, and being misled by it; for it has all the time no more real virtue than the old woman's "Mesopotamia." In reality, it is used to indicate, and to confound our knowledge of, the most various conditions of the blood, deficiency of the blood as a whole, or deficiency of some one or other of its constituents, with or without excess of some one or other or of all the rest; sometimes even excess of some one constituent is sufficient to cause it. A great many different forms of blood-change are by custom classed under one common name; and it is, probably, only the coarsest of them which can be recognised by any direct physical characters of the blood itself. In the greater part of cases we infer the existence of some form of anæmia from certain clinical symptoms; and we do so rightly, even when the most careful chemical analysis may yield only negative results.

Its simplest form would be the immediate consequence of hæmorrhage; but even here mere diminution of quantity is followed at once by change of quality. For I need not speak of the fact that in venesection the quality of the blood alters as it flows; that drawn last differing in composition from that issuing first. And the same holds good, in a still greater degree, when repeated bleedings are practised in the same case. It is seemingly impossible to make the merest mechanical change in any part of the organism without setting up a long train of chemical and physiological, or—if anyone chooses to retain the term—vital consequences.

And this is especially true of the blood. The sum total of nutritive and other processes of which the blood is the product is very great; so that, in point of fact, few if any changes can take place anywhere in the body without some corresponding change in the blood and all other organs. For we must remember that an organ, as it exists in the body during life and health, is not essentially the solid structure which we examine after death, and the changes in which we are prone to regard too exclusively as the causes of clinical symptoms. During life this solid structure may be (I believe sometimes is) not only the least important physiologically, but even the least in point of bulk. The organ is made up of this solid structure *plus* blood of a certain composition and temperature, flowing through the vessels in certain quantity, and at a certain rate, and subject to a certain degree of pressure. Any deviation beyond certain limits in any of these respects leads, of necessity, to changes in nutrition, and still more strikingly in function, which may easily become cumulative, or even cause immediate death, and yet leave no discernible trace

behind. To apply this more particularly to the case of anæmia, I would say that, so far as the blood is concerned, the body is by rough comparison a self-feeding engine. As in this, if the head of steam or the power of the engine falls below a certain point, the generation of steam must cease: so in the body, a certain quantity, and quality, and pressure of blood is necessary for the production of fresh blood; and if these conditions are interfered with, rapid deterioration of the blood must ensue—and this, very possibly, without anything which in an anatomical sense could be called disease of any blood-making organ.

Anæmia may arise in very many different ways. The composition of the blood is the result of the sum total of the changes which it undergoes in its passage through the different organs and parts of the body. These changes vary not merely in organs differing as widely as the kidney and the brain, but also probably in the case of every single bone and muscle. Any abnormal change anywhere, any increase or diminution of the activity of any organ or part, must *pro tanto* interfere with the just balance of the whole, and thus tend at least to produce a condition of the blood more or less unfit for its manifold functions, and among others for its own reproduction; and in this way changes, not in themselves perhaps properly to be called anæmic, may yet bring about anæmia. Practically the following are frequent causes of anæmia. I do not pretend to offer anything like a complete list, but it is necessary to my argument to show the very wide range of these causes, and the consequent difficulty, I might say impossibility, of excluding them all in any one case, and thus being driven to fall back upon some unknown mysterious cause:—1. Hæmorrhage, traumatic or pathological—*e.g.*, epistaxis, hæmorrhoidal hæmorrhage, menorrhagia, post-partum hæmorrhage. 2. From improper and insufficient food—*e.g.*, in extreme cases from scurvy. An ingenious German, Dr. Dyes, suggested some six years ago that the increasing prevalence of anæmia is due to bad teeth and bad medical treatment, especially the abuse of mercury and bleeding. 3. From impure air—*e.g.*, compare the general effect of indoor with that of outdoor occupations. There is no need to go into special details of the action of unhealthy gas—*e.g.*, as to whether it depends upon some such condition as (1) want of ozone, (2) excess or deficiency of watery vapour, (3) excess of carbonic acid gas, (4) presence of gaseous products of manufacturing processes, (5) presence of sewer gas. We are familiar with the effects produced by some at least of these, and anæmia is a constant result. 4. Anæmia in connexion with definite changes in the structure of organs, more or less sufficient to explain it. Of these changes, some give rise to special well-known forms of anæmia—*e.g.*, Addison's disease, chlorosis in connexion with uterine trouble and imperfect vascular development, leukæmia splenica, lymphatica, lieno-lymphatica, or myelogenica, the effects of malaria. But less definite forms of anæmia no doubt frequently take their rise from disease, it may be only temporary, of some organ, such as the lungs, heart, stomach, intestines, liver, kidney, brain, and spinal cord. 5. From parasites—*e.g.*, trichina spiralis or echinococci, or the endemic hæmaturia of the Cape of Good Hope, or the ankylostomum duodenale of Cayenne. 6. From discharges more or less chronic—*e.g.*, varicose ulcers of legs; and the effect of such discharges is often out of all proportion to their amount,—even gonorrhœa, or the injudicious use of blisters, may produce anæmia. 7. In connexion with acute disease—*e.g.*, typhus, small-pox, or rheumatic fever. This form of anæmia is often serious, although no distinct local lesion can be anywhere detected. 8. In connexion with certain constitutions or diatheses—*e.g.*, gout (especially if hereditary), syphilis, and struma. 9. From the action of poisons, such as mercury, lead, or the long-continued use of alkalies. 10. Depressing mental emotions. This very imperfect enumeration is sufficient to make it clear that the diagnosis of idiopathic anæmia is not to be lightly made. It is far more probable that any given case depends upon some ordinary cause which eludes detection than upon some mysterious pathological process, the existence of which it is unnecessary, and therefore unscientific, to assume. In fact, in this connexion "idiopathic" is nothing more than a cloak for ignorance, or it may be hasty observation. Even with the utmost care and skill, and under the most favourable circumstances, the diagnosis of idiopathic anæmia may prove to be a mistake. No case can be accepted as such until the diagnosis be verified by a post-mortem examination.

Some few cases have been published, many such have, no doubt, occurred, in which after death some common organic lesion has been found to be the cause of a supposed essential anæmia. So far as the fatal cases are concerned, it is, in fact, impossible to distinguish by means of clinical symptoms between an essential anæmia and one which depends on some ordinary cause. A woman suffers from post-partum hæmorrhage, and dies from its effects, not immediately, but after the lapse of two or three weeks: we do not call that essential or idiopathic or pernicious anæmia, and yet the history alone enables us to make any different diagnosis; the clinical symptoms are identical. Again, it by no means follows that because an anæmia is idiopathic—*i.e.*, because we fail to discover its cause—that therefore it is fatal. I am sure few can deny that they meet, and frequently meet, with cases of anæmia for which they utterly fail to discover any cause. And these idiopathic anæmias are in most instances readily and speedily cured by simple means, such as change of air or occupation, with or without some common drug. It is only when our treatment fails that we begin to talk of "pernicious anæmia." There seems to be, to me, no more right or occasion to do so than there is to talk of pernicious bronchitis or pernicious measles.

The difference between cases which recover and cases which do not recover is in each instance one of degree and not of kind. I would claim, then, to have established, at least, a probability that neither our ignorance of the exact cause of anæmia, nor its fatal result, nor these two circumstances together, make it in any way necessary to look for an explanation of these cases outside the common well-ascertained causes of anæmia. For, first, fatal cases of anæmia depending upon well-known causes do not seem to differ essentially from those whose causes we do not know; and, secondly, we meet with numerous cases of anæmia whose cause is unknown to us, but which yet do not terminate fatally. I claim, therefore, assent to my thesis that there is no such disease as progressive pernicious anæmia. But I have no wish to rest content with a merely destructive statement. Is it possible to give any explanation of these most interesting cases? I believe that it is—that the clue is supplied by the very history of the cases themselves. To understand them we must look not to the existing cause of the disease or its supposed nature—at best a very vague metaphysical abstraction,—but to the constitution of the patient, the "personal factor" in the case. People differ as much in lung-power, liver-power, kidney-power, stomach-power, or lymphatic gland-power, as they do in intellect, or in moral or muscular strength; and in any given case any one of these organs may, and does, break down utterly under a strain which others scarcely feel at all. Just as an amount of exercise which does nothing but good to a fairly strong healthy man may kill on the spot an older, less sound, or feeble man. Expose two persons to the same amount of cold and privation, and they will almost certainly suffer in different ways. It cannot be necessary to give instances of what must come under the daily observation of us all. By way of illustration, two chains whose breaking power is the same will yet probably not give way at the same link. In the same way people differ in blood-making power, and one will succeed in making good blood when that fluid has been impoverished or altered to an extent which would prove fatal to another.

This varying tolerance of anæmia is most certainly true so far as the effects of blood-letting are concerned (*e.g.*, Marshall Hall on "Blood-letting," part ii., chap. i., *ad init.*). "It is one of the most remarkable facts in physic, that if several patients of similar strength and constitution, but affected by dissimilar diseases, be respectively placed in the erect position and bled *ad deligium* they will be found to have lost very various quantities of blood. I have known a patient, not apparently very feeble, faint on losing four ounces of blood; and I have known patients bear to lose fifty, sixty, or even seventy ounces of blood without syncope. Persons in health and of moderate strength will generally faint, if bled in the erect posture, on taking fifteen ounces of blood. A stout man, aged thirty-five, on the fourth day of fever fainted on losing four ounces of blood. Six months later, when suffering from lumbago, the same man lost sixteen ounces without the least disposition to syncope."

Having gone through the known causes of anæmia, we are left with a certain number of cases which, in our present ignorance, we must call idiopathic; and a certain number of these cases, ending fatally, have most unfortunately received the further epithet of "pernicious." But there is no reason

whatever for regarding them as a different form of disease from the milder idiopathic cases. All analogy would lead us to attribute their fatality, not to any essential difference in their nature, but to their "personal factor." A case of fatal anæmia from hæmorrhage is "pernicious"; and some cases of anæmia labelled idiopathic and pernicious during life have been found to depend upon some cause discoverable only by post-mortem examination—*e.g.*, constant slight hæmorrhage high up in the small bowel. No one regards so-called malignant small-pox, measles, scarlet fever, as essentially distinct from the commoner and milder forms, for we know that the most malignant case frequently gives rise by infection to the milder forms, or that the reverse may be the case. I do not deny that some fatal cases of anæmia may hereafter be proved to depend upon some necessarily fatal lesion—*e.g.*, of the nervous system,—but I do assert that there is no necessity now to speak of "pernicious anæmia" as a mysterious form of disease, and for these reasons: cases of pernicious anæmia do not form a sharply defined class; they cannot be divided by a distinct line from ordinary non-fatal cases of idiopathic anæmia. The data we have even at present are sufficient to explain the fatal nature of so-called idiopathic anæmia without the intervention of any unknown mysterious cause. (1.) Anæmia—*e.g.*, from hæmorrhage—proves fatal by its cumulative action. In so-called pernicious anæmia it may be that anæmia, however caused, proves fatal to certain constitutions simply by becoming cumulative.

If we endeavour to understand the way in which anæmia proves fatal, clinical and pathological considerations alike point to failure of the functions of the alimentary canal, and of the blood-making organs attached to it. In almost all cases dyspepsia, gastric or intestinal, occupies a prominent position. In fact, the production of fresh healthy blood is interfered with at the first step in the process. This is specially important with regard to treatment. It would be out of place to dwell at length here on the treatment of cases of anæmia. I would only insist on the necessity of early and efficient treatment, and the great evil which may follow neglect of apparently trifling cases. For, if the theory I have brought forward is correct, even a slight degree of anæmia may prove fatal by its cumulative action. If the usual remedies fail, I would recommend very strongly the most complete change which the patient can obtain—change in food, air, scene, and occupation. In desperate cases transfusion of blood or milk might be tried; but I must confess that transfusion of blood has not altogether answered my expectations in one or two cases of leukæmia splenica in which I have adopted it, and that transfusion of milk in the single case of pernicious anæmia in which I have been able to try it also failed. As, however, the patient was almost *in articulo mortis* before the transfusion could be accomplished, it seems to be still worth trying in these cases.

THE disused burial-ground in Drury-lane has been laid out as a garden for the use of the poor in the neighbourhood, and it was opened for that purpose on Tuesday last.

HÆMOPHILIA.—The family Mampel, of Kirchheim, near Heidelberg, supplies an example of this. Its progenitors, both healthy persons and of healthy families, married in 1798, and had 6 sons and 4 daughters. Among the former were 3 "bleeders." In the next generation among the 32 children there were 13 "bleeders." In the third generation there was only 1 "bleeder." The "bleeders" were all of the male sex, and externally exhibited no difference from any other member of the family. The children of the "bleeders" remained exempt from the disease, and in general it was transmitted only by the females of the family, who themselves were, as far as inclination to bleeding was concerned, in a normal condition. Of the 17 "bleeders" who, in the course of three generations, appeared among a family of about 100 individuals, 9 died from hæmorrhage, some from insignificant wounds, and others from subcutaneous intermuscular bleeding, sometimes produced by slight contusions. There were also hæmorrhages from the gums, the nose, and the mucous membranes of the bronchi, the stomach, and the bladder, and repeatedly bleeding into the joints. Of these 17 "bleeders," 2 died during the first year, 7 between the first and seventh years (5 from hæmorrhage), and 5 (4 from hæmorrhage) in their fifteenth, twenty-fourth, thirty-fourth, thirty-fifth, and fifty-fifth year.—*Wien. Med. Woch.*, March 17, and *Deutsche Zeit. f. Chir.*, B. vii.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

CASES OF PARALYSIS OF THE MUSCULO-SPIRAL NERVE.

(Under the care of Dr. GOWERS.)

PARALYSIS of the musculo-spiral nerve is of not very rare occurrence, but it is of interest from the illustration it affords of the consequences of certain forms of nerve-injury. The following cases illustrate some points of practical importance in the symptomatology of the affection:—

Case 1.—*Paralysis of Musculo-Spiral Nerve from Pressure—Electrical Contractility of Muscles unchanged—Rapid Recovery.*

A porter, aged forty-two, presented himself on January 5 with complete paralysis of the extensors of the wrist and long extensors of the fingers, of one month's duration. He had gone to sleep when lying on a bench on his right side, and woke up unable to extend the hand. Three years before, when at sea, he had had a similar attack from a similar cause, but the paralysis on that occasion lasted only three days. When first seen no improvement had occurred. No extension of the wrist or metacarpo-phalangeal joints was possible. If the proximal phalanges, however, were passively extended, the two distal joints could be readily extended by the interossei, which were unaffected. He complained of tingling in that part of the hand which is supplied by the radial division of the musculo-spiral, but no loss of sensibility could be detected. Electrical examination showed that although there was complete paralysis, there was no loss of contractility to the faradic current in any muscle except in the extensor ossis metacarpi pollicis, which did not act quite so readily as on the other side. There was no increase in contractility to the voltaic current. He was ordered faradisation of the affected muscles, and the voltaic current along the course of the nerve every other day. In a week he had recovered considerable power of extension, and the slight defect in the irritability of the extensor of the thumb could no longer be detected; and in another week he was so rapidly improving that he ceased to attend.

Case 2.—*Paralysis of the Musculo-Spiral Nerve from Pressure—Change in Electrical Contractility of Muscles—Slow Recovery.*

A man, aged fifty-three, in the beginning of September, 1876, went to sleep with his arm over a sharp piece of wood, with the elbow bent. On waking he found the whole arm numb and tingling, and that he could not extend the wrist or fingers. He came to the hospital a month later, and it was then found that there was complete loss of power in all the muscles supplied by the musculo-spiral nerve, and in no others. There was marked flattening of the back of the forearm. Electrical investigation showed that, compared with the left arm, there was considerable diminution of contractility to faradism in the radial extensor of the wrist, and a slighter but distinct diminution in the ulnar extensor of the wrist and common extensor of the fingers. There was no loss of irritability in the supinator longus, but considerable diminution in the force of its contraction; a current of moderate strength caused a much stronger contraction in the supinator longus on the healthy than on the affected side. There was no loss of contractility in the lower part of the triceps, the hand muscles, or the muscles on the flexor aspect of the forearm. The muscles in which the faradic contractility was lessened presented a distinct increase in their irritability to the voltaic current. Faradisation of the affected muscles was ordered, and in a fortnight, although there was no return of voluntary power, the faradic contractility had so far returned that scarcely any difference could be detected between the muscles of the two arms, and the increased irritability to the voltaic current had disappeared. The same treatment was continued, and the improvement in contractility was soon followed by a return of voluntary power, which increased so that by the beginning of January the wrist and fingers could be extended as completely as on the other side. Both the extensors and supinators were weak, however, so that if he raised a weight from

the table with the hand midway between pronation and supination there was a tendency to increased pronation. The weakness of the extensors was shown also indirectly by the defective strength of grasp, which in the right hand was only twelve kilogrammes, while in the left it was thirty-five. The treatment was continued, however, and in another two months the arm was affirmed by the patient (and appeared) to be perfectly well.

Remarks by Dr. Gowers.—The musculo-spiral nerve is of all nerves of the arm that most frequently paralysed. This is the result of its exposed course as it winds round the humerus beneath the triceps muscle. This position exposes it to two dangers: to the effects of pressure, and to the damage in violent contractions of the triceps. The first of these is the more common, and is illustrated by the cases detailed. The position of the nerve protects it to some extent from sudden violence, but exposes it to damage from long-continued pressure, as in certain postures not unfrequently assumed during sleep. Occasionally, although rarely, paralysis results from pressure during sleep in bed. The patient goes to sleep on the right side with the arm under him, and wakes in the morning with the extensors of the wrist paralysed. The more common cause is an afternoon nap on a chair or a bench, with the arm hanging over some hard or sharp edge. It is curious that one patient should have had two attacks produced in this way. This may have been due to some habitual position of the arm during sleep, or to the musculo-spiral nerve having a course more than usually exposed. The other way in which the nerve sometimes gets injured is by a violent muscular contraction. Dr. Gowers has seen two cases in which this occurred. One patient was an epileptic liable to attacks of *petit mal*. He felt an attack coming on, and to save himself from falling, seized a rain-water pipe close to which he was standing. On recovering consciousness he found himself still grasping the pipe, and had somo difficulty in relaxing his hold, in consequence of complete loss of power over the extensors of the hand. There was at first general weakness of the limb, but it soon became limited to the muscles supplied by the musculo-spiral nerve. These rapidly wasted and presented the loss of faradic and increase of voltaic contractility. In another case the same accident happened during a violent extension of the arm in throwing a stone. There was instantly violent pain in the arm, and complete paralysis of the extensors of the wrist and fingers. A few days afterwards extravasations of blood were apparent along the edge of the biceps and also at the back over the triccps muscle. It is probable that laceration of some of the muscular fibres caused an extensive hæmorrhage. In this case, a month after the injury, the faradic contractility was lost in all the muscles of the forearm supplied by the musculo-spiral nerve, and also in the lower part of the triceps muscle. The weakness of the flexors, which is conspicuous in all cases of extensor paralysis, and which was very marked in those above described, is, of course, apparent only. The flexors of the fingers, acting on both wrist and digits, can only act on the latter with force if the wrist is kept extended. Flexion of the wrist shortens so much the course of the flexor tendons that only very slight flexion of the fingers is possible. This is easily shown in the healthy. If the wrist-joint be forcibly flexed, the two distal joints of the fingers can be flexed only very slightly, and at the expense of much pain in the flexor muscles in the forearm. The constant carpal flexion on use of the hand in these cases of extensor paralysis often causes a slight backward protrusion of the carpal bones, which is the source of much uneasiness to the patient.

These cases illustrate the prognostic as well as the diagnostic valuc of the electrical examination of paralysed muscles. The change in faradic contractility is an index to the statc of nutrition of the nerve-fibres both within and without the muscle. The profound diminution in the faradic contractility indicates, as is well known, a degenerated state of the nerve-fibres, the result of an irritating lesion of the nervc at the seat of injury. To this the electrical contractility is the only sure guide. Visible loss of nutrition in the muscles is a less certain indication, since the flabbiness of atony may be mistaken for the shrinking of atrophy. Loss of muscular power is no guide as to the state of the nerves and muscles, as these cases show. Each came under observation a month after the injury. In each when first seen the loss of power was complete; but the first, in which there was no evidence of nerve-degeneration, was well in a few weeks; the second, in which there was marked depression of faradic contractility, was well only in a few months; while in the case of the epileptic, in whose muscles the depression of faradic contractility was profound, nine months passed before there was any return of power, although he also ultimately made a good recovery. Another point in regard to the contractility of paralysed muscles was illustrated by Case 2. The supinator longus presented no loss of irritability; slight contraction occurred to a current of the same strength as was needed for the healthy muscle, but a stronger current caused far less contraction in the paralysed than in the unaffected muscle. In testing a muscle the most significant thing to note is the contractility,—the weakest current to which it will react; but it is also important to note the power of the muscle—the degree of contraction to a stronger current,—since the latter may, in rare cases, be altered as a consequence of nerve-injury, etc., while the former remains normal. It is impossible to doubt the usefulness of electrical applications in such cases. No doubt the slighter cases would recover without its aid, but it is frequently to be noted that the first return of power occurs soon after the commencement of electrical treatment. The excitation of the nerve seems to aid the recovery of a state in which the voluntary stimulus can traverse the fibres. For this purpose, in the case of the musculo-spiral nerve, the voltaic current is most effective on account of the deep course of the nerve beneath the fibres of the triceps muscle, and the voltaic current has much greater power of penetrating a layer of muscular fibre than the faradic. The latter is, as it were, absorbed by the contracting muscular fibres to a far greater extent than the voltaic current. In more severe cases, as in that of the epileptic mentioned, in which all nerve-irritability for a time is lost, the application of the voltaic current to the muscles is often followed by an improvement in their nutrition. In that patient this was very marked, and voluntary power was ultimately regained, although it had been absent for many months, during which the muscles distinctly improved in size under the treatment.

THE FACULTY OF MEDICINE AND PHARMACY OF LYONS.—A decree of the President of the Republic creates twenty-five chairs and two supplementary chairs for this new Faculty; and subsequent decrees furnish lists of the various professors appointed, which are published in the *Union Médicale* for April 28. Among these we observe the names of M. Chauveau, appointed to the chair of Experimental and Comparative Medicine, M. Ollier to that of Clinical Surgery, and M. Lépine (a Paris *agrégé*) to that of Clinical Medicine. Most of the other chairs are filled by local celebrities.

OXIDE OF ZINC IN OBSTINATE DIARRHŒA.—Dr. Bonamy, of Nantes, relates some cases confirmatory of the great and speedy utility of oxide of zinc in obstinate diarrhœa that has resisted various other remedies. He employs the formula recommended by Prof. Gubler, who first used the remedy for this purpose—viz., three grammes and a half (fifty-three grains) of the oxide, combined with half a gramme (eight grains) of bicarbonate of soda, and divided into three or four doses—one to be taken every threo hours. The addition of the soda prevents the production of vomiting by the zinc.—*Bull. de Thérap.*, March 30.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN APRIL.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction	20·80	0·064	0·129	0·000	0·009	14·3	3·7
West Middlesex	19·80	0·057	0·120	0·001	0·009	13·2	3·3
Southwark and Vauxhall	20·80	0·067	0·120	0·001	0·009	13·2	4·2
Chelsea	20·80	0·071	0·150	0·000	0·008	13·7	3·7
Lambeth	21·10	0·070	0·174	0·001	0·008	13·7	3·7
Other Companies.							
Kent	27·90	0·006	0·350	0·000	0·003	18·8	5·6
New River	18·80	0·042	0·105	0·000	0·006	13·2	3·7
East London	19·60	0·060	0·129	0·001	0·008	12·6	3·5

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in the Lambeth, and the Southwark and Vauxhall Companies.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, MAY 5, 1877.

UNINHABITABLE HOUSES.

A case of considerable importance from a sanitary point of view, and of great interest to all persons who take houses for short periods in London or elsewhere, was tried on Friday last, April 27, in the Court of Exchequer, before the Lord Chief Baron and Barons Pollock and Huddlestone. In May, 1875, a furnished house in Wilton-crescent was taken for a period of three months for the Dowager Countess of Winchelsea; but when Lady Winchelsea came to take possession she was met by such a sensible, though invisible, preoccupation of the premises by sewer-gases, that she felt compelled to retreat. The drains in the basement of the house were so out of order that you could nose them, not as you went up the stairs only, but almost as you entered the house, and in the rooms on the upper storeys; and Lady Winchelsea declined to risk health and life by sharing the tenancy of the house with the sewer-gases. Dr. Corfield also inspected the house, and pronounced it unfit for habitation. On examination, it was found that close by the lower part of the kitchen there was a cesspool, containing the accumulated filth of ten years; and that the drain was an old brick one of forty years' standing, which had inside it a deposit of foul matter some two inches deep, and was untrapped. This state of things having been discovered, the lessor directed repairs to be done, which took some nineteen days; but Lady Winchelsea still declined to complete the bargain, and an action was brought against her to recover the rent. The case was tried first in March, 1876, before the late Mr. Justice Quain, who left to the jury the question whether the house was in a habitable condition, the drains having been out of order when the defendant came desiring to take possession. The jury found that it was not, and thereupon the judge directed a verdict for the defendant, leave being reserved to the plaintiff to appeal. In May last year the case was argued before Barons Bramwell and Cleasby, but a rehearing was ordered before three judges, and came on, as we have said, last week. The counsel for the plaintiff urged that there was no implied warranty that the drains should be in a perfect sanitary condition; and, in addition to various points of law, he argued that the house was no worse than many of the houses about it. Evidence went to show, he declared, that more than half the houses in Wilton-crescent were in the same condition; and he said that more than half the houses in London, nay, in England, fifty years ago smelt a great deal worse than the house in question; and half the common people in this country lived in houses which smelt quite as bad, and would say that this house was a great deal too good for them. As the house was not the less habitable, the maxim *caveat emptor* applied; and there was, counsel urged, a broad distinction between cases where a man inspect, the thing bargained for or hired, and the cases where he takes it on the seller's warranty. In a furnished or any other house the hirer could judge if the place were fit. A great number of cases were cited; and among them that of "Smith *v.* Marrable," the case of a house infested by bugs, was commented on, and an effort made to distinguish it from the present case.

The judges, however, moved by good sense and good law, instead of by the ingenuity of counsel, unanimously decided in favour of the defendant. They held that there was a condition precedent, implied, that a house so let for immediate occupation should be reasonably fit for such occupation. This condition had wholly failed here, and the defendant, had she entered, would not really have got what she had bargained for, and what was clearly the intention of the parties should be given and paid for. The sum agreed to be paid here was for the accommodation for the three months. "Smith *v.* Marrable" had been somewhat hardly treated, having been often questioned and commented on, but never overruled by a single judge. It was said that this was not a condition precedent, but merely a breach of covenant not going to the whole consideration, and that it was her ladyship's duty to go to an hotel and incur expense till the house was ready to receive her, and then bring an action for these damages. This view was erroneous, and involved in the first question—viz., that the contract was for use and occupation of a reasonably comfortable house. In these circumstances the ruling of the late learned judge at the trial was correct; the defendant was not compellable to enter.

The defendant in the case has rendered good service to the public in so resolutely fighting her case; but she may be congratulated on having been able as well as willing to fight it out; on her good fortune in having triumphed in all the three trials, notwithstanding the subtleties and the proverbial uncertainty of law; and on her having so quickly discovered the peril that awaited her in the house she had taken, and at once decided not to occupy it. Her predecessor had for some time occupied the house; had, six weeks previous to the time when Lady Winchelsea's tenancy was to commence, instructed builders to put the drains into perfect order; and she and her children had lived in the house till the day before Lady Winchelsea was to take possession: and yet the latter at once decided that the house was not habitable, and has succeeded in triumphantly proving it. We are afraid that her good fortune will not prevent many other hirers of houses from suffering the perils and penalties which she escaped; though it may be hoped that her success will not only aid them in defending themselves, but will teach them to be more alive to the dangers that may lie in wait for them in moving into fresh premises; and will also teach builders and surveyors to look more closely and truly into the sanitary condition of all houses, new and old. The principles of efficient drainage and the dangers of imperfect drainage and ventilation are simple,

and are becoming, though slowly, more generally known; but till architects and builders will pay more attention to them it will continue to be imperative on hirers of houses to look carefully and closely into such matters for themselves.

DENTAL SURGEONS.

A FEARFUL storm rages in dental circles, and hard names are of frequent occurrence. How this storm originated, it is not very easy to say, but it is easy to see the extent to which it now prevails, though not, we fear, the depth of the animosities it has raised. One body—the Association of Surgeons practising Dental Surgery—has petitioned the Council of the Royal College of Surgeons to the effect that no schedule shall be received by the College except it be signed by one having some registrable surgical qualification, such as that of Member or Fellow of the College of Surgeons; and this recommendation has received the sanction of the Dental Board. This is intended, we suppose, to compel all teachers of dental anatomy, physiology, or surgery to be or to become qualified to practise medicine and surgery. The intention of the memorial is evident: the Association desire to raise the standard of dental surgeons generally by insisting on or encouraging the taking of a proper medical qualification, and they begin at the top of the tree. In this we think they are hardly wise. Many men may be led who will not be driven; and we think it probable that if the Association had kept on the even tenor of its way its ends and aims might have been more speedily accomplished.

But when we turn to what might perhaps be termed the opposite camp we find even more to condemn. In the view of these gentlemen the dental diploma of the Royal College of Surgeons of England is the be-all and end-all of dentists. Without possessing that qualification no one is to be allowed to call himself "Dental Surgeon, Surgeon-Dentist, or Dental Practitioner, or Dentist," under a penalty; and qualified dental practitioners are to be alone capable of recovering fees for dental operations. We have ever been far from intruding upon the province of dental surgeons, nor do we now desire to do so, were we not compelled to stand up for the rights of medical practitioners. Matters have surely come to a pretty pass when duly qualified surgeons are to be deprived of their rights, secured to them by Act of Parliament,—and certainly these rights are scanty enough already,—at the bidding of a body of dentists. What dental operation is there which a duly qualified surgeon may not legally undertake? There are many points relating to manipulation, to the making and fitting of artificial teeth, which no ordinary surgeon would care to claim as within his special province, for the study and practice of the art would not repay him; but is he therefore, provided he care to devote himself to the pursuit of these things, to be precluded from doing so unless he take a certain qualification, granted only in London under certain special conditions, whether the surgeon belong to England, Scotland, or Ireland? This does not hold with reason.

There can be no doubt that the dental profession, or business, or trade is sadly in need of reform, but the reform seems to be beginning, or trying to begin, at the wrong end. In the meantime, anyone, however ignorant, may call himself dentist or surgeon-dentist—the two words often carefully separated by an intervening word,—and may with impunity practise anything he likes. A man who has served in a workshop preparing artificial teeth may set up in this way, and might, compared with some, be even called well qualified to practise the art. But it is time that such men should be separated from gentlemen of the highest professional and scientific eminence, who, we are glad to think, are to be found in the ranks of the dental profession. It would be far better were the squabbles among dentists to cease as regards the upper ranks, and every effort be made to improve the lower class of dental-surgeons. From our point of view, however, we cannot look upon the L.D.S. as the be-all and end-all of a dentist's education. It is true that to acquire it a somewhat complex curriculum has to be undertaken—a curriculum which does not differ very greatly from that required for the membership of the College of Surgeons,—but there is this vast difference, that in the case of the membership the examinations are much more extensive and more strict than they are as regards the dental diploma. Hence it is that too often dental students lounge through the classes at their medical school utterly indifferent to what is going on, idle themselves, and a source of idleness in others. We are happy to say that to this rule there are many noble exceptions, but we fear the rule is on the side of idleness. We hold it better, therefore, in all cases where there is no material obstacle, that the student should proceed to qualify himself for registration on the Medical Register, whilst also qualifying himself for the work of dentistry, than to slip into a by-path with only the smattering of a medical education. But it is plain that all men cannot do so: the time and the money are awanting to many; and for these we certainly recommend the dental diploma by itself. But the dental diploma cannot be, and will not be, held to be superior to a diploma in surgery or medicine. Skill and knowledge do not depend on diplomas either in dentistry or anything else. In cities and large towns it is all very well to do as one dental gentleman suggested at a meeting of dentists—send all dental cases to a dentist; but in the country the general practitioner has most frequently to do everything himself, and it would certainly be hard if he were to be deprived of the right of recovering fees for any dental operation.

In as far as dentists are seeking to regulate and improve the internal condition of their own body, they have our hearty sympathy. Their mode of procedure may be injudicious, and we certainly think it foolish that the best qualified men in the dental profession should be arrayed in two camps; but their aim is to do good. When, however, they come to interfere with the rights and privileges of our body that is a different story,—*Gare qui touche*,—they run the risk of upsetting their whole scheme. To certain parts of it, indeed, we cannot help objecting. They seek to create a register of dental practitioners, and they want that appended to the Medical Register. We trust the Medical Council will consent to no such proposal. There are quite enough qualifications already, and the addition of another to find refuge between the boards of the Medical Register is not desirable. If there is to be a Dental Register, let it be a register of dentists—men practising dental surgery.

THE WEEK.

TOPICS OF THE DAY.

THE great interest which has been aroused in the minds of the public by the recent colliery accident in South Wales has induced the *Times* to prepare and publish a statement of the loss of life which has taken place in our coal mines for fifteen years from 1861 to 1875. From the reports of mine inspectors for that period it appears that 15,908 lives have been sacrificed in raising our coal-supplies. The various sources of accidents are classified as follows:—1, explosions; 2, falls of coal and roofs; 3, shaft accidents; 4, miscellaneous accidents underground; and 5, accidents at surface. From 1863 to 1867, both inclusive, the average proportion of lives lost to persons employed was 1 in 296; in the following five years the proportion was reduced to 1 in 349; in 1873 it was still further reduced to 1 in 479; and in 1874 the proportion fell to 1 in 510. But in 1875 the number of lives lost was greater in proportion to the men employed than in any of the three previous years, the average then being 1 in 430. Legislation has undoubtedly endeavoured to grapple

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with this large annual expenditure of human life in our mines, but in the face of these figures it is evident that, whatever has been attempted, much yet remains to be done. Many of the accidents reported, being due to forgetfulness, rashness, and neglect, are very largely preventable, and our contemporary suggests that, as the first function and primary duty of every Government is the protection of life, it is evident that further measures should be taken to place matters in this respect on a more satisfactory footing.

The recent exposure of the defective moral and sanitary condition of our canal population has elicited from the Home Secretary a statement that he has prepared a Bill, which will shortly be introduced, to deal with this subject. Meanwhile, were anything necessary to further demonstrate the necessity of legislation in the matter, the following fact has been made public:—In the cabin of a barge at Paddington, a month ago, a boatman died very suddenly during the night, and it was stated by the jury in their verdict that his death was partly due to the want of sufficient fresh air. There were three men and one woman sleeping in the cabin at the time he lay dead, and in order to lay him out part of the cabin had to be taken down. That matters can easily be improved is evidenced by the fact that the manager of a large canal company, possessing 335 boats, reports that at the present time they have only six women and ten children on board, and they employ no youths unless they are regularly apprenticed as sailors, and can read and write; 105 boatmen out of 662 in their employ are total abstainers, and 646 have houses on land.

The barque *Archarus*, of Liverpool, Captain Phillips, from the West Coast of Africa, recently arrived at Falmouth with only the master and three men in a condition to work the vessel. Three of the crew died during the voyage home, and three others are now only just recovering from an attack of coast fever.

We recently alluded to the boring operations carried out at Messrs. Meux's brewery, which resulted in water being obtained at a depth of 1004 feet. Mr. Alfred Langley, engineer to the Great Eastern Railway, now reports, as the result of a boring he has recently completed at the Loughton Station of the line in Essex, that chalk was reached at 243 feet from the surface of the ground, passing through a thickness of it amounting to 648 feet 6 inches. Below this there was a thickness of 37 feet of chalk containing layers of green sand, followed by 132 feet 6 inches in the gault, and finally a bed of 31 feet 6 inches of gault interspersed with pebbles. The boring terminated at a depth of 1092 feet 6 inches below the surface, this being stated to be the deepest in or near London.

A communication has been received from Teheran, which states that the plague has again broken out at Reshd, causing three or four deaths daily. There have been twenty-four cases up to the present time, of which sixteen have proved fatal. It is feared that the mortality is likely to increase, and increased sanitary measures are being taken by the Persian Government. The sanitary officer at Bagdad reports 176 deaths from plague between the 16th and 23rd ult.

Some excitement was caused at Wakefield, on Saturday last, in consequence of a complaint made to the Home Secretary about the illegal removal of a body from St. Andrew's churchyard. The Mayor was directed to inquire into the circumstances, and accordingly proceeded to the spot, accompanied by several of the corporate officials. A lengthy investigation took place, and it became apparent that while a workman was pulling down some wooden posts he had disturbed a number of bones. The affair began to assume a serious aspect, and, there being no sign of a coffin, it was thought that foul play must have taken place, especially as some lime was discovered amongst the bones. At this point it was considered advisable to obtain a medical opinion, and the attendance of a doctor having been secured, he at once put an end to the mystery by declaring that there was not a single human bone amongst the remains, which were those of an ass or a horse.

Since we last alluded to the subject, Mr. D. Cubitt Nicholls, by direction of the Home Secretary, has held another inquiry into the Metropolis (Whitecross-street, St. Luke's) Improvement Scheme—the largest scheme which has yet been framed in London under Mr. Cross's Act. The interests involved were so extensive that two adjournments were found to be necessary, and the inquiry, which commenced on the 14th ult., was not concluded until the 23rd ult. The area here sought to be dealt with comprises about seven acres and a half, with 4000 inhabitants, principally costermongers; it runs from Beech-street to Old-street, in Middlesex, just outside the City of London. The official representations on which the scheme is founded were made by Dr. Pavy, F.R.S., medical officer of the parish of St. Luke's. On the 21st ult. Mr. Cubitt Nicholls also opened an inquiry into the High-street, Islington, scheme of the Metropolitan Board of Works. This scheme deals with about an acre of land situated on the east side of High-street, Islington, and approached from that street and the City-road. Dr. C. Meymott Tidy made, under the statute, the official representation upon which the scheme was framed.

The question which has been mooted of establishing in this country middle-class hospitals for that very large class of society who are unwilling to intrude upon the accommodation provided by charity for the poor, and who are yet unable to bear the expenses of severe illness in lodgings, has attracted the attention of an English gentleman resident in Spain, who, in a communication addressed to a contemporary, explains the system in force in the Peninsula. He states that in each hospital in the larger cities and towns of Spain there are two classes of wards, the one description for the poor who are unable to contribute towards their support in sickness, and the other for persons who can afford to pay at the rate of 2s. or 2s. 6d. per diem for the accommodation. These latter are called *particulares*, and their privileges are, the right of buying such luxuries as their medical attendants allow; the occupation of a small private room walled off with deal partitions from the other patients; and free intercourse with their relatives. This system, it is stated, is found to work well in Spain; but in the one or two hospitals of our metropolis in which something similar has been attempted, we are bound to say the result has been anything but a success. There is, however, no doubt that some description of hospital suitable for the lower middle-class is a great want of the present day, and we should be glad to see a thoroughly sound scheme propounded which would unite the outdoor relief of the dispensary with a certain amount of indoor accommodation for serious cases.

A general abstract of the number of marriages, births, and deaths registered in Ireland during the year 1876 has just been published by the Registrar-General for Ireland. It is stated that the year in question marks an epoch in the later history of the country as being the first for a considerable period in which the natural increase of population, or excess of births over deaths, was not more than counterbalanced by the number of emigrants. The births registered during the year amounted to 140,438, the deaths to 92,499. The estimated population in the middle of the year was 5,321,618. During the year 8820 deaths were returned as having occurred from the eight principal zymotic diseases, being 9·5 per cent. of the total deaths, and equal to 1·66 per 1000 of the living. Only 21 deaths were caused by small-pox, from which cause 535 deaths resulted in the previous year; 593 were from measles, 1992 from scarlet fever (being only half the number

in the year 1875, and nearly 1000 under the average for the ten years 1866-75), 347 from diphtheria, 1439 from whooping-cough, 2530 from fever, 1828 from diarrhœa, and 70 from simple cholera.

The Tottenham Sanitary Association has recently issued a special report on the health of that district, in which it is shown that although forty years ago, when the Registrar-General's department was first established, it was a decidedly healthy place, some fifteen years since, when the population began rapidly to increase, the Local Board became supine, neglecting to extend the area of the drainage and water-supply, supplementing the latter by land spring water drawn from highly manured land, and taking no notice of freshly established nuisances. As a natural consequence, the death-rate rose rapidly, and in 1870 it was 20 per cent. higher than formerly, while the death-rate from the seven principal zymotic diseases had nearly doubled. Typhoid fever became prevalent, and in 1873 was epidemic. The leading inhabitants, becoming alarmed, formed themselves into a sanitary association, since which time, according to the report, everything has improved, and Tottenham has once more recovered its reputation for salubrity. In this instance the efforts of a vigorous and enlightened body of gentlemen have been undoubtedly of great advantage to the district; but it is far better that the responsibility for the sanitary condition of towns and districts should rest in the hands of a duly appointed medical officer of health. The mischief is that too often the time of the health officer is otherwise engaged, so that he is unable to carry out effectually the object for which the self-elected Tottenham Sanitary Association was formed—viz., "to watch over the sanitary condition of the parish, and to diffuse sound information on all matters connected therewith." The proper remedy for this is the combination of authorities and the appointment of a properly qualified and properly salaried officer of health.

The Richmond Rural Sanitary Authority has prepared a scheme by which it is proposed to take about four acres and a half of Barnes Common for the purpose of erecting machinery and buildings for getting rid of the sewage of the parishes of Barnes and Mortlake by the process of precipitation. In furtherance of this scheme they have applied to the Local Government Board for a provisional order enabling them to take the land in question compulsorily, and on the 19th and 20th ult. the Inspector of the Board, Colonel Fox, held an inquiry on the subject. Both Barnes Common and Putney Lower Common are dedicated to the public and placed under local management. The conservators of each common appeared before Colonel Cox in opposition to the proposal, and were assisted by the Ecclesiastical Commissioners (the Lords of the Manor of Barnes), the Metropolitan Board of Works, the Vestry of Barnes, and many residents in both Barnes and Putney. It is hoped that Colonel Cox will report against the scheme, and so stop all further expense and trouble; but should it prove otherwise, the matter will be brought before Parliament, with a view of saving one of the few open spaces still existing near London.

EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.

H.R.H. Princess Mary of Cambridge, Duchess of Teck, accompanied by H.S.H. the Duke of Teck, graciously honoured Shadwell with their presence on Wednesday last. The occasion of their visit was to open the new Children's Hospital. It will be remembered that, about eight years ago, Mr. Heckford, of the London Hospital, founded at his own expense a small hospital for children at Ratcliff-cross. It was situated in an out-of-the-way place, but in the very centre of a teeming population, and in the midst of countless children; the district is proverbially poor, even for the East-end of London. Under the guidance of its founder and his wife this little "ark by the waterside"—as the late Charles Dickens aptly styled it after one of his visits—prospered; and though it is so far off, and so out of sight, and in a neighbourhood where the well-to-do scarcely ever penetrate, thanks to the enterprising committee who now manage its affairs it has altogether outgrown its old premises, and new ones have had to be built. It was the opening of these new premises which the Princess Mary so graciously condescended to inaugurate on Wednesday last. We must congratulate the Hospital on the choice of this Princess for the occasion, for no one could have been more appropriately chosen than her Royal Highness. In the visit through the wards her kindly solicitude for the little inmates fully betokened the motherly feelings which had prompted her visit, and the many questions put concerning their ailments at once indicated her own knowledge of children's diseases, and her sympathy with the little sufferers around her. The new Hospital which was thus so auspiciously opened on Wednesday last is built on the pavilion system. In shape it may be roughly likened to the letter E: the lowest horizontal stroke representing the administrative block, the middle stroke representing the wards which have just been opened (they run parallel), while the top stroke shows the remaining block which is to be very shortly commenced; the vertical stroke represents the corridor of communication between the different parts of the building. The administrative portion includes secretary's offices and board-room, accommodation for two resident medical officers, a lady superintendent, matron, and a full staff of nurses. The kitchens, etc., which are in the basement, are in direct communication with the different floors by means of a lift, so that food, etc., can quickly be raised with a minimum outlay of manual labour. The wards are large and airy—they are seventy-five feet long by thirty feet broad and fourteen feet high; they are lighted by ten windows on each side, and are intended to hold thirty beds each. The ventilation is effected on Tobin's principle, and, to judge by the short experience of the other day, we should think it answers very well indeed. The walls are of Parian cement; the woodwork is deal, stained and varnished. The walls struck us as rather bare, but we imagine that they will be distempered with some agreeable colour before very long. It would add much to their appearance, and in no way interfere with the efficacy of the Parian cement. Opening out of each ward are a well-ventilated water-closet and a bath-room, which are appropriately fitted; also a room for the lady superintendent of the ward. At the other end of the ward there are a small kitchen and a linen-room. On the whole we are very much pleased with the arrangements; they reflect very great credit on the promoters, and we have no hesitation in saying that this Hospital will serve as a model for many years to come. In addition to the three main wards, there is a small separate building for infectious cases. The Hospital is managed by a Matron and a Lady Superintendent of Nursing; the former controlling the household arrangements, while the latter presides over the nursing department. The Committee have decided to reorganise and extend the teaching power of the Hospital, for it is felt how few places in London exist where ladies and others can be *systematically* trained in nursing; and it is believed, moreover, that many ladies who are anxious to learn are deterred by the obvious difficulties of commencing such a career in adult hospitals. Under any circumstances such a life necessitates great sacrifices on the part of those who undertake it, and brings them in contact with scenes which shock the feelings of every modest woman. We agree with those who think that a children's hospital is *par excellence* the place where a woman may best commence her career as a nurse, and gradually accustom herself to work among the sick. The present Lady Superintendent has had many years' experience in children's

hospitals, and is qualified for the post she holds as much by natural gifts as by long-continued and judicious training. It is intended also to train nurses with a view to lend them out in private families where special cases demand special care. We are pleased to find that the medical officers are all *ex officio* members of the Managing Committee: we are sure that such an association of lay and medical elements tends to successfu management, and we believe that all hospitals in London would be better if the same plan were generally adopted. The proceedings of Wednesday last passed off with great satisfaction, and we must especially thank Mr. Ashton Warner, the secretary, for his courtesy on the occasion; to his exertions and enterprise the success was in no small degree due. The Hospital has our best wishes for its continued prosperity.

MR. HOLT'S "CRUELTY TO ANIMALS" BILL.

At the sitting of the House of Commons on Wednesday afternoon Mr. Holt's Cruelty to Animals Bill came on for the second reading. The Bill has one virtue, in that it is not directed solely against one class of persons, as other anti-vivisection Bills have been, for by Clause 3 it provides that if any person shall cruelly torture any vertebrate animal he shall be guilty of an offence. But the intention of the Bill is the absolute prohibition of "the practice of painful experiments on animals, known as vivisection"; and Clause 4 forbids all cruel operations, even with anæsthetics, except for the purpose of alleviating or curing the sufferings of a diseased or injured animal. The stock statements, misstatements, and exaggerations about experimentation on animals by medical men were brought forward by the supporters of the Bill. The statement of the late Sir W. Fergusson, that he was not aware of any important discovery having been ever made through vivisection—a statement which astounded the profession almost to laughter by its calm ignoring of facts—was, of course, again quoted; and, of course also, the real evidence produced by the Royal Commission on Vivisection was passed by as if of no value or non-existent. The ignorance of science and the ignoring of facts against their views displayed by the supporters of the Bill could scarcely have been more complete had no previous discussion of the subject ever taken place, and no Blue-book on it ever been published. Dr. Cameron, in an able and forcibly temperate speech, moved the rejection of the Bill, and was well supported by Dr. Lush. Sir Selwin-Ibbetson, on the part of the Government, asserted that the Act passed last year had been entirely successful in effecting the purposes for which it was passed; and that not only had the Act worked as it was intended it should, but the Home Secretary had found the greatest readiness among physiologists to carry it out thoroughly in its spirit and meaning; and he asked the House to maintain the beneficial legislation adopted only last session, and which allowed, with comparative immunity from pain to the lower animals, those advances in medical science which it would be contrary to the public interest to arrest. We might remind Sir Selwin-Ibbetson that last year's Act, while hampering physiologists and other men of science with unneeded forms and restrictions, really requires from them no more care and tenderness towards the animals experimented on than had already been employed voluntarily,—but let that pass. The Bill was rejected by 222 votes against 83. And it may be observed that it was, after all, but a half-and-half measure, such as could not satisfy the out-and-out anti-vivisectionists, for it proposed to protect vertebrate animals only. The hon. member for Marylebone, Mr. Forsyth, opposed it because it would not permit the infliction of pain, even in making experiments with the view of discovering means of removing human suffering; but he made a sensational appeal for protection to invertebrate as well as the vertebrate animals, and Mr. Holt admitted that he had only confined the Bill to the latter "to meet the views of the weak brethren."

AMERICAN DIPLOMAS IN THE LAW COURTS.

A case of great importance to all holders of foreign diplomas, genuine or otherwise, and to the medical profession generally was decided in the Exchequer Division of the High Court of Justice on Tuesday last. A Mr. Foulds, who professed to hold a diploma from the University of Philadelphia, and who practised at Bolton, was convicted by the magistrates of that town under the 40th section of the Medical Act, 1885. Against this conviction Mr. Foulds appealed. It appeared from the special case presented to the Court that the appellant had put on his door the inscription, "Dr. Foulds," and on a fanlight over the door, "Dr. J. J. Foulds, M.D. U.S., Eclectic Physician." He had prescribed twice for a Mr. Hobson, and given him two or more certificates on one of which he described himself as "Dr. J. J. Foulds, M.D. U.S., Eclectic Physician"; but in another he dropped some of the latter designations. On these facts the magistrates fined the "Dr." £1 for the first offence, and £20 for the second. The counsel for the appellant contended that his client was wrongly convicted, as he did not pretend to be a registered practitioner, but was careful only to describe himself as an "eclectic physician"—a title not used by medical men of this country—and as an American graduate. Copies of two diplomas, one from the University of Philadelphia, and the other from the Society of Eclectic Physicians, were produced. It was stated that the originals were lost or mislaid. Without calling upon the counsel on the other side to argue in support of the conviction, Baron Pollock proceed to deliver the judgment of the Court, and, in the course of his remarks, said that in his opinion the fact of describing himself as "Dr." would be sufficient to bring him within the Act. The letters "U.S." could not be held to control the other words of description, but might be treated as mere surplusage, as if he had used other words. The public was not bound to know that he was not qualified to practise. He had his name on his door-plate, and it was given in evidence that he had treated a case, prescribing and giving certificates. The magistrates had therefore properly convicted him, and the decision would be upheld. Baron Huddleston concurred, and further stated that in his opinion the addition of the words "eclectic physician" to the title "M.D." implied that he was not only an M.D., but that he was a member of a particular chosen and better class. It was an assertion that he was something else beyond, and was calculated to impose on people and to defraud them, if done wilfully. This authoritative decision will, we should imagine, entirely dispose of the pretensions of holders of American diplomas.

PAYMENT FOR MEDICAL TESTIMONY AT INQUESTS.

In the Court of Queen's Bench (Ireland), on Saturday, April 28, Mr. Purcell, Q.C., with whom was Mr. Robert O'B. Furlong, instructed by Mr. Clifford Lloyd, on the part of Dr. Archibald H. Jacob, Chairman of Council of the Irish Medical Association, applied for a conditional order for a *certiorari* for the purpose of obtaining the opinion of the Court with respect to a decision made by Mr. Finlay, the Public Auditor, allowing certain payments in the nature of a fixed salary made by the Corporation of Dublin, for the year ending August 26, to a medical witness who had been employed by the coroner at inquests. By the 9th and 10th Vict., chap. 47, it is made lawful for the coroner, whenever he deems medical evidence necessary at an inquest, to summon any duly qualified medical practitioner in medical practice at or near the place where the death happened, and to pay such witness any sum not exceeding a guinea for each inquest. An affidavit of Dr. Jacob stated that for some years back one and the same medical witness had been permanently employed by the coroners to attend at all inquests without regard to the locality of the death, and that the Corporation had paid him a fixed salary of £75 a year,

instead of payments by fees per inquest, as provided by the Act of Parliament. The Lord Chief Justice: Do I understand that the medical witness was to do all the work, including the making of post-mortem examinations, for the fixed payment of £75 a year? Mr. Purcell said it appeared so. Mr. David Fitzgerald, instructed by Mr. V. B. Dillon, on the part of the Auditor, said he would have been willing to allow an absolute order for the writ sought to go at once, but on consultation with Mr. Purcell they had found that if that course were taken there would be no opportunity of bringing all the facts necessary for the decision of the question before the Court on affidavit. Their Lordships accordingly granted a conditional order for the writ, a copy of which they directed to be served upon Dr. R. W. Egan, the medical witness.

PATHOLOGICAL SOCIETY OF DUBLIN.

The closing meeting of the session of 1876-77 was held on Saturday, April 28. Dr. Hayden, President, occupied the chair. Dr. Henry Kennedy showed a large tumour which engaged the roof of the right lateral ventricle in the brain of a woman aged thirty-three, who had suffered from left hemiplegia, severe attacks of right headache, and epileptiform fits without aphasia. Her temperature was persistently subnormal. The histological nature of the tumour had not yet been ascertained. Dr. W. G. Smith exhibited an example of sarcomatous growth engaging the left supra-renal capsule, in an elderly male. There had been no discoloration of the skin. Dr. Purser presented the heart, bladder, etc., of a well-developed blacksmith, aged thirty, who fell a victim to pyæmia with secondary deposits in the lungs and other viscera. The starting-point of his illness was a hyperplasia, tending to recurrent endocarditis, the last attack of which was very interesting, being one of "endocarditis ulcerans" or "diphtheritica." The endocardium abounded with micrococci. The President exhibited a specimen of suppurating multiple hydatids of the liver in a soldier's wife aged twenty-eight. No hooklets were found, nor was there a history of tapeworm, but the post-mortem appearances otherwise fully verified the diagnosis. The President also showed a ruptured chorda tendinea as a cause of mitral regurgitation in a girl aged twelve. The case illustrated the etiology of an apical presystolic murmur, for in this instance it was caused by simple roughening of the endocardium near the valve. After these specimens were shown, the President announced that the Society's gold medal had been awarded to "Καππα" for his essay on "Diseases of the Œsophagus—their Pathology and Treatment." The author proved to be Mr. John Knott, who received the medal amid loud applause. Strangers then withdrew, and the Society proceeded to transact private business. Several radical changes were made in the working of the Society. Discussion is in future to take place on the specimens shown; students are no longer to be admitted to the meetings; and the awarding of a gold medal is for the present to be suspended. These changes will take effect in the next session, commencing in November, 1877.

SMALL-POX IN LONDON.

The fatal cases of small-pox in London, which had been 78, 60, and 68 in the three preceding weeks, further rose to 89 during the week ending Saturday, April 28—a higher number than has been returned in any week since the middle of March; 41 were certified as unvaccinated, 14 as vaccinated, and 34 were "not stated" as to vaccination. The 89 included 49 which were recorded in the Metropolitan Asylum Hospitals, and 8 in the Highgate Small-pox Hospital; the remaining 32 fatal cases occurred in private dwellings. Excluding one extra-metropolitan case, and distributing the other 56 fatal hospital cases, it appears that 10 of the deceased small-pox patients had resided in Southwark, 9 in Bow, 7 in Hackney, 6 in Marylebone, 6 in Islington, 6 in Bethnal-green, 5 in Lambeth, and 5 in Camberwell; in all, 5 belonged to the West, 23 to the North, 4 to the Central, 30 to the East, and 26 to the South groups of districts. The fatal cases showed a marked increase in North, East, and South London. Three children of a carpenter, aged nine years, six years, and four months, died of small-pox, within three days of each other, in Percy-terrace, Hackney, all being "not stated" as to vaccination; and in Peckham the deaths of four children were referred to the same disease, the medical certificates relating to which contained no information as to vaccination. The Metropolitan Asylum District Hospitals contained 824 small-pox patients on Saturday last, against numbers declining from 988 to 881 in the four preceding weeks. The number of new small-pox cases admitted during the week was 207, against 228 and 161 in the two previous weeks.

The deaths referred to diseases of the respiratory organs, which in the four previous weeks had declined from 645 to 343, were 349 last week, and exceeded the corrected weekly average by 60.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The annual general meeting of the Society was held, by kind permission of the Royal Medical and Chirurgical Society, in their rooms, Berners-street, on Friday, April 27. The chair was taken by Mr. Fuller, treasurer. From the statement read by the Secretary, the receipts available for payments during 1876 had been £3154 18s. 11d.; the expenditure had been £3100 5s. 11d.; leaving a balance of only £54 13s. A sum of £2885 10s. had been given to fifty-eight widows and thirteen orphans. The expenses had been £214 15s. 11d. The funded property had been increased by the purchase of £792 13s. Metropolitan Consolidated Stock. During the last year eleven members had died, four had resigned, and thirteen new members had been elected. The number of members at the end of the year was 402. Five widows had been admitted as fresh recipients of grants, three had died or become ineligible. One orphan had been declared eligible, and two had become ineligible for further grants. A legacy of £1000, duty free, from the Rev. H. C. Morgan had been received. Mr. Prescott G. Hewett was elected a Vice-President in place of Sir William Fergusson, deceased; Mr. N. H. Clifton a director in place of the late Dr. Carr; and Mr. Goodchild, Dr. C. Brodie Sewell, Dr. Blandford, Sir William Jenner, Mr. W. Morrant Baker, and Mr. Rouse were elected directors in place of the six senior who retired by rotation. A vote of thanks to the editors of the medical journals for their kind advocacy of the interests of the Society was carried unanimously. The meeting was closed by a vote of thanks to the chairman.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

At an ordinary meeting of the Royal College of Physicians, held on April 26, the new by-law enacting that candidates for the College licence, who possess degrees in medicine or surgery, obtained after a satisfactory course of study and examination from a British, colonial, or foreign University recognised by the College, shall be exempt from re-examination on such subjects as shall in each case be considered unnecessary, was finally agreed to; and it was referred to the Council of the College to revise the list of recognised universities, and to consider what further exemptions, if any, may be desirable, and to report to the College. The most important business before the College was, however, the election of Fellows. The following members had been nominated by the Council, and were proposed to the College for election:—William John Little, M.D. Berlin, Park-street; William Henry Parsey, M.D. Lond., Hatton, Warwick; Charles Rooke Prance, M.D. Edin., Plymouth; Christian Godfried Heinrich Baümler, M.D. Erlangen, Freiburg in Baden; George Vivian

Poore, M.D. Lond., Wimpole-street; William Jelly, Madrid; Evan Buchanan Baxter, M.D. Lond., Weymouth-street; Frederick Thomas Roberts, M.D. Lond., Harley-street; Robert Farquharson, M.D. Edin., Brook-street; David Ferrier, M.D. Edin., Upper Berkeley-street; Norman Moore, M.D. Camb., St. Bartholomew's Hospital. The list is a small one, certainly, but a very safe one. All the gentlemen fortunate enough to be comprised in it were elected; and it would, indeed, have been surprising had any objection been felt to conferring the honour of the Fellowship upon any of them. The College resolved to give, as usual, a *conversazione* in the course of the summer.

GARDEN HOSPITALS AT NOTTINGHAM.

In his annual report on the health of the borough of Nottingham for the year 1876, Mr. Edward Seaton, the medical officer of health for the district, remarks that the most encouraging feature to which he has to call attention is the diminution in the mortality from fever. Under this heading forty deaths were registered, against an average of seventy-four for the previous five years. The decrease in the mortality from this specially preventable disease may, he submits, be fairly taken as indicative of an improved sanitary condition of the town. An excellent arrangement appears to have been instituted at Nottingham, in the shape of garden hospitals for infectious diseases; the number of cases admitted to these during the past year was thirty-seven. Of these thirty-four were cases of scarlet fever, one of measles, and two of erysipelas. Thirty-three were discharged when free from infection, and the deaths were four from scarlet fever. The amount contributed by patients treated in them towards their maintenance was £44. The plan adopted for the removal of patients is as follows:—Upon receiving from a householder or friend of the sick person a certificate from the medical practitioner that the case is one of scarlet fever, an order is sent for the removal to the garden hospitals, a bed is prepared, and the ambulance ordered; so that within two or three hours of the time that the illness is made known, a case, say for instance one of scarlet fever, breaking out in a house full of children, may be removed to the garden hospitals. The sick-room and all its contents are then disinfected, and the danger of the disease spreading is reduced to a minimum. At the hospitals the patient continues under the care of the practitioner previously in attendance, his friends contributing a small sum per week towards his maintenance, and he is kept there until such time as he can be pronounced to be perfectly free from infection. Mr. Seaton says there are not wanting indications of an increased appreciation amongst all classes of the importance of isolating early cases of infectious diseases, and as the public become better informed on the subject he believes the demand for hospital accommodation of this character will steadily increase.

A NEW FREEZING MICROTOME.

In the *Journal of Anatomy and Physiology* for April, Dr. Bevan Lewis describes an instrument which he has devised for the preparation of microscopic sections of fresh brain through freezing by means of ether spray. The instrument consists of three parts—(1) an ordinary Stirling's microtome, (2) a section plate, and (3) a freezing and condensing chamber. By the play of the ether upon the under surface of the plate upon which a small piece of brain is placed, the cerebral substance becomes fixed and solidified to such a consistence as permits of the slicing of very fine sections, the whole process being carried out in the space of from twenty to thirty seconds. The advantages of the method are that no previous preparation of brain-substance is required; that all risk of change in the elements of the tissue by the action of chemicals is avoided, and that consequently absolute certainty is reached hat all the conditions observed in the brain-substance are those proper to the healthy or abnormal state of the brain. The simplicity of structure and easy manipulation of the new freezing microtome are great recommendations of the instrument, and pathologists will be thankful for the means which it supplies of enabling them to make sections of the brain at once, so as to do away with the delay of several weeks necessary for the production of chrome-hardening. A wood engraving showing the structure of the freezing microtome accompanies Dr. Lewis's paper.

THE CONJOINT SCHEME.

A meeting of the Conference of Delegates of the Medical Authorities concerned in the formation of a Conjoint Examining Board for England was held at the Royal College of Surgeons on the 1st inst., when it was announced, we believe, that the three Medical Corporations, and the Universities of Oxford, Durham, and London, had concurred in rejecting the proposition made by the Syndicate of the University of Cambridge for the addition of a clause enacting that the Scheme should terminate at the end of ten years, to be renewed should the Authorities desire it. The two other Cambridge proposals had been accepted by all the other Authorities. The Altered Amended Scheme will therefore, no doubt, be presented to the Medical Council for discussion and approval during the approaching session.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the College held on May 1 the following Fellows of the College were elected examiners for the ensuing year:—Examiners to examine candidates for the letters testimonial and fellowship—B. Wills Richardson, Edward A. Stoker, John Barker, Edward S. O'Grady, William H. O'Leary, Henry G. Croly, William Thomson, and Robert S. Swan. Examiners to examine candidates for the diploma in midwifery—Henry Croly, John R. Kirkpatrick, and William Roe. Examiners to examine candidates in general education—Frank J. Davys, Michael J. Malone, and Robert Morton.

MEDICAL PARLIAMENTARY AFFAIRS.

Cattle Plague.—On Tuesday, May 2, Viscount Sandon moved that the Select Committee on Cattle Plague and Importation of Live Stock should consist of twenty-three members, of which the names were given. Captain Nolan and Mr. Butt objecting that Ireland was not duly represented, obtained leave to the appointment of three Irish members on the Committee. The nominees of the Government were severally proposed and elected as follows:—Sir H. Selwin-Ibbetson, Messrs. Hunter, Chaplin, Jacob Bright, Egerton, Corry, Pease, Chamberlain, Colonel Kingscote, Sir E. Jenkinson, Sir R. Knightley, Major Allen, Messrs. Murphy, Elliot, Mundella, Cameron of Lochiel, Ritchie, Holms, Torr, Anderson, Norwood, Assheton, and Mr. A. Peel. After some further discussion with reference to the additional Irish members the House was counted out.

Elimination of Lead in Saturnine Paralysis.—Professor Semmola, of Naples, has recently published an account of six cases of paralysis from lead-poisoning in which he has effected a rapid cure by inducing the elimination of the lead, chiefly in the urine, by the agency of the continued current applied in the region of the ganglionic nervous centres, without any attention being directed to the paralysed parts themselves. On the second day of treatment lead begins to appear in the urine, and increases in quantity as amendment progresses. In from fifteen to twenty days the blue line on the gums disappeared, and in two or three months the paralyses were entirely cured without any other means being employed. Prof. Semmola claims this mode of employing electricity in these cases as entirely his own, former applications having been directed to the local stimulation of the nerves and muscles of the paralysed parts—a procedure that does not enter into his plan of treatment, which entirely consists in increasing the action of the eliminating organs.—*Gaz. des Hôp.*, April 10.

FROM ABROAD.

The Vienna and Prague Lying-in Hospitals.

M. E. De Roubaix, writing to the *Presse Médicale Belge* (April 15), states that, having learnt that the Brussels Maternité has recently been closed on account of an epidemic prevailing therein, and that the opinion of the majority at the late Brussels Medical Congress was unfavourable to the maintenance of maternities, he thinks that information concerning the lying-in hospital at Vienna which Prof. Braun has communicated to him will prove of interest.

This forms a portion of the great General Hospital, and is divided into three departments, each having its medical director. Two of these, under the direction of Profs. Carl Braun and Spaeth, are devoted to the instruction of male students in theoretical and practical midwifery and gynæcology; and the other, under Prof. Gustav Braun, is confined to the instruction of midwives and female pupils. The Professors are appointed by the Government, and an annual statistical report is presented by them to the authorities. Prof. Carl Braun's department, besides himself as director, consists of two assistants with residences close to ths wards. It is upon them rests all the responsibility when the Professor is absent; and in the female department the action of the midwives is exceedingly limited, being confined to superintending the course of delivery, and whenever any interference is called for, sending for one of the assistants. Nowhere can medical students have finer opportunities for instruction than in this Hospital, the wards of which are always open to them. They are divided into series, each having their day of practice—*i.e.*, they attend to all the cases that come in during the twenty-four hours. Not only do they pass the night in the Hospital, but are furnished with all appliances for employing their time usefully, resorting to the room devoted for them when their presence is not required by the bedside—long sofas with requisite coverings being provided for them when they wish to sleep. In this room is also found all that is required for the pursuit of study. An electrical signal informs them of the approach of a delivery or the performance of an operation. The students in attendance insert on cards kept near the beds all the particulars observed. There has never been any complaint made of this constant presence of the students, nor has it ever been known that any of them coming from any of the other clinics or theatres have conveyed infection into the Maternity. The same is observed with regard to the assistants, who, giving daily on the body practical demonstrations of obstetrical operations, thanks to the measures of precaution and disinfection observed, have never found any inconvenience to result from this practice.

Women are admitted six weeks before the expected time of confinement, and in order to prevent overcrowding, to which the greatest importance is attached, each of the three departments receives during twelve hours the women presenting themselves, whether already beginning to feel the pains of labour, or having yet some weeks to wait. On their arrival the women are examined by the assistant on duty, who determines the position of the child, the presumed time of delivery, takes notes of all information supplied by the applicant, and decides whether she is to be admitted. The students are admitted to this visit, and are allowed to examine the women and to verify the diagnosis of the assistant. Before making the examinations every one is obliged to wash and thoroughly brush the hands with soap and phenicated water; and this is the only precaution now insisted upon. Formerly much more complicated procedures were put into force, phenicated glycerine and various forms of disinfectants being resorted to. The above-mentioned precaution has been found amply sufficient, and Prof. Braun attaches a far higher importance to hygienic conditions, to which he principally attributes the success that he has obtained. In 1853 and 1854 the mortality rose to 3 and 4 per cent., and the present far more favourable results date back thirteen or fourteen years, when important changes were made, and when a complete system of the ventilation termed the "Bohemian" was introduced. This was attended by the enormous expense of 150,000 florins (£15,000), but its results soon showed themselves, the deaths descending to 1 per cent. in 1863, and sometimes much lower still in subsequent years. From 1863 to 1876 there have been admitted 52,583 women, and 724 deaths have taken place, or $1\frac{3}{10}$ per cent.—the locality of the building remaining the same, and all the change consisting in improved hygienic conditions.

When a woman is taken in labour, her temperature is carefully taken and noted, as it is immediately after delivery and frequently during the early subsequent period. As soon as any elevation is observed, she is at once removed from among the other patients, and placed in a ward in which she is kept completely isolated. In this way propagation of puerperal fever is prevented, the orders to this effect being very strict and punctually obeyed. As to the treatment of metro-peritonitis, when it does occur it is very much as that ordinarily employed, bleeding never being resorted to. Immediately after delivery the woman is enveloped in hot napkins, which have been already submitted to a very high temperature in a stove *ad hoc*. The napkins are renewed three or four times a day. The use of sponges is prohibited, and vaginal injections are only had recourse to when early symptoms of the exudative process are observed, and the woman has been isolated. Straw mattresses are excluded from the establishment, only those of iron-wire being employed, which, though very expensive at first, are cheaper in the end. Prof. Braun's section of the establishment will receive 500 patients, and there are from 500 to 600 students who frequent the lectures annually.

The new Prague Maternity has been opened two or three years, having been built on the pavilion principle, united by corridors, at an expense of a million and a half of florins. It is situated on a height outside the city, and isolated from all other habitations, large gardens and fields surrounding it on every side. Its appearance, indeed, is quite palatial. It is managed by three medical directors, each having two assistants who live on the premises. The students are divided into series, who take their turns, a portion of them being allowed to reside constantly. A special part of the building is assigned to them, whence they are summoned by electric signals when anything remarkable occurs. Each of the three clinics receives about 900 women per annum, the mean mortality being below 1 per cent.—one death only, indeed, having taken place among nearly 200 women treated during the present year. When there is room the women are admitted three months before confinement, but the usual time is six weeks. In each ward there are but six large beds, widely separated from each other, and each bed having a cradle by its side. The system of ventilation is the same as at Vienna, but the disinfecting means are more complicated. The floors and windows are washed with phenicated water, and phenic (carbolic) acid is continually thrown into the privies. Every woman who has been delivered has a compress applied to the genitals, which is imbibed with chlorine-water and often renewed, and she injects herself several times a day with a lotion of camomile-tea and chloride of lime. Isolation of the sick is promptly effected, and the number of wards is sufficiently great to allow always of a large portion of them to remain unoccupied for two or three days, during which the windows and doors are left wide open and disinfectants are employed.

Transfusion in a Young Girl.

Dr. Strapart relates (*Révue Méd.*, March 26) the case of a girl, thirteen years of age, who was admitted to the Hôtel-Dieu, at Rheims, on account of uterine hæmorrhage. She was a strong and well-developed girl, and between July and October had menstruated three times. On this last occasion menstruation became profuse, and, having continued so for three weeks, she was brought to the hospital on November 23. She was then excessively pale and exhausted, her pulse being rapid and filiform, the hæmorrhage issuing as an oozing, and clots being occasionally discharged. Under the use of ice, ergotine, quinine, with perchloride of iron and cold enemata, she improved, and continued doing so until December 13, the bleeding diminishing considerably. On the 14th and two following days the hæmorrhage returned with violence, and was accompanied by very frequent vomiting, and by the 17th the patient's condition seemed desperate, she being pulseless and almost unconscious. Transfusion was at once resolved on, the girl's father supplying the blood. Of non-defibrinated blood 120 grammes were injected by Mathieu's apparatus. In proportion as the blood flowed in, the girl felt a vivid sense of warmth pervade her entire frame. This soon after was followed by shivering and thirst that nothing seemed capable of appeasing. The pupils, which prior to the operation had been dilated, were two hours afterwards considerably contracted, and continued so for four or five hours. Wine and a little broth were prescribed. The night was sleepless, and there

was frequent nausea, but no vomiting. On the 18th the pulse was 145, and the thirst still continued excessive. Some sleep was procured at night. On the 19th the pulse was 135, with a little more power, the cheeks also regaining some colour. The temperature was 38° C.

Without pursuing the case further in detail, it may be stated that the patient gradually, but slowly, improved, although her temperature rose to 39°. A month after the transfusion she began to leave her bed, and on January 28 left the hospital in a satisfactory condition, the pulse, although still rapid, being regular, and the cardiac *souffle* less distinct. Scarcely any hæmorrhage had occurred since the transfusion. Her treatment had consisted in tonics, iron, and Malaga wine. The phenomena observed in her case were due to advanced chlorosis, and the red globules, which prior to the transfusion could easily be counted on the field of the microscope widely separated from each other, were afterwards considerably increased in number. The irrestrainable vomiting formed an important feature in the case, and an additional indication for adopting transfusion. It may be questioned whether so prompt an effect would have been produced if defibrinated blood had been employed.

Gastrotomy in Obstruction of the Œsophagus.

M. Lannelongue, of Bordeaux, read a paper (*Gaz. Hebd.*, April 13) on a case of gastrotomy performed upon a man fifty-nine years of age, on account of an impassable obstacle situated at about the middle of the thoracic portion of the œsophagus. The difficulty of swallowing had gradually been increasing during six months, so that at last he could only swallow a few spoonfuls of milk. The emaciation was extreme, but there were no cachectic appearances. Gastrotomy was performed, and a fistulous aperture was easily established, which enabled the patient to be regularly fed. He died, however, on the twenty-sixth day, in consequence of an epithelioma of the œsophagus having induced bronchial perforation and asphyxia. The stomach was found to be solidly adherent to the walls of the abdomen, and the artificial fistula was well formed, so that the success of the operation was complete. M. Lannelongue concludes that—1. Gastrotomy is a rational operation, founded on the history of gastric wounds and fistulæ produced experimentally in animals, or accidentally in man. 2. It is indicated wherever aphagia renders death from inanition imminent. 3. The operative procedure should be conformable to the rules indicated by Prof. Verneuil, one of the principal of which is not to open the stomach until after having fixed it to the abdominal wall by the careful application of numerous points of suture, in order to prevent any effusion into the peritoneal cavity. 4. The incision should not be carried below the inferior edge of the eighth costal cartilage, so as to more directly reach the anterior wall of the stomach, which, after long fasting, is always shrunken and drawn up towards the diaphragm. 5. The stomach should be opened near its small curvature, so as to allow space enough in a dependent position for the accumulation of the secreted or injected fluids. 6. Neither should hæmostatic forceps be applied to the gastric orifice, nor should the tube left in be fixed by threads, these means risking lacerations and mortifications, which may give rise to an enlargement of the fistula and the escape of the fluids.

The Fishmongers' Company have contributed £250 towards the building fund of the Metropolitan Free Hospital.

Printed Pills and Granules.—Prof. Bouchardat observes that at the present time, when medicinal substances of great energy and in very minute doses are employed, everything should be received with favour which leads to precision of doses and the prevention of fatal mistakes. The printed pills and granules of Frère completely attain this double object. The active material, prepared as the last edition of the "Codex" directs, is accurately distributed throughout the pill-mass, and each pill or granule is exactly of an equal size. The name and the dose of the active principle are very legibly printed on each pill, the pills being also coloured differently, according to the substances employed. This is an excellent procedure for rendering certain to the practitioner that what he has prescribed will be administered in the doses in which it has been ordered, while the precautions taken for preventing mistakes are very ingenious.—*Bull. de Thérap.*, April 15.

GENERAL CORRESPONDENCE.

TRAINING COLLEGE FOR TEACHERS OF THE DEAF.

Letter from Dr. Thomas Crozier.

[To the Editor of the Medical Times and Gazette.]

Sir,—The article in your journal of March 17, under the above title, prompts me to give you a sketch of what is being done in the same direction on this side of the water. For three years there has been in successful operation in this city a school for the instruction of teachers of deaf mutes in the theory and practice of articulation as applied to the deaf.

Strange to relate, while you in London are looking to Germany for the best system of instruction, here, after careful and patient investigation, the German method has been laid aside as imperfect and cumbersome in comparison with a system *which originated in your own city*, and which is now being taught to a large portion of the 30,000 deaf mutes of the United States and Canada.

Let me call your attention to a work published in 1867 by Simpkin, Marshall, and Co., London, printed by Collie and Son, Edinburgh, entitled "Visible Speech, the Science of Universal Alphabetics," by Alexander Melville Bell. This volume, the result of nearly twenty years of labour, occupies almost untrodden ground, and is a marvel for its freedom from the crudeness and error so often found in a new and untried venture. This work is the basis, in this country, of all intelligent instruction of the deaf in the art of talking. Professor Bell came to Boston in 1871, and gave a course of lectures before the Lowell Institute. The result of these lectures was an experiment with the system in the Boston Public Day-School for the Deaf and Dumb. The experiment was a success, and the system was adopted. At present this School has seventy pupils and eight teachers; the mutes and semi-mutes of Boston numbering about 500. It was afterwards introduced into the Clarke Institution at Northampton, an endowed institution, aided by the State of Massachusetts, where signs are excluded. It has been introduced into the Day-School for Deaf Mutes at Portland, in the Institutions at Hartford, New York, Philadelphia, Montreal, and other places. Wherever it has had a fair trial it has overcome prejudices and been adopted as a regular feature of the institution. The training-school in this city is under the direction of Professor Alexander Graham Bell, a son of the inventor of the system above mentioned. The instruction is of the most thorough character, the term lasting from October to May. Pupils are instructed in the various methods of teaching articulation to the deaf; methods of correcting defects of speech, foreign peculiarities of utterance, lip-reading, the sounds of foreign languages, etc. From a knowledge of the subject since its introduction into this country, and from an almost daily contact with its results for the last two years, I am unable to conceive of a more perfect system, or one attended by such complete success.

Professor Graham Bell is the inventor of the "telephone," an instrument of marvellous simplicity, by which the human voice is conveyed through telegraph-wires to places hundreds of miles apart, not only with clearness, but so distinctly that even the person speaking can be identified by those familiar with his voice. You will, I trust, soon have the opportunity of witnessing the operation of this wonderful instrument, the invention of your fellow-countryman; but it is unfortunate that the equally important invention of the elder Bell, "visible speech," should fail of support in the place of its birth—while here, after the most searching investigation, it has established itself on a sure and permanent foundation.

I am, &c., Thomas Crozier, M.D.

Boston, Mass., U.S., April 4.

New Chair in the Paris Faculty of Medicine.—A decree has just been published, establishing in the Paris Faculty a "Clinical Chair of Mental Pathology and Diseases of the Encephalon," and M. Ball is appointed the first Professor.

Medical Practitioners in Vienna.—With a civil population of 690,548 souls, Vienna has at the present time 1069 doctors of medicine, 116 magisters of surgery, 65 surgical and midwifery practitioners (*Wund-und Geburtsärzte*), 16 magisters of dentistry, 62 apothecaries, 35 veterinarians, and 1000 midwives.—*Wien. Med. Woch.*, April 7.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 13.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

SUBPERIOSTEAL RESECTION OF THE SHAFT OF THE TIBIA.

MR. CHRISTOPHER HEATH read notes of this case, which was that of a boy aged ten, who had been kicked on the leg a month before admission. The shaft of the tibia was found to be bare, and separated from the epiphysis at both ends, and was removed in May, 1876, by separating the periosteum with the handle of the scalpel. The whole of the shaft was not necrosed, the back part having new bone adherent to it. The patient made a good recovery, and was shown to the Society. There was still an open sinus, but the boy was able to walk without assistance, and the length of the limb was the same as that of the opposite side. Mr. Heath referred to a similar case recorded by Mr. Holmes, and recommended the proceeding in appropriate cases, pointing out the necessity for obviating shortening by maintaining the full length of the limb by the use of a splint during healing.

Mr. HOWARD MARSH related the particulars of a case in which he had removed a portion of the femur, including the whole thickness of the bone, and extending from the lower epiphysis to the lesser trochanter. The patient, a boy aged nine, had been attacked a month before with diffuse periostitis of the bone, with the formation of a large subperiosteal abscess, and was at the time of the operation in so exhausted a state from profuse suppuration that there was a question whether amputation should not be performed. The piece removed was seven inches and a half long. A new shaft was rapidly produced, and the limb was shortened only three-quarters of an inch. The boy left the hospital with all the parts soundly healed. Mr. Vincent, formerly Surgeon to St. Bartholomew's Hospital, had published a case in which he removed the whole bulk of the femur, from the trochanter to the lower epiphysis, in a child four years old, who had had subperiosteal abscess. Here also a new shaft was quickly developed, with scarcely any shortening. Mr. Marsh stated that he had seen several cases in which, although, in consequence of acute subperiosteal abscess, large surfaces of the long bones—the femur and tibia—had been completely stripped of their periosteum, this membrane, when matter was let out, had settled down again and become adherent, so that no necrosis had occurred; and Sir James Paget had mentioned to him that he had had several similar cases. Two or three years ago a case—that of a girl aged about six—was admitted into the Children's Hospital, in which a large abscess had formed around the ends of a fracture of the femur that had been overlooked. When the abscess was opened, the ends of the bones were found bare for a considerable distance, yet the fracture speedily united when the limb was kept at rest, and no necrosis took place. All these cases, and others like them that he had seen, made him quite sure that the periosteum of the long bones in children, after it had been stripped off by diffuse suppuration, might settle down and become re-attached, and that no necrosis might take place.

Mr. BARWELL had already described cases in which he had removed the shaft of the tibia. As to the reattachment of periosteum after diffuse periostitis, there was no doubt about it; its occurrence was general if the matter were let out at an early date. Even in a man sixty-seven years of age, it had occurred when a subperiosteal abscess of the lower part of the femur had been opened, and some carious bone removed. In any case of doubt as to whether bone was necrosed or not, if it were struck with a small steel instrument, a distinction would be made: necrosed bone gave out a musical note almost like a tuning-fork, whilst from living bone the steel instrument elicited a dull note.

Mr. BRYANT said it was sometimes doubtful as to when one should interfere in these cases. It was impossible to determine beforehand how much of a bone exposed would die. Years ago he had given an extensive trial to the early separation of supposed necrosed bone. In the case of a boy with abscess of the femur, which was opened, the periosteum was found to be completely separated from the bone; but the case took a favourable turn. The early removal of the shaft of the bone was attempted, and the bone was divided in order that both sections might be easily removed. But the centre of the shaft was found to be living and healthy; only its circumference was dead. He consequently readjusted the fragments. A small case of new bone was formed around the old bone, and finally a little necrosed bone came away. Since then he had been chary of removing supposed necrosed bone. In a similar case, of a boy with acute abscess of the fibula and tibia, a good free incision was made down to the bones; and eventually only the lower part of the shaft of one bone and a small shell of the other were removed. But, if he had acted in that case on Mr. Heath's suggestion, he would have removed a large quantity of viable bone. He now ranged himself on the side of the teachers who would leave the bone until it was certainly necrosed, but make very free incisions and expose the bone.

Mr. HEATH asked if, in Mr. Bryant's case, the shaft was separated from the epiphysis.

Mr. BRYANT replied that the shaft was quite loose, and he had simply cut it through in order to remove it more easily.

Mr. CROFT inquired why the operation was specially called *subperiosteal*, since all operations for the removal of dead bone from the shafts of necrosed bones were subperiosteal. No one in his senses would in such cases dream of removing the periosteum. He wished to confirm the experience of Mr. Bryant, that apparently dead bone would recover. After extreme separation of periosteum, if the pus were evacuated, the periosteum would often settle down again and become attached to the bone.

The PRESIDENT remarked that the question to which he had referred in his introductory address arose again out of Mr. Heath's case—viz., the asymmetry of limbs. He had had sent to him from Philadelphia a statement as to the great difference of the length of healthy limbs on the opposite sides of the body in many cases.

Mr. BARWELL observed that, in his work on Curvature of the Spine, he had shown that many cases of that affection were due to asymmetry of the lower limbs.

Hr. HEATH, replying to Mr. Croft, read an extract from "Holmes's Surgery," which justified his use of the term "subperiosteal"; the difference from the ordinary operation for necrosis was that in his case the necrosed bone was removed before the formation of the new bone around it by the periosteum. In his case, possibly, some of the bone which was removed might, if left, have recovered. But he believed he had done the best for his patient, as he was suffering from the rubbing together of the epiphysis and diaphysis. He had never before had a case in which he had thought it advisable to remove the whole shaft, the shaft being movable at both ends. But the result was good; the boy now (April, 1877) walked fairly well. Had he waited for the repair of bone and the subsequent removal of the dead portion, he thought recovery would have been much longer deferred.

MYELOID TUMOUR OF LEFT ULNA.

Mr. CLEMENT LUCAS exhibited a patient from whom he had removed the lower half of the left ulna on account of a myeloid tumour which had commenced in the interior of the bone. The case was of interest from the rare occurrence of myeloid disease in the lower end of that bone, but chiefly from the very serviceable limb which remained after the operation. Allusion was made to a paper by Mr. Cock in the *Guy's Hospital Reports* for 1861, in which mention was made of three cases of compound fracture of the bones of the forearm, for which excision of the lower ends of both radius and ulna was performed, and in every case a useful hand remained. There was a preparation in the Museum of the Royal College of Surgeons, contributed by Mr. Hancock, and called osteo-aneurism. It consisted of the lower ends of the radius and ulna, which had been excised for a tumour commencing in the radius of a woman aged twenty-five. The microscopic appearances were not well described, and it was not improbable that this was a case of myeloid tumour commencing in the lower end of the radius, where it was not unfrequently met with. Mr. Henry Morris had performed a similar operation, which was noticed in the *Lancet*, March 18, 1876. Several cases were on record where the greater part of the ulna or radius had been removed; but each of these operations appeared to have been undertaken for injury or necrosis, so that the periosteum was preserved and the bone reproduced. Mr. Lucas had been unable to find any recorded case in which the lower end of the ulna alone had been removed for a tumour involving that bone. Mr. Lucas's patient was a healthy-looking married woman, aged twenty-

nine, who was admitted into Guy's Hospital on August 11, 1876. About nine or ten months before admission she first noticed a slight swelling at the lower third of the left ulna. This swelling was accompanied by a gnawing pain, and it gradually, but very slowly, increased in size. In April, 1876, she first sought advice at another metropolitan hospital, where she attended as an out-patient for ten weeks. She was then admitted into the same hospital, but left a fortnight later upon a suggestion having been made to her that amputation would be necessary. When admitted into Guy's Hospital in August the patient was found to have a firm, dense, but somewhat elastic swelling occupying the lower part of the left forearm on the ulnar side. It projected more posteriorly than anteriorly, and extended upwards for about two inches and a half above the wrist-joint. It was smooth and convex towards the inner side, where the tumour was slightly red and inflamed, but the skin was not adherent to the tumour except over a small cicatrix. The circumference of the forearm over the centre of the tumour was two inches greater than the corresponding part of the opposite limb on the same level. Pronation and supination were somewhat interfered with, but the movements of the wrist-joint were perfectly free. The tumour was not particularly painful upon pressure. The glands above the tumour were not enlarged. On August 15, chloroform having been administered, Mr. Lucas made a longitudinal incision about four inches in length on the inner side of the forearm, so as to expose the tumour between the flexor and extensor carpi ulnaris muscles. In doing so the posterior branch of the ulnar nerve was exposed and divided. The muscles and skin were now retracted to the sides, and the bone exposed above the level of the tumour. In order to clear the bone above the tumour it became necessary to make a short transverse incision at the upper part of the wound. A blunt knife was then passed between the radius and ulna, and the latter bone was divided with a saw. The piece of bone connected with the tumour was now seized and drawn out of the wound, whilst the interosseous membrane connecting it to the radius was divided, and the extensor indicis on the posterior aspect and the pronotor quadratus on the anterior were separated from the periosteum enclosing the tumour. On dividing the ligaments of the lower radio-ulnar joint the tumour dropped away from the triangular fibro-cartilage; and on dividing the attachment of this cartilage to the styloid process, and also the internal lateral ligament of the wrist-joint, the excision was completed. The wrist-joint was thus left intact, being protected by the triangular fibro-cartilage. The operation was not performed antiseptically, but carbolic dressings were afterwards employed. Very little constitutional disturbance followed; and the patient left the hospital five weeks after the operation, the upper part of the wound having united, and the lower part having closed by granulation. Microscopical examination showed the tumour to be a characteristic myeloid growth. She had now free use of her hand, which she employed in all her household work; and the movements of pronation and supination were perfect. There was, moreover, no tendency of the hand to drop towards the ulnar side, such as, perhaps, might have been anticipated after removal of the inner bone with which the carpus articulated. In this respect excision of the ulna contrasted favourably with excision of the radius, inasmuch as abduction of the hand almost certainly followed resection of the latter bone. This abduction was often seen after Collis's fracture, and in its most complete form in cases of congenital absence of the radius, when the hand often assumed a position at right angles to the forearm. Further, the movements of pronation and supination must necessarily be lost when the radius was divided, whereas after excision of the greater part of the ulna they might remain complete. Lastly, owing to the intervention of the triangular fibro-cartilage, excision of the lower end of the ulna might be effected without opening the wrist-joint. In thus comparing excision of the lower extremity of the ulna with excision of the lower end of the radius, Mr. Lucas said he did not wish to deter anyone from performing the latter operation; on the contrary, he would be the first to follow the example of Mr. Hancock and Mr. Morris, and remove portions of both bones rather than sacrifice the hand; but he wished to point out that removal of the lower end of the ulna was a most simple operation, involving injury to no structure of importance, and yielding a most satisfactory result. He ended by saying that tumours of the lower end of the ulna were happily of not very frequent occurrence; but, after the experience of this case, he should hold it most culpable in himself, and not altogether blameless in others, to entertain the thought of amputation for a benign tumour, without first attempting to remove the growth by excision of the bone.

Myeloid Sarcoma of the Left Radius.

Mr. Henry Morris read a paper on this case, in which he had excised the lower ends of the radius and ulna, leaving a useful hand. The patient applied at the Middlesex Hospital on January 3, 1876, with a large tumour just above the left wrist, the result of a fall upon her hand. When she first came to the hospital, thirteen months after the fall, and ten months after the commencement of the swelling, the lower end of the left radius was expanded into a large rounded tumour. The inner surface of the ulna was quite free, and could be traced down to the styloid process, but its radial border was overlapped by the expanded radius on both the flexor and extensor aspects. She was advised to come into the hospital for operation; but this she flatly refused to do, and added that nothing would induce her to have her hand amputated. At last she was admitted; and on March 8, chloroform having been administered, and Esmarch's bandage applied to the hand and forearm, a long incision was made over the outer side of the radius, extending from the styloid process of the upper third of the bone. The radial nerve was looked for, and used as a guide to the interval between the supinator longus and extensor carpi radialis longior muscles, as Mr. Morris had previously satisfied himself that he could most readily separate the soft structures from the front and back of the radius by going between those muscles, and keeping the supinator to the fore part of the incision. The supinator longus and the pronator radii teres, at their insertions, were detached from the radius, and the bone, when freed both in front and behind of its muscles, was sawn through at the lower edge of the supinator brevis by a chain-saw. The saw was passed through the interosseous membrane upon a piece of silk threaded through a nævus-needle. A second longitudinal incision, of less extent than the first, was made along the inner side of the ulna from the wrist-joint upwards, and through it the rest of the soft structures were separated from the tumour and from the lower part of the ulna. The ulna was divided by the chain-saw between three and four inches above the wrist, and the lower ends of both bones of the forearm were disarticulated by opening the wrist-joint on the inner side. This done, the entire tumour, together with the ulna and the pronator quadratus muscle, which was thinly and tightly spread out over the tumour, were removed *en masse*. In the operation the anterior interosseous artery was necessarily divided above the upper border of the pronator quadratus, but, with this exception, none of the trunk-vessels or their larger branches were injured. On removing Esmarch's bandage, several bleeding points had to be tied or twisted, the most noticeable of which was a small branch from the radial, winding round to the back of the radius, which had been divided close to its origin. A branch of the radial artery was divided, and bled as furiously as could the radial itself. All hæmorrhage was, however, soon stopped; the wound was washed out with carbolic lotion, carbolised catgut sutures were inserted, and lint soaked in carbolic oil was placed over the incisions. The hand and forearm were enveloped in antiseptic gauze, and lightly bandaged upon a straight splint. When examined after removal, the tumour proved to be of a typical myeloid character. It was confined within the radius, which formed a thin and imperfect shell, on the dorsal surface of which were seen the grooves and markings of the extensor tendons. The ulna was firmly attached to the tumour, partly by the pronator quadratus, and partly by adhesions between the periosteum of the ulna and the capsule of the tumour. The patient did uninterruptedly well. After leaving the hospital on April 27, the woman, who was very apathetic and indifferent about her position, rarely attended without being sent for. At the end of August she came and had a light leathern splint moulded to the forearm and carpal part of the hand. When out of the splint, her hand still hung loosely down like a flail, but she was now able to raise it to a level with the back of the forearm, and to keep it so for a little while. She could make the thumb approach the tip of each finger, but could only make it touch that of the index-finger. The hand was somewhat retracted, so that the carpus had approached the ends of the radius and ulna, the ulna now being only one inch, and the radius about three inches, from the carpus. The hand inclined towards the radial border of the forearm when the arm was resting on a

table, as well as when she made an effort to move the hand from its dangling attitude. It could, however, be brought straight, and kept so on a flat surface. Both radial and ulnar arteries pulsated naturally. Sensation of the whole hand, as tested by the point of a pencil, was good. On applying the faradic current it was found that, with a battery of two-pint Leclanché cells, and Stöhrer's coil No. 3 power, excited a slight movement, and provoked a low cry from the patient each time the circuit was completed by applying one pole on the forearm near the elbow, and the other at some part of one of the fingers or of the thumb. The most marked effect was produced when the positive sponge was placed upon the ring-finger. She was very thankful she did not have her hand removed, as she found it very useful. On January 11, 1877, she was seen for the last time. She was still wearing the same splint; and, with it on, could move her thumb and each of her fingers fairly well: she was able to pick up a pin, and could hold a fork. She had been using the hand a good deal for washing, holding the wet linen in the left, while she wrung it dry with the right hand. Mr. Morris remarked that the case of Mr. Lucas had been treated at the Middlesex Hospital for a medical ailment by one of the physicians. The tumour was punctured, the microscope used, the tumour pronounced to be myeloid, and excision advised. But the patient left, and, fortunately as it happened, fell into Mr. Lucas's hands.

Mr. Gould said that last year Mr. Berkeley Hill had a case of round-celled sarcoma, the size of a lemon, originating in the ulna. The piece of bone was removed. The wound healed slowly, but there was good use of the hand.

Mr. Bryant congratulated the authors on their results. It was too often the practice in such cases to remove the whole bone. This should be the exceptional course. Sir James Paget had shown that in such cases they might often simply remove the tumour or the portion of bone connected with it. This was often of very great importance, especially when the upper extremity was effected. Myeloid tumours might, he thought, return; but such was not the rule. He alluded to an interesting case under his care, where, after certain preliminary operations, it had been found necessary to remove one half of the upper jaw. Unfortunately, it was found that the opposite side was also affected. This, however, was not removed, and after a time it was found that the myeloid growth had completely disappeared.

Dr. Althaus asked whether the portion of the ulnar nerve here referred to was only cut across, or was it entirely removed, as sensation was described as very good. [Mr. Lucas replied that about two inches were removed.] He also remarked that, after the use of Esmarch's bandage, bleeding might be stopped by applying the poles of an electric battery to the upper and lower edges of the wound. This, acting on the muscular coat of the arteries, caused them to contract, even in such an artery as the radial.

Mr. Marsh thought we could hardly conclude from what had been said that the whole of a myeloid tumour was not to be removed. A good example was epulis.

Mr. Callender thought the operation for removal of the jaw probably began in the practice of gouging out myeloid growths.

Mr. Morris thought the tendency of myeloid to recur was not great if properly removed; and the growth might even disappear after removal of the bone, as in the case of the upper jaw.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 17.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

The Minute Anatomy of Scarlatina.

Dr. Klein read a paper upon his researches on this subject. He said that he had examined in all twenty-three cases of undoubted scarlatina, dying from the second to the forty-second day of the disease, specially investigating the state of the kidney, liver, spleen, and lymphatic glands. The results of his observations on the throat and skin would not be published on the present occasion. The duration of the disease between the extremes above stated was as various as possible. Most of the subjects were between the ages of two and twelve; but one was as old as thirty-eight years. First, with respect to the *kidney*. This organ was examined in twenty-three cases. In the *first week of the disease* the vascular and glandular parts of the organ presented the following changes:—1. The nuclei on the Malpighian bodies were increased in number. 2. The intima of the minute arteries had undergone hyaline degeneration; they were swollen into cylindrical hyaline structures, with narrowing of their lumen. At the same time, larger or smaller portions of the glomeruli became impermeable—hyaline at first, fibroid afterwards; while Bowman's capsule also appeared hyaline. These changes were constant. 3. Another early change was multiplication of the nuclei of the muscular coat of the minute arteries. This was observed in different parts of different arteries, but especially at the point of their entrance into the glomerulus. 4. Parenchymatous nephritis—swelling and multiplication of the nuclei of the epithelium, and a granular appearance of the tubules and Malpighian bodies. In some cases the epithelium was found detached. With respect to the second of these changes—the hyaline degeneration—Dr. Klein said that it was decidedly the same as that described by Sir William Gull and Dr. Sutton. Nillsen had recently described the walls of the capillaries of the pia mater as suffering a similar change in several diseases, with shrinking of the endothelial nuclei, as well as further changes; and his chemical examination had shown that the hyaline substance reacted like elastic tissue. On this account, and because the change was observed at the points of division of the vessels, Nillsen's observations were interesting confirmations of Dr. Klein's. Sir William Gull and Dr. Sutton had described a similar change in chronic Bright's disease, and the real place of origin in their cases was probably the elastic tissue between the outer and middle coats. Another disease in which a similar alteration occurred in the arteries was typhoid fever. Next, with respect to the muscular fibres, there was no doubt that the nuclei were increased, that they belonged to the muscular fibres, and that they did not come from migrated cells; but there was some difficulty in deciding whether this proliferation was accompanied by increased size of the muscular fibre or true hypertrophy. Against the existence of true hypertrophy were its early appearance, and the absence of sufficiently extensive disease of the capillaries to account for such wide-spread arterial enlargement. Klebs had described cases of scarlatina dying early of anuria, in which the glomeruli were found pale: the urinary tubules frequently not changed; and neither interstitial inflammation nor signs of catarrh present. There was, therefore, in these instances little beyond congestion to account for the symptoms. With such cases Dr. Klein had not met; he observed nuclear increase in all his specimens, and if no lesion were found he would be inclined to account for the anuria, not by compression of the capillaries, but by extreme contraction of the arteries from the action of some poison in the blood. The parenchymatous (tubular) changes were at first very slight, and quite local. *After the first week* of the disease, the changes might be described as (1) infiltration around the tubules, commencing in the tissue about the large vascular trunks; and (2) parenchymatous nephritis, the tubules being crowded with lymphoid cells and hyaline cylinders, and the epithelium presenting fatty degeneration. Of these two changes, the interstitial infiltration occurred first between the medullary rays, and afterwards spread to the cortex; in some cases the resulting growth resembled adenoid tissue. In one case, that of a child of five, dying on the thirteenth day of the disease, the interstitial change was advanced, and emboli were found in the arteries, consisting of fibrine and a few cells. In all cases the infiltration was accompanied by swelling of the kidneys and parenchymatous change. Dr. Klein said that, while many observers had described interstitial nephritis as rare in early scarlatina, he considered it a regular lesion. Secondly, with respect to the *lymphatic glands of the neck*, it was observed that in scarlatina the uninuclear cells of the central parts were greatly diminished in number, and that their place was taken by large multinuclear cells, with intermediate forms; while the peripheral parts of the glands were occupied by crowds of ordinary lymph-cells. Fibrinous thrombi occurred at the same time in the bloodvessels, and giant-cells were found. Further changes were in the direction of fibroid degeneration. In the *liver*, which was examined in eight cases, Dr. Klein discovered (1) granular opaque swelling, or even fatty degeneration, of the hepatic cells; (2) a change on the arteries similar to that described in the renal vessels; and (3) great thickening of the interlobular connective tissue

of Glisson's capsule. These appearances were well marked in a case of only two days' duration. The *spleen* presented (1) enlargement of the Malpighian bodies; (2) hyaline degeneration of the intima of the arteries; (3) distinct multiplication of nuclei of the muscular coat of these vessels; (4) adenoid growth around the arteries; and (5) infiltration of the lymphatic follicles with large hydropic cells. In conclusion, Dr. Klein said that, besides the preceding changes, he had observed a swollen, hyaline state of the basement membrane of the trachea, and of the elastic tissue of the vocal cords. It was interesting to remember that this tissue, so extensively affected over the body in scarlatina, was one specially resistant to the swelling-effect of reagents.

The PRESIDENT, in thanking Dr. Klein for his communication to the Society, remarked that he seemed to have shown that what was generally considered to be a purely desquamative disease, the renal complication of scarlatina, was really complex, including also changes on the arterial walls and on the connective tissue of the organ. He wished to know whether Dr. Klein considered that these changes disappeared in cases that recovered; and, if so, how? Another question, interesting in its clinical bearing, related to the occurrence of albuminuria between the middle of the third and the middle of the fourth weeks, which might be the first symptom of serious disease of the kidney. Could Dr. Klein offer any explanation of this circumstance?

Dr. GREENFIELD said that Dr. Klein's observations closely corresponded with some that he had made himself in the course of examination of twenty-five collected cases. He had further had the advantage of studying the morbid anatomy of scarlatina under Professor Charcot, in Paris; and Charcot had said that he believed that interstitial nephritis occurred as a lesion in the disease. While he (Dr. Greenfield) could personally confirm most of Dr. Klein's statements, he had to add that, in some cases, he had quite failed to find evidence of interstitial change. He had observed the affection of Glisson's capsule in the liver; and it was remarkable how firm the liver felt, even to the hand, in the sixth or seventh week of scarlatina. He was less acquainted with the changes in the spleen. The appearances in the lymphatic glands of the neck closely resembled those found in diphtheria; and Dr. Greenfield believed that all these changes described as found in scarlatina were not specific, but the result of inflammation. Even in the kidneys the same lesions had been seen by him in typhoid fever and in diphtheria.

Dr. MOXON said he must confess that Dr. Klein's results were more new to him. In general hospitals their experience of fatal scarlatina and acute renal disease was rare; while the large white or congested kidney was more familiar, inasmuch as it was of older standing. He did not remember having ever seen Dr. Klein's phenomena; and he had not associated clouds of corpuscles around the Malpighian bodies with the acute changes in this state. He had, however, long looked for a pathological explanation of the clinical difference between the acute Bright's disease of scarlatina, and that due to other causes—how the former disappears, but the latter not. Could Dr. Klein give any explanation of this? In specimens of ordinary tubal nephritis carefully prepared he had never seen much evidence of exudative nephritis; perhaps the cases had been too advanced. He wished, in conclusion, to ask Dr. Klein how he could identify as an embolus the material found in an artery post-mortem.

Dr. KLEIN replied: With respect to the President's questions, —he had one case in an adult fatal on the forty-fourth day, of pneumonia: in it the parenchymatous and interstitial changes in the kidney were both slight; and, comparing this with the other cases, he had concluded that it was recovering from the interstitial disease. As regarded albuminuria, some of the patients had had none, and yet post-mortem the urinary tubules presented casts and advanced disease. He accounted for this by suggesting that the albumen remained arrested in the kidney, and did not pass into the urine. Dr. Klein said that he was glad to hear from Dr. Greenfield that his researches had been confirmed by other pathologists. Of course cases occurred where no interstitial disease could be discovered. At first there occurred a small deposit of cells around the vessels, and then these went on increasing. All persons dying of scarlatina presented at least as much as this. In reply to Dr. Moxon's question regarding embolus, Dr. Klein said that when an artery presented within it at the point of its division a bit of fibrin, filling it, and causing dilatation with accumulation of blood behind, while the branches in front were small and empty, he concluded he had before him an embolus, and not a post-mortem product.

THE MINUTE ANATOMY OF SO-CALLED PIG-TYPHOID.

Dr. KLEIN also read a paper upon this subject. He said that while Professor Axe and Dr. Budd had tried to prove the identity of pig-typhoid with typhoid fever in man, the President (Dr. Murchison) had questioned it several years ago. He had himself taken up the study of this as a good example of an infective disease of animals. Briefly, the clinical history of pig-typhoid was as follows:—The disease was an infective fever, with a period of incubation lasting from three to fourteen days. The ordinary symptoms of fever then set in, such as dulness, pyrexia, etc., followed in a few days by patches of redness, with swelling on the skin in particular regions of the body. The latter developed into a characteristic eruption, which had been described as consisting of slightly elevated spots one to three lines in diameter, circular, firm, and disappearing on pressure. After lasting three days this eruption was said to subside, and to be followed by successive crops with the same characters. In some cases vesicles appeared on the summit of the eruption, containing a clear fluid, and these might become confluent. Prostration was an early general symptom; the bowels might be constipated, or there might be diarrhœa, even with bloody discharge; the belly was tender. Delirium occurred in some cases, and death followed—days or weeks from the commencement—in 90 per cent. of the animals attacked. In twelve cases examined by Dr. Klein post-mortem the following appearances were found:—The *skin* was affected in the majority; in one case there was no eruption; in some necrosis even had occurred. The small *intestine* was hyperæmic and ulcerated; as were also the *stomach* and the large intestine. In some cases the ulceration was extensive, with thickening of the mucosa, but it did not possess the characters of that found in typhoid fever. Microscopically this difference was confirmed, for it was found that the ulceration did not pass beyond the mucosa, and had no relation whatever with the lymphatic structures. The throat and mouth were also ulcerated in some cases. The mesenteric *glands*, and those connected with the large intestine, along the aorta, in the submaxillary region, etc., were found to be large, red, firm, and oozing blood on section. On microscopical examination of the various parts it was discovered that the vessels were ruptured in places, allowing escape of blood into the tissues. There was, further, distinct affection of the lungs and serous membranes. The lungs presented œdema of the interlobular tissue and hyperæmia; hepatisation occurred as a later change, and, still later, the foci ran into opaque areas. The pleura corresponding was inflamed, even large areas becoming altered in this way; and in some instances a thick, foul exudation was found. A similar appearance was occasionally seen in the pericardium and peritoneum. The *spleen* was dark, and either somewhat enlarged or of normal size. The *liver* in severe cases was enlarged. The *kidneys* were hyperæmic. The microscopic examination of the large intestine revealed extravasation of blood into the tissues, distension of the superficial vessels, and removal of the epithelium; and these changes proceeded to complete destruction of the affected part. Without doubt the ulceration was due to necrosis of the superficial part of the mucosa, the usual limit externally being the muscularis mucosæ. There was here, therefore, nothing in common with the appearances in human typhoid. The occurrence of giant-cells around the lymphatic spaces in the mucosa was to be remarked by the way. In the mouth, etc., the ulcers were the result of a necrosis of inflamed mucosa. In the lymphatic glands masses of blood were found effused into the lymph-sinuses, and in the mesenteric glands many giant-cells were seen, which could be traced to small epithelium-like cells. In the lungs lobular pneumonia was found. The changes in the liver were very marked—in the form of accumulation of lymph-corpuscles both in the interlobular connective tissue and within the acini. With respect to the *etiology* of pig-typhoid, Dr. Klein said that Professor Axe had proved (1) that infection occurred through the air; and (2) that the fluid of the skin eruption contained the contagion, which could be successfully inoculated. That the intestinal ulcers also contained the contagion had been proved by himself, by the successful injection into healthy animals of scrapings from the ulcerated surfaces. Feeding with diseased materials also gave rise to the "typhoid" in healthy pigs, but inoculation might really have occurred on previous ulcerations in the mouth. The spleen also contained

the poison, as was proved both by inoculation and by feeding. The blood, or juice from a lymphatic gland, did not propagate the disease—a fact disposing of the theory that pig-typhoid was identical with anthrax. It was, however, an interesting fact that such blood-inoculation appeared to render the effects of subsequent inoculation with contagious material peculiarly mild.

The PRESIDENT said that ten years ago he had brought the subject of pig-typhoid before this Society. He had then concluded that the disease was perfectly distinct from typhoid fever in man. He had observed that it did not affect the lymphatic follicles, and that the skin eruption was not like that in human typhoid fever. Indeed, pig-typhoid bore more resemblance to scarlatina.

Professor AXE requested the Society to allow him to reserve his reply till another meeting. He still favoured the view that "pig-typhoid" was typhoid fever in the pig, though not identical with the disease in man. He wished to discuss the question in a broader light than that of morbid anatomy.

THE INTIMATE PATHOLOGY OF CONTAGION.

Dr. BRAIDWOOD exhibited a large number of specimens and drawings, and read a paper illustrative of this subject, the investigations described having been made upon the anatomy and certain physical relations of vaccinia and variola. The changes on the *skin* in vaccinia were first detailed. Briefly, these consisted in corpuscular infiltration of the tissues—especially around the glands,—leading on to, and ending in, a fusing together of the parts, the *débris* having been carried away. No fungoid forms were found in any instance. Various attempts were made, but without much success, to vaccinate the skin of the heifer with tinged lymph. The pathological histology of variola was next reviewed, the successive changes in the eruption being briefly described. On comparing the processes in the two diseases, there was found to be a close relation between them. In both there were infiltration, destruction of structure, and gemmation of the corpuscular elements. Passing next to the *physical properties of contagion*, Dr. Braidwood said that with respect to the portion of the vaccine fluid that probably contains the active principle, his results were confirmatory of those of Dr. Burdon-Sanderson and Cheveau, proving the futility of inoculation with the soluble portions of vaccine. The results of experiments on the effects of temperature on vaccine lymph were as follows:—1. 139° Fahr. was the highest temperature to which lymph could be heated and retain its inoculative power. 2. Lymph kept for one hour and a quarter at a temperature of 100° Fahr. below the freezing-point of mercury did not lose this power. Finally, with respect to *germicides*, 537 inoculations were made on heifers with lymph treated with various "germicides," inoculation with the lymph being repeated as a test when the result was negative. The results were briefly these:—(1) that a mixture of vaccine lymph and a one-to-twenty solution of carbolic acid, when immediately used, fails in some cases; (2) that the same mixture, when kept for some time, entirely fails; (3) that lymph is entirely destroyed by strong carbolic acid; (4) that sulphurous acid destroys it instantly; (5) that ozone destroys it more slowly; (6) that chlorine acts like sulphurous acid; (7) that chloral is inert; (8) that quinine destroys lymph after an interval of contact; (9) that salicylic acid has no effect upon it; and (10) that liquor potassæ permanganatis (P. B.) affects the action of lymph, but not at once.

DEATHS OF DOCTORS FROM DIPHTHERIA IN PARIS.—M. Carrère has just died of diphtheria at the early age of thirty-one. He makes the fifth doctor who has died in Paris within a short time from the same disease—viz., MM. Regnauld, Dubois, Méranden, Cintrat, and Carrère. And, besides, how many others may there be who die obscure and unknown?—*Gaz. des Hôp.*, April 24.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—At the meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, the question of the alleged abuse of authority by the police in transferring their supposed sick cases from the streets and from the cells to the infirmaries of the workhouses was discussed, when it was resolved that application be made to the medical officers of the metropolitan and certain provincial urban workhouses, requesting them to forward to the Hon. Secretary, Mr. J. W. Barnes, any information they can supply on this subject. The annual meeting of the Association will take place at 3, Bolt-court, Fleet-street, on June 21, at 3 p.m.

MEDICAL NEWS.

UNIVERSITY OF DURHAM.—The following is a list of candidates who passed the recent First M.B. examination:—

Callender, J. H.	Fenwick, Bedford.
Coombs, M. L. B.	Morton, Shadforth.
Dodd, J. R.	Young, Thomas M.

UNIVERSITY OF ABERDEEN.—At the late Medical Graduation Term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

The Degree of M.D.—John Alexander, M.B., C.M., Western Infirmary, Glasgow; James Allardyce, M.B., C.M., Rakwana, Ceylon; Samuel Henry Bailey, M.B., C.M., Nottingham; Thomas Churton, M.B., C.M., Leeds; George Cran, M.B., C.M., Banchory-Ternan; Sorabshaw Homasji Dantra, M.B., C.M., Calcutta; William Donald, M.B., C.M., Bogside of Eden, Banff; George Maitland Edmond, M.B., C.M., Stonehaven; James M'Call Fehrsen, M.B., C.M., Cradock, Cape of Good Hope; William Jack, M.B., C.M., Keighley, Yorks; Francis Edward Jackson, M.B., Manchester; Arthur Culver James, M.B., C.M., Kensington, London; William Bisset Knowles, M.B., C.M., Murrurundi, New South Wales; Robert Laws, M.B., C.M., Lake Nyassa; Robert Mortimer Yule, M.B., C.M., Towie.

The Degree of M.B.—James Allan, M.A., Birnie, Elgin; James Anderson, M.A, Aberdeen; Henry Bartlett, London; Arthur Bennett, Stawell, Victoria; James McKenzie Booth, M.A., Aberdeen; Frederick William Evans, Cardiff; William Fergusson, Ellon; Giles Forward Goldsbrough, Mere, Wiltshire; Peter Buck Gould, Aberdeen; John Rapsey Guy, Bristol; Henry Mason Jay, Chippenham, Wiltshire; John Alexander Mackenzie; Charles Arthur Moore, Thetford, Norfolk; James Noble, M.A., Fraserburgh; Harris Philpots, Leamington; James Porter, M.A., Monymusk; Thomas Richards, Cardiff; Frederick Freer Leslie Robertson, Cosham, Hants; William Smith Robertson, Peterhead; James Ross, M.A., Tullynessle and Forbes; George Peter Schokman, Ceylon; Johnston Shearer, M.A., Aberdeen; William Lemmon Stewart, M.A., Keith; Seymour Taylor, Derby; William Robb Tough, M.A., Aberdeen; George Shewan Trail, M.A., Monymusk; Edmund Venning, Cornwall; Henry Winchester, Elgin.

The Degree of C.M.—James Allan, James Anderson, Henry Bartlett, Arthur Bennett, James M. Booth, Frederick Wm. Evans, William Fergusson, Giles F. Goldsbrough, Peter Buck Gould, John Rapsey Guy, Henry Mason Jay, John Alex. Mackenzie, Charles Arthur Moore, James Noble, Harris Philpots, James Porter, Thomas Richards, Frederick F. L. Robertson, William S. Robertson, James Ross, George Peter Schokman, Johnston Shearer, William L. Stewart, Seymour Taylor, William R. Tough, George S. Trail, Edmund Venning, Henry Winchester.

Of the above-mentioned candidates, James Anderson, William Fergusson, and Peter Buck Gould received their degrees in Medicine and Surgery with Highest Academical Honours; James Allan, Arthur Bennett, Giles Forward Goldsbrough, Johnston Shearer, and William Robb Tough their degrees in Medicine and Surgery with Honourable Distinction.

At the same time, Llewelyn Robert Jones was certified as having passed all the examinations, but did not graduate; and the following were declared to have passed part of their examinations:—

David Mitchell Arthur, Wm. Montague Ball, Arthur George Blomfield, George Boyes, Thomas Breese, Algernon D. Brenchley, John K. Butter, William Clarke, George Coutts, Andrew Richard Cowell, Robert Eddie, Frederick J. Fehrsen, Andrew Fowler, Skene Gordon, Alex. Hill Griffith, David Hardie, William Henry, Charles Hoar, Samuel P. Impey, George Alex. Legge, Peter Wm. Macdonald, William Mackie, Donald S. M'Donald, Alexander M'William, John Francis T. Melvill, William A. Michie, Forbes R. Mutch, Andrew Norrie, James M. Park, Robt. F. Scott Proctor, George Rae, Archibald Reid, Charles Reid, William Reid, Leonard Rudd, George Jolly Shand, Charles L. I. de Seilan, David Skinner, Donald Stuart, Henry Sutherland, Henry Thomson, Octavius Todd, Herbert R. Vachell, Joseph Watt, William R. White, George Alex. Wilson.

The next professional examination for degrees in Medicine commences on Saturday, July 28.

UNIVERSITY OF DUBLIN.—At the First Commencement in Trinity Term, held on Monday, April 16, the following Degree in Medicine was conferred:—

Doctor in Medicinâ.—Arthur Stopford Underhill.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Licentiate of the College on April 26:—

Sugden, D'Arcy, student of St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma were admitted Members of the College at a meeting of the Court of Examiners on the 26th inst.:—

Collingridge, William, Hornsey, student of St. Bartholomew's Hospital.
Dresser, Arthur Kinnaird, Hammersmith, of St. Thomas's Hospital.
Earle, Joseph Herbert, L.S.A., Brentwood, Essex, of Guy's Hospital.
Edmunds, Richard, Bangor, Flintshire, of St. Bartholomew's Hospital.
Elsmere, Edward, Shrewsbury, of St. George's Hospital.
Evans, Charles Watkyns de Lacy, Bangor, Carnarvon, of St. Thomas's Hospital.

Gillard, Clarence Richard, L.S.A., Clapham-road, student of St. Thomas's Hospital.
Hammersley, Joseph, L.S.A., Lewisham, of Guy's Hospital.
Henchey, John Henry, M.D. Laval, Quebec, of St. Thomas's Hospital.
Horrocks, Peter, L.S.A., Over Darwen, Lancashire, of Guy's Hospital.
Howat, George Rutland, L.S.A., Southgate, of St. Bartholomew's Hospital.
Jee, Henry Christian, Nuneaton, Warwickshire, of Guy's Hospital.
Lee, Roger, L.S.A., Burton-on-Trent, of Guy's Hospital.
Lewis, Charles Blake, Wimbledon, of King's College Hospital.
Meek, John William, L.S.A., Macclesfield, of Guy's Hospital.
Poynder, John Leopold, L.S.A., Southsea, Hants, of St. Bartholomew's Hospital.
Wight, Alexander William, Trinidad, of King's College Hospital.
Williams, David James, Llandovery, South Wales, of University College Hospital.
Wright, George Arthur, Romford, Essex, of Guy's Hospital.

Six gentlemen were approved in Surgery, and when qualified in Medicine will be admitted Members of the College; and only one candidate failed to acquit himself to the satisfaction of the Court of Examiners, and was referred to his professional studies for six months. Of the eighty-eight candidates, four were L.R.C.P. Lond., four L.R.C.P. Edin., sixteen L.S.A., one L.K.&Q.C.P. Ire. and L.S.A., one M.D. Queen's Univ. Ire., two M.B. Edin., one M.D. New York and M.B. Toronto, one M.D. Ohio, one M.D. McGill, one M.D. Laval, and one M.B. Toronto. It may be interesting to notice also that at the recent primary and pass examinations Japanese and Chinese students were successful on these occasions, and that amongst the successful candidates were the sons of gentlemen no doubt destined to maintain the reputation achieved by their worthy sires—as Acland, B.A. Oxon., son of the President of the General Medical Council; Gulliver, B.A. Oxon., son of a former member of the Council of the College; Bowlby, son of the talented correspondent of the *Times*, so cruelly assassinated by the Chinese; Gilbert Grace, the champion cricketer, whose scoring has been as successful in this as in another field.

At the Primary Examination on Monday, the 30th ult., the following candidates were successful, viz.:—

Casement, Brabazon, student of the Dublin School.
Crawther, George H., of the Leeds School.
Greathead, J. B. Smithson, of the Edinburgh School.
Gruggen, William, of the Liverpool School.
Gwynn, Charles H., of the Edinburgh School.
Handford, Henry, of the Edinburgh School.
Hewitson, William A., of the Newcastle School.
Hurtley, William M., of the Leeds School.
Jones, R. Rowland, of the Newcastle School.
Lewis, Christopher J., of the Birmingham School.
Ritchie, Daniel, of the Edinburgh School.
Shaw, William, of the Edinburgh School.
Snowdon, Anthony, of the Newcastle School.
Tonks, Joseph, of the Birmingham School.

Ten candidates were rejected. The following passed on the 1st inst., viz.:—

Bland, Archibald, student of the Cork School.
Brown, Martin L., of the Edinburgh School.
Chisholm, John M., of the Edinburgh School.
Clarke, Henry J., of the Edinburgh School.
England, Frederick W., B.A. Oxon., of the Leeds School.
Farrer, R. Thompson, of the Leeds School.
Guillemard, Bernard J., of the Edinburgh School.
Hudson, Theodore J., of the Leeds School.
Jones, H. Parry, of the Dublin School.
Jones, R. Dennett, of King's College Hospital.
Thomas, William E., of the Dublin School.
Todd, G. Dixon, of the Leeds School.
Whiteley, George W., of the Edinburgh School.
Young, Campbell L., of the Bristol School.

Eleven candidates were rejected. The following passed on the 2nd inst., viz.:—

Bedford, Robert T., student of Guy's Hospital.
Cox, Robert, of St. George's Hospital.
Emerson, Peter H., of King's College Hospital.
Griffith, Edward P., of the Middlesex Hospital.
Hackman, L. Havelock, of St. Mary's Hospital.
Hunt, Edgar A., of St. George's Hospital.
Kendall, P. Slade, of the Edinburgh School.
Mantle, Alfred, of the London Hospital.
Morgan, Augustus K., of Guy's Hospital.
Pierson, Alfred H., of Guy's Hospital.
Townsend, Knowlson, of St. Bartholomew's Hospital.
Wells, Charles, of the Middlesex Hospital.
White, R. Prosser, of the Edinburgh School.
Williams, W. D. Campbell, of University College Hospital.
Wray, George B., of University College Hospital.

Nine candidates were rejected.

The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the pass examination for the diploma of Membership of the College of Surgeons on the 30th ult., when they were required to answer at least four, including one of the first two, viz.:—1. Name the structures divided by a circular saw passing completely through the hand across the centre of the palm. 2. Describe the crural arch, enumerate in order the structures which pass through it, and give the steps of the operation for strangulated femoral hernia.—3. Of what value is the careful observation of the temperature of patients after surgical operations? State the range of temperature, and briefly relate any case you may have watched in illustration of the subject. 4. Mention the changes which the urinary organs may undergo in a fatal termination of a case of organic stricture of the urethra. 5. Describe the signs of fracture of the surgical neck of the humerus; explain these on anatomical grounds, and give the treatment of this injury. 6. Describe the characteristics of sclerotitis; under what circumstances may it occur? and how would you treat it?

The following were the questions in the Principles and Practice of Medicine, viz.:—1. Describe the contracted granular kidney. What are the organic changes which attend it, or to which it gives rise, in the heart and bloodvessels? Discuss the more important symptoms of the disease, including the chemical and microscopical characters of the urine. 2. Describe the symptoms of acute rheumatism. How would you distinguish pathologically and clinically between rheumatism and gout? 3. What medicinal plants belong to the order *Cinchonaceæ?* and what are their several therapeutical properties? Enumerate their more important officinal preparations, and name their ordinary doses.

Royal College of Surgeons in Ireland.—At the examination held on April 23 and following days the undernamed gentlemen having passed the required examinations for the diploma, and having made and subscribed the declaration, were admitted Licentiates of the College, viz.:—

Barton, Thomas Boyne.
Collis, Robert W.
Considine, Patrick Oswald.
Costello, Hubert Kelly.
Crozier, William.
Donaldson, Ebenezer.
Dundas, Richard Thomas.
Edge, James J.
Fisher, Francis C.
Fitzgerald, Cornelius.
Hogan, Denis.
Knott, John Freeman.
Mackey, Stephen William.
Martyn, Robert Joseph.
Marques, Lorenço Pereira.
McNeece, James Gressen.
Miley, William Kildare.
O'Meara, William Henry.
O'Neill, Edward Daniel.
Patterson, John.
Peacock, James Charles Harding.
Spourt, William Ripton.
Turner, Reuben.
Tyner, Richard Gelling.
Walsh, John J.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 26:—

Jackson, Thomas, Great Torrington, Devon.
Knaggs, Robert Henry Edward, Trinidad, West Indies.
Scott, David Francis, 9, Mount-place, E.
Shresh, John Thomas, Southgate, Wakefield.
Trilee, Herman Thomas Bedingfield, Chatham.

The following gentlemen also on the same day passed their primary professional examination:—

Blott, Herbert, St. Bartholomew's Hospital.
Cocksedge, Charles Ernest, London Hospital.
Evans, Edward Pritchard, Middlesex Hospital.
Fraser, Græme Bisdee, St. Mary's Hospital.
Heald, Robert, University College.
Homes, James, University College.

At the Preliminary Examination in Arts, held at the Hall on April 27 and 28, seventy-five candidates presented themselves, of whom twenty-seven were rejected, and the following forty-eight passed and received certificates of proficiency in general education, viz.:—In the first class, in order of merit:

W. H. Hart and Jane Jaffé (equal); P. M. Earle and T. W. Price (equal); C. O. Fowler, R. J. Harcourt, and Constance V. Hitchcock (equal); F. St. John Kemm, R. M. Norton, and G. F. Travers (equal).

In the second class, in alphabetical order, viz.:—

F. W. Bate, R. B. D. Batt, H. H. Button, W. Case, T. H. Chittenden, W. T. Crick, E. Daunt, H. M. Davidson, D. T. Davies, G. H. Dawson, E. R. Derrett, T. Dixon, M. E. Dovaston, T. L. Downes, W. G. Ellis, A. Greetham, A. Kingston, G. P. L. Llewelyn, G. T. Miles, H. C. Otway, A. A. Parrott, J. Payne, R. F. T. Perkins, G. Perrin, A. Pocock, T. W. Price, G. C. Roberts, N. Roberts, R. M. Roberts, F. E. Row, A. M. Rugeroni, M. M. Siddall, H. G. Sworn, A. W. Thomas, F. H. Thornton, A. J. R. Tyler, and R. W. Watson.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barron, John, M.A., M.B. Aber.—Assistant Medical Officer to the Berks County Asylum, Moulsford, Wallingford, *vice* Charles William Harvey, M.B. Lond., resigned.

BOWER, ERNEST DYKES, M.R.C.S.E., L.S.A.—House-Surgeon to the County Infirmary, Gloucester, *vice* Henry Moore Sampson, resigned.

PLUMBE, SAMUEL THOMSON, M.R.C.S.—Assistant House-Surgeon and Dispenser to the Kent and Canterbury Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff Surgeon Frederick Augustus Brice has been promoted to the rank of Fleet Surgeon, with seniority of March 31.

BIRTHS.

CROSS.—On April 30, at 7, Stanhope-terrace, Regent's-park, the wife of John Cross, M.D. Cantab., of a son.

MARRIAGES.

HENDERSON—WELLS.—On April 26, at St. Matthew's, Oakley-square, N.W., William Henderson, M.B., of 26, Delancey-street, N.W., to Emma, daughter of H. T. Wells, of 6, Stanhope-terrace, Regent's-park.

PAGE—GRAHAM.—On April 28, at the parish church, Sandown, Isle of Wight, Frederick Page, M.D., of Newcastle-upon-Tyne, to Margaret, daughter of the late John Graham.

PENTON—WILLS.—On April 26, at St. Helier's, Jersey, Charles T. W. Penton, Captain 88th Connaught Rangers, to Emily Rose, daughter of John Wills, M.D.

DEATHS.

GIBSON, ROBERT EDWARD, M.R.C.S. Eng., at Norwich, on April 30, aged 36.

JONES, EDWARD PERCY, son of Edward Jones, M.D., 48, Sydenham-park, London, at Pleasant Point, Timaru, New Zealand, on February 17, aged 20.

PENNELL, JOHN WILSON CROKER, M.B., formerly of Rio de Janeiro, at 1, Powis-square, Notting-hill, on April 29, aged 57.

TYSON, WILLIAM TAYLOR, M.R.C.S., at Folkestone, on April 27, aged 65.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Candidates must have a double qualification, medical and surgical, and be duly registered. Testimonials to the Chairman of the Board of Management, on or before May 21. Candidates must state their age.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon. Applications, stating age, previous experience, etc., with testimonials, to Captain A. S. Leatham, Hon. Sec., on or before May 5.

GENERAL HOSPITAL, NOTTINGHAM.—Resident Surgeon-Apothecary. Candidates must have the following qualifications, viz.:—Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Dublin, or of the Faculty of Glasgow; Licentiate of the Society of Apothecaries in London; duly registered under the Medical Act. Applications to Thos. W. Bush, Secretary to the Hospital, on or before May 9.

NEW HOSPITAL FOR WOMEN, 222, MARYLEBONE-ROAD.—Resident Medical Officer. Only women are eligible. Salary £50, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, DEVONPORT.—Resident Medical Officer. Candidates must be registered under the Medical Act, 1858, and be qualified by law to practise both in medicine and surgery in England and Wales. Applications, with testimonials, to the Chairman of the Selection Committee, on or before May 12.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, 59, MOUNT-STREET, W.—Physician-Accoucheur. Candidates must be Members or Fellows of the Royal College of Physicians of London, or, if not, then of some other like College in the United Kingdom. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before May 5. Candidates are requested to attend the meeting of the Managing Committee on Tuesday, May 15, at 4 p.m.

WESTERN GENERAL DISPENSARY, MARYLEBONE-ROAD, N.W.—Honorary Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Testimonials and qualifications to the Secretary, on or before May 14.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Carnarvon Union.—Mr. R. A. Jones has resigned the Workhouse; salary £45 per annum.

St. Austell Union.—Mr. Samuel Mason has resigned the Third District; area 4990; population 5520; salary £20 per annum.

APPOINTMENTS.

Devizes Union.—T. Scoresby Jackson, M.D. Edin., M.R.C.S. Eng., to the Fourth District.

King's Norton Union.—Edward Potts, M.R.C.S. Eng., L.S.A., to the Edgbaston District.

Leighton Buzzard Union.—Henry W. A. Sandell, L.R.C.P. Edin., M.R.C.S. Eng., to the Leighton Buzzard District and the Workhouse.

Martley Union.—Edward S. Greensill, M.R.C.S. Eng., L.R.C.P. Edin., to the Martley District and the Workhouse.

Rothbury Union.—James Watson, L.R.C.P. Edin., L.R.C.S. Edin., to the Whittingham District.

Shardlow Union.—John C. Brady, L.R.C.P., M.R.C.S., L.S.A., to the Normanton District.

Sheffield.—Alfred H. Allen, F.C.S., as Analyst for the Borough for one year.

Tendring Union.—Walter Maine, M.R.C.S. Eng., L.S.A., to the Eighth (A) District.

Thame Union.—Samuel Moore, L.R.C.S. Edin., L.F.P.&S. Glasg., to the Great and Little Milton Districts.

HUNTERIAN MUSEUM.—A valuable collection of skilfully prepared and beautifully mounted microscopical specimens has been presented to the Museum of the Royal College of Surgeons by Mr. Walter Pye, M.R.C.S., House-Surgeon and Assistant-Demonstrator of Physiology to St. Bartholomew's Hospital. It consists of portions of normal tissues and sections of various organs, more especially of the tunics of the eye and the mucous membrane of the alimentary canal. Many of the specimens are suitable for examination purposes, and it is much to be desired that skilful young microscopists, now tolerably abundant in the various medical schools, would follow Mr. Pye's example, and contribute additions to the microscopical collection of the Museum of the College, which is deficient in preparations mounted according to the most recently perfected methods.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Staff Surgeon.—Apply to the authorities.

Godolphin.—Ale-houses were first licensed in 1551. Both ale and ale-houses are mentioned in the laws of Ina, King of Wessex.

Manfred.—The public baths and washhouses movement in London was practically initiated by the holding of a meeting at the Mansion House, under the presidency of the Lord Mayor, in September, 1844, when resolutions were passed for the formation of an "Association for promoting Cleanliness amongst the Poor." The first experiment was made near the London Docks, Glasshouse-yard, Rosemary-lane, where "free baths and washhouses" were opened in May, 1845. This, though the first establishment of the kind in London, was not the first in England, a very small one having been previously started, and with great success, in Liverpool, though without the knowledge of the London committee.

Hygiene, Bethnal-green.—Victoria-park, London, was commenced in 1842; and Battersea-park was thrown open in 1857.

A PENITENT ANTI-VIVISECTIONIST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Now this question is being agitated and raised again for further legislation on the "vivisection" question, I cannot remain silent, in justice to the medical profession. Will you allow me, as having worked in the cause, to add my experience and testimony? Last year I acted as secretary on the "total abolition" side for this and the adjacent neighbourhood, and that petition for presentation to Parliament had signatures in all over three thousand—in duplicate, Lords and Commons,—including the bishop of the diocese, many nobles' names, over a hundred magistrates (county and borough), and a large proportion of clergy, medical, and other professional names. Now, I regret to say, a medical gentleman of repute and eminence has since written me "that the papers given me for working circulation have been proved to be much exaggerated." His letter, he writes me, was a piracy, and was so mutilated that he scarcely recognised it, and that he was made to say "total abolition," whereas, in fact, he advocated "restriction"; indeed, the matter has, I feel, been much exaggerated and perverted, and its promoters now, by their placards on the London walls and statements, are not deterred still from propagating exaggeration and error. Abhorring, as I do, anything like cruelty, and admitting the crusade may have done good, yet the country ought to be satisfied in the wisdom of recent legislation, and not agitate further; indeed, it is cruel and libellous on the profession—a kind-hearted and benevolent race of men. If you think this worthy of a corner in your current journal, pray insert it, and allow me to sign myself

Bath, May 1. A LOVER OF TRUTH AND JUSTICE.

BEARING-REINS AND SHARP BITS.

Much attention has lately been drawn, and very properly, to the cruelty inflicted on horses by the use of the bearing-rein. On this question, we are glad to say, a praiseworthy example has been set by many doctors. They have abandoned the use of this senseless means of torture. But it appears—and it is well to notice the fact—that the bearing-rein is often supplemented by a sharp bit, which not only causes great irritation to the animal, but mutilates the mouth. We quote some observations of a correspondent writing on this subject to a contemporary. He says—"It needs only to watch these horses to see what torture they are suffering. Their heads are drawn back by a pulley attached to one bit, while their mouths are cut till they bleed by another worked by a lever. Yet, if you speak to the horses' owners of vivisection, they are shocked."

OUR CANAL BOATS AND SMALL-POX.

Any comments of ours on the following disgraceful state of things would be superfluous. Mr. George Smith writes to a contemporary on the 29th ult.—"I have travelled and seen a great deal in my time, but never during my life have I seen such a sickening sight as I saw this afternoon at Paddington among the canal boatmen. I had to literally wend my way to the boat cabins through dead cats, rats, mud, and filth of the very worst description, then to be told, to my grief and sorrow, that six poor boat-children and three boat-women were being taken to the small-pox hospital. There were about seventy boats lying in this cesspool of disease and death; and the small-pox spreading, not only amongst the men, women, and children living in the boats, but I am told that it is getting into the houses near to the wharves, and it is impossible to tell where it will end. This terrible disease is being carried in canal boats through the country, without any law, system of inspection, or sanitary authority, as regards overcrowding and the bad ventilation of the canal boats, to prevent it."

COMMUNICATIONS have been received from—

Dr. William Squire, London; Mr. W. E. Poole, London; Dr. James Andrew, London; Mr. John Chatto, London; Dr. Gowers, London; Dr. Robert Lawson, Banstead Downs; Mr. B. R. Wheatley, London; Dr. Churchill, London; Dr. Barlow, London; Mr. T. M. Stone, London; Mr. H. Everest, Anerley; Dr. A. W. Edis, London; Mr. Hutchinson, London; The Secretary of the Pharmaceutical Society, London; Mr. Lewin Hill, London; The Registrar of the Royal College of Physicians of London; The Registrar of the University of Aberdeen; Dr. Eugene Dupuy, New York; Mr. C. Martindale, Bath; Dr. Cartwright Reed, London; The Secretary of the Clinical Society, London; Dr. Wickham Barnes, London; The Registrar of the Apothecaries' Hall, London; Dr. Willoughby Arding, Wallingford; The Secretary of the Royal Institution, London; The Secretary of the London School of Homœopathy; Dr. L. Armstrong, Durham.

BOOKS AND PAMPHLETS RECEIVED—

E. C. Seguin, M.D., Myelitis of the Anterior Horns, or Spinal Paralysis, of the Adult and Child—Cassell's History of India, part 17—Robert Bentley, F.L.S., Henry Trimen, M.B., F.L.S., Medicinal Plants, part 20—Edmund Andrews, A.M., M.D., The Mortality of Surgical Operations in the Upper Lake States compared with that of Other Regions—Dr. Theodor Billroth, Lectures on Surgical Pathology and Therapeutics—Clifton E. Wing, M.D., The Use of Uterine Supporters.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmacentical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Gazeta Medica da Bahia—Students' Journal and Hospital Gazette—Monthly Homœopathic Review—Veterinarian—Hardwicke's Science Gossip—Monthly Microscopical Journal—National Anti-Compulsory Vaccination Reporter—New York Druggists' Advertiser—Edinburgh Medical Journal.

APPOINTMENTS FOR THE WEEK.

May 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Royal Institution, 3 p.m. Rev. A. H. Sayce, "On Babylonian Literature."

7. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Conversazione. Annnal Oration by Dr. J. Hughlings-Jackson, "On Ophthalmology and General Medicine."

Royal Institution, 2 p.m. General Monthly Meeting.

8. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Institution, 3 p.m. Prof. Gladstone, "On the Chemistry of the Heavenly Bodies."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Pearson Irvine, "The Clinical Condition of the Heart and Vessels in Chlorosis." Mr. Clement Lucas, "Extraction of a Broken Silver Tracheotomy-Tube from the Left Bronchus." Mr. Knowsley Thornton, "Twenty-five Cases of Ovariotomy, with Remarks on the Fever following the Operation."

9. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Epidemiological Society, 8½ p.m. Dr. Mouat, "On Medical Statistics of Epidemic Disease."

10. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

11. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. Furneaux Jordan, "A Case of Excision of the Os Calcis and the Astragalus, in which the Second Row of Tarsal Bones was drawn down under the Malleoli." Dr. Dowse, "A Fatal Case of Syphilis contracted from the Congenital Form of the Disease." Dr. Pearson Irvine, "A Case of Empyema and Abscess of the Liver in which Paracentesis was performed." Mr. Mac Cormac, "A Case of Talicotian Rhinoplasty" (a living subject).

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. D. Mackenzie Wallace, "Intellectual Movements and Secret Societies in Russia."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 28, 1877.

BIRTHS.

Births of Boys, 1346; Girls, 1189; Total, 2535.
Average of 10 corresponding years 1867-76, 2350·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	803	754	1557
Average of the ten years 1867-76	715·2	663·6	1378·8
Average corrected to increased population ...	...	...	1475
Deaths of people aged 80 and upwards ...	...	...	53

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	...	1	8	3	2	...	...	4
North	751729	48	8	3	1	7	...	3	...	...
Central ...	334369	...	12	...	...	2	...	2	1	...
East	639111	12	9	2	1	8	1	2	1	4
South	967692	27	18	8	...	10	1	4	1	4
Total	3254260	89	47	14	3	30	4	11	3	12

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·591 in.
Mean temperature	44·7°
Highest point of thermometer	61·9°
Lowest point of thermometer	33·6°
Mean dew-point temperature	38·0°
General direction of wind	E.N.E. & W.S.W.
Whole amount of rain in the week	0·08 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 28, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending April 28.	Deaths Registered during the week ending April 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2535	1557	61·9	33·6	47·8	8·78	0·08	0·20
Brighton	102264	43·4	56	38	57·8	35·9	44·8	7·12	0·33	0·84
Portsmouth ...	127144	28·3	94	45	71·8	38·2	49·3	9·61	0·62	1·57
Norwich	84023	11·2	52	35	54·2	35·0	43·0	6·11	0·67	1·70
Plymouth	72911	52·3	43	21	59·0	38·5	46·9	8·28	0·66	1·68
Bristol	202950	45·6	172	91	59·7	33·9	44·3	6·84	0·60	1·52
Wolverhampton ...	73389	21·6	63	38	...	...	...	...	...	...
Birmingham ...	377436	44·9	348	186	59·0	32·4	42·6	5·90	0·30	0·76
Leicester	117461	36·7	88	50	60·5	33·0	42·9	6·06	0·21	0·53
Nottingham ...	95025	47·6	77	53	61·8	29·4	42·9	6·06	0·89	2·26
Liverpool	527083	101·2	393	285	54·0	36·9	42·7	5·95	0·23	0·58
Manchester ...	359213	83·7	296	196	...	...	...	...	...	...
Salford	141184	27·3	129	89	54·7	32·3	41·8	5·48	0·30	0·76
Oldham	89796	19·2	94	66	...	...	...	...	...	...
Bradford	179315	24·8	127	89	50·4	37·2	41·4	5·22	1·01	2·57
Leeds	298189	13·8	227	137	52·0	38·0	42·4	5·78	1·28	3·25
Sheffield	282130	14·4	225	105	53·0	31·0	41·5	5·28	0·62	1·57
Hull	140002	38·5	121	58	...	...	...	...	...	...
Sunderland ...	110382	33·4	107	51	...	...	...	...	...	...
Newcastle-on-Tyne	142231	26·5	91	61	...	...	...	...	...	...
Edinburgh	218729	52·2	151	87	46·4	31·0	39·3	4·06	0·68	1·73
Glasgow	555933	92·1	453	281	...	...	...	...	...	...
Dublin	314666	31·3	183	175	56·8	29·0	45·8	7·67	0·05	0·13
Total of 23 Towns in United Kingdm	8144940	38·3	6125	3794	71·8	29·0	43·7	6·50	0·53	1·34

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·59 in. The lowest reading was 29·37 in. on Monday afternoon, and the highest 29·80 in. on Thursday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

MEETING
OF THE
GENERAL MEDICAL COUNCIL,
HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIRST DAY—THURSDAY, MAY 10.

OPENING ADDRESS BY DR. ACLAND, F.R.S., PRESIDENT.

THE twenty-fourth session of the Medical Council will find it engaged with subjects of no less interest, and with problems no less complex, than those presented at the first session of its existence in 1858. To enable the public to distinguish between educated and uneducated practitioners: to be responsible for the teaching and examination provided by nineteen licensing bodies; to further, in harmony with the Government, such measures as may promote these ends; and to watch the progress of events which affect personal or public health, in consequence of the development of our own empire, the demands of civilisation and international intercourse;—these are the chief aims which bring members of the Council at this season of the year from important duties in their several universities, or from their responsible private occupations. Every member of the profession of medicine is now more or less intimately concerned with great questions of science and sociology.

A statement is occasionally made, though only by the uninformed, that the Council has no objects adequate for its existence. Those better informed know that it has become impossible to discharge the duties expected of it by the Legislature without great economy of its time and its finances. Entirely impossible it would be if it were not for the loyal manner in which the universities and corporations, in their respective spheres, co-operate with the combined endeavours of their representatives in the Council, and aid the Executive by willing correspondence in the interval between the sittings of the whole body.

At the close of the last session of the Council, a report on the subject of education was received. The nature of that report, which was, in fact, a summary of a multitude of facts and of much and various experience, induced the Council to decide that the subject-matter of that document should this year take precedence of all other questions. Although, no doubt, the decision of one session cannot absolutely bind the action of a succeeding one, it is not probable that in this instance the general feeling of the Council would be favourable to the reversal of their recorded opinion.

Before, however, entering on what is expected to be the chief business of the Council in this present year, it may be well to pass in review several circumstances to which the attention of your Executive has been drawn since the last meeting, as helping us to a general survey of the duties we have before us in the immediate future.

Two important Acts affecting especially the medical profession have passed since we separated in June of last year, each of them samples of the changes which quietly and almost insensibly steal over the fabric of English life. After a discussion marked by the usual extremes of statement on one side and on the other, the Vivisection Act became law. The moderate form which it assumed by reason of the judicial firmness of Mr. Secretary Cross, influenced, I have no doubt, to a considerable extent by the memorial presented to the Government by the Council, has placed biological inquirers under the protection of the Government, as the best means, on the one hand, of securing them against fanatical interference, and on the other of insuring to the feebler portion of the animal creation that tenderness and justice which the cultivated sense of society unmistakably demanded. The division of 222 to 83 in the House of Commons on May 2 against reopening this question shows unmistakably the determination of the country not to permit vexatious interference with the just liberty and conscience of honest scientific inquirers. The other Act has stilled the loud clamour which called for the admission of women to equal rights with men as medical and surgical practitioners. Women can now enter the medical profession through the College of Physicians in Ireland; but signs are not wanting that there are yet rocks ahead; among other difficulties is one hardly yet realised. The Act took no steps towards solving the problem whether it would be just to women and to the country to enable them to acquire a complete education for practice among their own sex, without undergoing the torture which it would be to some of making dissections, and being examined in operations, on the male sex, which in after-life they would never perform. At present no such exemption is possible, yet it is probable that the general sense of society would not be wholly against any examining board which enforced on a woman, as it now must, the performance of operations on the male, against her protest that she had no intention to practise in that direction. The advice of the Council may yet be sought on this difficult question. A third Act amending the Medical Act was passed to enable legally qualified medical practitioners to hold certain public appointments. These three Acts, however, being law, need not further occupy the time of the Council.

As regards the future, it may be noted, first, that circumstances connected with the conduct of the Medical Register must engage our immediate attention. This document is almost the *raison d'être* of the Council. It is that by which the Council professes to enable the world to judge between practitioners legally qualified and unqualified to practise in England, and to know what are their legal qualifications. Not only is it of chief importance that all improper persons should be excluded, but that all proper persons should be included in it, and that their designations and qualifications should be entered with precision. The conditions under which any name is on the Register or kept off it ought to be rigorously just and strictly observed. At present the printed Register is open to several exceptions, some of more, some of less importance. They may be briefly stated in order.

A question has arisen whether degrees conferred *honoris causâ* can legally be entered.

Accordingly, the late Registrar of the Council, pending the decision of the Council, felt compelled to refuse the registration of a degree in Medicine from the Queen's University in Ireland, conferred *honoris causâ* on a surgeon not possessed of a medical qualification. A case was drawn up by the Solicitor, Mr. Ouvry, and by him submitted to counsel. An opinion being given against registering honorary degrees, no alternative remained for the Registrar but to suspend action till the Council should meet. He could not properly, against legal advice, establish a precedent by which any university could claim to confer an honorary *medical* title on a surgeon, or a *surgical* title on a physician, which could take its place in the column of qualifications in the Register before the Council met. A few honorary degrees have, indeed, in former years been registered. These ought not, however, to form a precedent if their registration was impolitic or illegal. In order to destroy any valid argument from precedent (though their cases do not really constitute one), the late and the present Presidents have jointly lodged an application to the Council to remove, pending the discussion of the whole question, the degrees with which they had been honoured by Trinity College, Dublin, in 1869. These degrees were placed in the Register because the document forwarded to the Registrar did not describe them as other than ordinary diplomas, and did not tender them as honorary degrees. Various papers bearing on this question will be laid before the Council.

Again, a complaint has arisen in Canada as to the action of the Board of Trade with respect to practitioners licensed in the Dominion, and arriving in England in charge of ships. Application being made on the subject to the Medical Council Office, the President directed the Registrar to inform the Board of Trade that the subject of colonial degrees had not escaped the notice of the General Council, and to intimate that it was part of a large question—viz., that of degrees in general considered internationally.

As far back as July 4, 1861, and again in the years 1863, 1864, 1867, 1868, and other times up to 1876, the Council had occasion to consider the question of colonial diplomas. It agreed to a clause in reference to them in the Marquis of Ripon's Bill in the year 1870. If only for this reason it was a misfortune that Mr. Forster was obliged to withdraw this Bill after it passed the House of Lords.

The time cannot be far distant when the relation of colonial and foreign graduates and licentiates to legal practitioners in England will be defined. It is hardly just either to them or the nation that their position should be so long a subject of discussion. A Committee of the Medical Council declared eight years ago, in its report on the amendment of the Medical Acts, that "the Secretaries of State in successive Governments have pressed upon the Council the necessity of dispensing with

or greatly relaxing its regulations in favour of persons holding foreign or colonial diplomas or degrees"; and they added that this condition appeared to be a *sine quâ non* to the consent of the Government to introduce any Bill for amending the Medical Acts.(a)

Since the communication from the Board of Trade above referred to, correspondence has taken place between the various departments of the Government: the Colonial, Foreign and Home Offices, the Board of Trade, Local Government Board, and Privy Council. The subject being now ripe for the consideration of the Council, this correspondence was forwarded by desire of the Lord President on April 23 for your consideration; and his Grace awaits your reply. The supposed exclusion of Canadian practitioners from practising in England has caused as much feeling in Canada as the discussion concerning the compelling English practitioners to undergo a new examination in France, though I am informed that English practitioners are re-examined in Canada prior to their legal registration in the Dominion. To the case of France your attention must now be drawn.

The public were surprised to find in the course of last winter that a Bill was to be brought into the French Chamber of Deputies to restrict the privileges which had been accorded hitherto by the French Government to various English practitioners settled in France. Before this Bill had attracted public attention in England, the Secretary of State for Foreign Affairs had been already warned by H.M. Ambassador in France of the effect of the Bill should it be passed. The correspondence on the Bill between Lord Derby and Lord Lyons was forwarded through the Privy Council to the President of the Medical Council, with a question as to the state of the law and the practice in England with regard to foreign practitioners. The answer to this question being urgently needed, it was drawn up the following day by the President and Mr. Ouvry, and put in the hands of members of the Council without delay. The history of the matter was succinctly related in a short memorandum; and it was added, in the spirit of the Council's long-continued endeavours to deal with justice and courtesy towards medical brethren abroad, that a conference might readily decide the terms of an international or reciprocal law and usage on a matter of much importance to the invalids of the respective countries. The French Government have expressed their disapproval of the Bill. The prompt action of Lord Lyons and the courteous confidence of the Government demand the gratitude of the Council. Since this correspondence took place, the English College of Physicians has discussed a scheme by which foreign practitioners may be legalised in England. The following by-law has been passed:—

"Any candidate for the College licence who shall have obtained a degree in medicine or surgery at a British, colonial, or foreign university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on such subjects as shall in each case be considered unnecessary."

By means of this by-law foreign practitioners can, on the judgment of the College, join the English College of Physicians, and so find entrance to the Register. It may be proper here to observe that the Medical Council will still retain the duty of accepting the conditions for admission to the Register of foreign graduates, or of representing the matter to the Privy Council. Considering the fact that the Board of Trade, the Foreign, Home, and Colonial Offices, and the Privy Council, have all been appealed to in this important question from independent sources, it is hoped the Council will not grudge the time given to the brief summary thus laid before them.

A proposal will be made to refer the whole subject without delay to a committee.

The Executive Committee will lay before the Council a short report on a point of law regarding the *restoration* of names. A person whose name by his own fault had been omitted (under Clause 14) applied for restoration. Circumstances arose which made the Committee hesitate to replace the name without reference to the Council thereon, and they have prepared a case and obtained counsel's opinion on a point which has for the first time arisen.

The Council is often indebted to its solicitor, Mr. Ouvry, for the promptness with which he advises the Executive Committee and the President in the absence of the Council. Yet experience would seem to show that the Medical Act does not clearly define to what extent the Council can delegate its functions to the Executive Committee, and a point in law may arise in which the Executive Committee are hardly justified according to precedent in acting. It may be worthy of consideration whether the experience of the Council during nearly twenty years, with regard to its functions as a judicial body, can suggest any improved machinery for the discharge of their duty in this respect. The experience gained, for instance, through the various correspondence with the Registrar-General is valuable; for it may end in the prosecution of one class of offences being undertaken by the Home Office. But even so a by-law to regulate the initiative in a way conformable to the wishes of the Council would strengthen the hands of the Executive when occasions arise suddenly and the Council is not sitting.

Lastly, as regards the Register, on account of the fact that the printed Register appears but annually, steps have been taken to furnish the Registrar-General periodically with copies of the additions made to the Manuscript Register in the Office, and the Council may perhaps consider whether this principle may not be advantageously extended to other public offices, without additional expense to the Council.

On the subject of legislation some important points have to be considered. They may be provisionally stated to-day in a general manner. There is no evidence to show that the Council has materially modified its views as expressed in the Report of 1870 in relation to Lord Ripon's Bill. The Council then put forward several principles of legislation—*e.g.*, that the examinations of licensing bodies should be reduced by combination under Clause 19 of the Act, if not voluntarily, than by contingent and collateral coercion; that colonial and foreign degrees should be accepted under conditions; that public health diplomas should be recognised.

Thus it was clearly established that at the proper time a new and comprehensive Act had sooner or later to be prepared.

The Medical Defence Association are urgent that one alleged incompleteness of the Medical Act should at once be remedied. They have therefore prepared a Bill on that point alone—viz., the prosecution of offenders.

The Obstetrical Society see a great need for better instruction of midwives, and prepare a Bill advocated and supported by their President, Dr. West. Their Bill proposes to place the control of the education and examination of midwives under the Medical Council. The Society having laid their views before the Lord President of the Privy Council, he has referred their proposals to the consideration of the Medical Council. The document will be laid before you. There may be a difference of opinion as to the machinery; there can be none as to the want. No one engaged in practice but knows well the difficulty that there is in obtaining adequately educated and trustworthy midwives, and nurses for the sick. It may or may not be desirable for the Medical Council to supervise their education; but the training and certificate are certainly needed. The very existence of such institutions as Miss Nightingale's at St. Thomas, as Dr. Sinclair's in Dublin, and as the Duke of Westminster's in Bloomsbury, prove the want and indicate ways of meeting it. It has been said that trained medical women of various qualifications are much needed in India. Sir Salar Jung, when in England, stated his views on this matter. His opinion was that it would be a great benefit to India—a benefit which could not be exaggerated—if English medical women completely educated in England could settle in the chief towns, to act as teachers as well as practitioners. He said that in the rural districts a class of ordinary female practitioners, not of the stamp of teachers, would be very acceptable to the vast native populations. He was of opinion that both classes would obtain a suitable and honourable professional maintenance. And though it would be impossible to give any precise estimate of the required numbers, 250 of the first class and 1000 of the second might be safely named. If the attempt were successful these numbers would probably prove wholly insufficient. An English lady who has lately had the opportunity of examining many Zenanas under exceptionally favourable circumstances confirms these statements in an emphatic manner. They are strongly supported by no less experienced a person than Dr. Macdougal, Bishop of Labuan. They therefore deserve the serious consideration of the women of England. Never, since England has had duties towards India, have these duties to the native peoples to which reference is now made been so manifest as now. It may be as

(a) Report, July 12, 1869.

well here to remark that Sir Joseph Fayrer has forwarded a communication regarding the recognition of medical education in the universities of India.

Whensoever, therefore, the Bill affecting the training of midwives is brought before the Medical Council, it will demand consideration under various aspects.

A third Bill has been announced to me, like the other two, to be brought forward as a private Bill, requiring that no one shall be registered unless he have a qualification both in medicine and in surgery. The same Bill calls on the Medical Council to appoint an examining board for the purpose of constituting a new class of medical officers, who will be entitled to append to their names in the Register the letters C.M.B. (Civil Medical Board). All medical officers, either in the military or naval services, or attached to public medical institutions in general, will by this Bill be required to pass the Civil Board. It was once said that the Medical Council has nothing to do with the medical wants of the empire, outside the four corners of the original Act, which Act had reference to the then existing nineteen independent licensing bodies. When we consider the state of feeling and knowledge as regards medical legislation in 1877, that view can hardly be maintained. The wants of the future are as present to us as the traditions of the past.

A Scheme for a Combined Board of Examiners for England will be communicated to the Council. It has been prepared with the concurrence of every licensing body in England. Should the Council sanction the union of these bodies for the purpose of conducting one combined pass examination for all England, a long series of negotiations will be concluded, which, but for the withdrawal of Lord Ripon's Bill, might have been unnecessary as far back as 1872. This Scheme affects only licences obtained in England, leaving untouched the examining boards in Ireland and Scotland.

The Government last year decided to give an annual grant of £5000 for the promotion of physical science, and placed it in the hands of the Royal Society, on the condition that heads of several bodies interested in physical science should be upon a committee for the administration of £4000 thereof. Among these bodies was the Medical Council. The Presidents of the Colleges of Physicians and Surgeons, who are both on the Committee, together with Sir William Gull and Sir James Paget, met at the Medical Council Office to consider in what way the interests of biological and specially medical science could be best promoted by the Government grant; and your President attended the General and the Biological Committees to support the common view entertained by that conference. The applications for the grant far exceeded its amount. Only a small portion was appropriated to subjects directly connected with medicine.

The Council having to lament the retirement of their valued Registrar, Dr. Francis Hawkins, instructed the Executive Committee to elect his successor. They have secured the services of Mr. William Miller. Mr. Miller is well known in the scientific world as the Mathematical editor of the *Educational Times*, and as one long engaged in the practical work of general education. It cannot be doubted that his extensive acquaintance with scientific men in various nations, and his educational experience, will greatly aid the Medical Council in their revision of the educational arrangements connected with medicine through the kingdom.

Mr. Quain having resigned the duties which he had so zealously performed here, the College of Surgeons has now added to the Council Sir James Paget.

Dr. Stokes, the Crown nominee for Ireland ever since the formation of the Council, has from ill-health resigned his seat. It were hard to say whether, as we part, genius and culture, or endearing personal nature, will be most deeply impressed on our memories.

There remains, then, the great subject of the education of the student of medicine. Whether the Council is ripe for any special settlement of that question it would be presumptuous to say; nor is this the occasion to inquire. No discussion within the Council, no criticisms without, will or can alter the fact that in harmonising in their due proportion the general, the scientific, the moral, and the physical training of the student consists the best education. So it has been from Plato and Hippocrates to the time of Milton and Locke; so it must remain. Do the methods change? Are the requirements of a youth altered? Have the schools, the hospitals, and the universities kept pace with pedagogic knowledge? This is greatly to be doubted. The German educator would answer unequivocally that the arrangements for teaching in England are imperfect or at least unsystematic. The Englishman would reply that at all events they have been made the subject of discussion, of inquiry, and report till the shelves groan beneath the load of the result. Are we in our department satisfied? Even in the metropolis is no revision required?

It is not for your President to answer these questions. A fund of knowledge and opinion is in our hands, whether derived from various Royal Commissions on general and on scientific training, or from the reports and answers given to this Council by universities, medical corporations, medical and scientific experts, and the Medical Teachers' Association of the metropolis.

The latest conclusions suggested for your consideration are to be found in a report by Professor Humphry, about to be laid on the table and prepared by your desire. It is not likely that the report will contradict an often-expressed opinion that the foundation of the "*mens medica*" is laid in a liberal education; or that the corollary drawn by the Council from that conviction will be overthrown—viz., that the great educational bodies are the fittest judges of the course and standard of liberal culture. On this topic one of our most honoured Presidents, Joseph Henry Green, wrote thirty years ago—

"I hold it as little less than indisputable that the rightful claim of the profession to its due estimation by society at large can be dependent only upon science, and upon its cultivation in union with the liberal arts and sciences—therefore entitled "liberal," because they are cultivated without hire or compulsion on the score of their own worth and dignifying influences. It is herein that we find the ground of a liberal education common to the professions and the gentry of a country—of an education fitted to maintain the continued succession of a class of *Viri Liberales*, of gentlemen, of men imbued with the liberal sciences, of professional men, who, in the full possession of a liberal science, apply it to the needs and benefit of their fellow-citizens. Nor can it be deemed of slight importance that those destined for our profession should partake of that education which is required for the liberal professions, as an integral part of the gentry of the country, with the sense and habits of a joint training in their duties moral and religious, in their obligations as citizens, and in their sentiments of honour as gentlemen."

A caution, however, is given by a not less illustrious President, Sir Benjamin Brodie. Writing with the consummate knowledge of a life of observation and exertion he says—

"In accordance with your view of the matter, Sir Walter Scott has somewhere observed, that 'the best part of every man's education is that which he gives himself'; and I willingly admit that, among those whose intellect is of the higher order, there are many who would ultimately accomplish greater things if in early life they were left more to their own meditations and inventions than is the case among the more highly educated classes of the community.

"Still, I do not mean to deny that there may be some defects in the prevailing systems of education. It would be marvellous if it were otherwise, considering how imperfect all other human institutions are. I do not profess to point out what these defects may be, nor have I, indeed, that practical knowledge of the subject which would make me competent to do so. I may, however, venture to suggest whether, as regards the higher kind of education, too much is not attempted to be done, and whether it would not be better if the students were left to accomplish more for themselves. But even as to this there can be no general rule; there being some who are incapable of learning anything except what they are actually taught, while there are others whose natural disposition it is to teach themselves and think for themselves. Unfortunately we have no means of distinguishing beforehand these two classes from each other; and even if we could do so, there would be a difficulty in varying our mode of proceeding so as to adapt it to each individual case."

If these suggestive utterances had their warning and significance thirty years ago, how much more now when competition is sharper, distractions are more numerous, and labour and self-command requisite for success greater than then! The examinations, which we are bound by the Medical Act to supervise, are, no doubt, the ultimate test of the attainments of students. But they are no less an expression of the slowly maturing convictions of the nation as to what is "the best and noblest way" of discipline, culture, and knowledge in preparation for our noble profession.

OPHTHALMOLOGY IN ITS RELATION TO GENERAL MEDICINE.

THE ANNUAL ORATION DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed, etc.

I CANNOT find appropriate words to express how much I feel the honour of being asked to give the annual Oration before the Medical Society of London. I think, after all, the best return I can make is not to waste your time in the endeavour, but to begin my real task at once.

[After some introductory remarks in which the speaker remarked on the very great value to physicians of the researches of Clifford Allbutt in medical ophthalmoscopy, he spoke of superficial organic affections of the eyes.]

The most important to physicians is interstitial keratitis. This affection is, as Mr. Hutchinson has shown, a certain proof of congenital syphilis. It usually goes along with a dental malformation, which, as he has shown too, is a test equally certain. This important double discovery could scarcely have been made except at an ophthalmic hospital, since the cases are rare and are only met with in numbers at a large ophthalmic hospital. Here is a great debt we owe to one I would call an ophthalmic surgeon, were he not distinguished by having done good work in other departments of surgery. Having in the corneal and dental peculiarities a certain warrant for the diagnosis of congenital syphilis, we can study its doings in other organs. In investigations of diseases of the nervous system I have profited very largely in the diagnosis and therapeutics of non-ocular diseases from these tests of inherited syphilitic taint.

Passing over numerous other important organic affections, I will speak of anomalies of refraction. It is exceedingly important that the physician should study anomalies of refraction and their indirect effects. I do not mean that it is necessary for him to have that familiar knowledge which the ophthalmic surgeon must have, but, for general medical purposes, he should be able to diagnose them. It is not necessary that the physician should be able to cut for stone, but it is needful that he should be able to diagnose or to suspect vesical calculus, or he will subject his patient to a long course of inefficient treatment. A knowledge of the indirect effects of anomalies of refraction would, doubtless, save us from serious misinterpretation of symptoms. Mr. Brudenell Carter records the case of a patient who came complaining of "periodical confusion of vision." Such a case would be inexplicable without ophthalmological knowledge. Mr. Carter found that the "periodicity" was in the clock. He diagnosed astigmatism, and found it.

We should learn how to estimate degrees of hypermetropia by the ophthalmoscope: the reason is that when a patient is too ill to permit testing the state of his refraction in the ordinary way the ophthalmoscope may be the only means of deciding. I could relate a striking case in which the discovery of a high degree of hypermetropia by the phthalmoscope in the hands of Mr. Couper was of inestimable value in unravelling a complex case in which there was partial aphasia, defect of sight, and convulsion, due to cerebral tumour.

We have learned from an ophthalmic surgeon that the common kind of strabismus is not really of nervous origin, as, before Donders's researches, it was universally supposed to be. It is owing indirectly to congenital shortness of the eyeball—to hypermetropia. This is an enormous gain both for thérapeutics and for diagnosis. It is now so well known, that we are scarcely conscious of the serious blunders from which Donders has saved us. Strabismus, indirectly owing to hypermetropia being taken to be of nervous origin, has, no doubt, often introduced sad confusion into the report of a case of brain disease, and has led to erroneous prognosis and misdirected treatment.

In some cases of abnormal refraction there is a simulation of brain disease, or, at any rate, patients who only want appropriate glasses are occasionally treated by physicians for brain disease. I have been speaking of hypermetropia, but the remark applies to other cases of abnormal refraction. Mr. Brudenell Carter has reported a remarkable case of myopia simulating brain disease, in the eighth volume of the *Clinical Society's Transactions*. This report should be carefully studied by physicians. The patient, for supposed brain-trouble, took a voyage to Australia, but was no better for it. He was told that "he must abandon the idea of carrying on the family business, or of taking any active part in life." This patient was thoroughly and permanently cured by the use of appropriate glasses. The possibility of an anomaly of refraction or any eye-defect being at the bottom of the patient's troubles seems not to have occurred either to himself or to his doctors. He did not consult Mr. Carter for any defect of sight, but because he had heard that ophthalmic surgeons had an instrument useful in the investigation of disease of the brain. I could also relate some cases of hypermetropia in which the diagnosis of brain disease had been made by physicians and refuted by ophthalmic surgeons. Here is one: A medical student, twenty-one years of age, had been obliged to give up his work because reading brought on attacks of vomiting and frontal headache. The vision of each eye for near and distant objects seemed good to ordinary examination, and there were no ophthalmoscopical changes, except some dilatation of retinal veins. To cut a long story short, after travelling about two years, doing nothing towards his career, Mr. Tweedy, in May last, fitted him with a pair of spectacles, remedying hypermetropia and astigmatism. The patient has been well ever since; has returned to his medical career, and has graduated at the University of London. Without some knowledge of anomalies of refraction, the physician would never suspect the real nature of such a case as that of this medical student. Mr. Carter writes, in the paper referred to, that his advice was received by the patient and his father with polite incredulity, although fortunately it was acted on. I find that patients whose symptoms appear to them to depend entirely on something wrong in the head or in the liver receive with something more than incredulity the statement that they require glasses, and I fail now and then to make them consult an ophthalmic surgeon. Yet it is very ludicrous to give "nervous" and other remedies for a state of things which requires only a scientifically adapted mechanical aid.

There is another thing in connexion with hypermetropia which deserves the attention of physicians. Mr. Couper has found that in some cases of hypermetropia the optic discs, in consequence of over-use of the eyes, become reddened and even swollen. The redness and swelling may, he tells me, be so marked that this comparatively unimportant condition, remediable by spectacles, is occasionally mistaken for and treated as slight neuritis depending on cerebral disease. The true explanation of these cases was given by Mr. Couper in a paper read before the Hunterian Society in 1870. In hypermetropia the strain on accommodation is great; and thus there is not only congestion of the disc, but œdema also. Mr. Couper says that the button-like prominence thus given to the disc is easily recognised in the indirect image by the exaggerated parallax when the object-lens is moved. Its amount may be approximately expressed by the lens answering to the difference in the hypermetropia for the disc and the adjoining retina respectively, as ascertained by the ophthalmoscope. Mr. Couper has found the *œdema* and *swelling* most marked in young subjects; the *redness* most marked in older persons who have never used adequate spectacles, and especially in those who have also taxed their eyes severely. In the former, perfect visual acuteness is usually obtained either immediately or in a few weeks by the use of proper glasses. In the latter this perfect result is not always attained. The prolonged œdema and loss of vascular tonus seems to impair the acuteness of the retina. Occasionally the redness is so intense as to conceal the choroidal boundary of the disc in great part. Besides its very obvious direct interest, this fact has an important indirect bearing. The congestion and œdema from overwork of the hypermetropic eye seem to me to throw light on cases in which functional abuse leads to paralysis—on cases of writers' cramp, for example. In such cases there is not a single fact as to the morbid anatomy; hence all our so-called pathological knowledge of them can only be inferential; and here, as in ophthalmic practice, is a case where we can see the effects of overwork in producing a morbid state, not, it is true, of a nerve-centre, but of a nerve-periphery. It seems to me important also as bearing on the way in which congestion of the brain results. As overwork of the eye causes congestion and œdema of the optic disc, so overwork of the brain causes congestion and even possibly œdema of the brain. I believe it produces arterial fatigue, and thus loss of arterial tonus. We cannot afford to overlook even indirect evidence bearing on so obscure a subject as cerebral congestion. Congestion of the

brain, although frequently spoken of, is very difficult to prove even post-mortem. Wilks and Moxon say that "post-mortem fulness of the vessels of the brain and its membranes is of no pathological value whatever as showing brain disease, as asphyxia produces it." They do not deny the existence of congestion of the brain as a fatal disease. It interests me very much to find that the conclusion that overwork of brain produces cerebral congestion by arterial fatigue has been reached by Niemeyer.

Paralysis of Ocular Muscles.—Although it is well known to ophthalmic surgeons that vertigo is one of the most important symptoms of paralysis of an ocular muscle, this is certainly not known widely in the profession. Graefe says that its non-recognition has often led to medical errors. It is common for the inexperienced, who do not know it, to overlook so simple a cause of this symptom and to treat the patient for some central affection. The case does not always diagnose itself. The patient who has paralysis or paresis of an ocular muscle or muscles does not always come complaining of double vision, but sometimes for giddiness and irregularity of gait. In cases of slight weakness of the external rectus, or when the superior oblique is the muscle paralysed, the palsy is by no means obtrusive; there is no ordinary strabismus; and in such a case the giddiness may be with fallacious ease attributed to some central lesion—to disease of the cerebellum, for example; or it may even be put down to disease or temporary disorder of a part of the body so distant as the liver. Even when ocular palsy is obtrusive, as when the sixth nerve is completely paralysed, it may happen that the attendant vertigo is erroneously put down, not to that palsy itself, but to some supposed *additional* lesion of a nervous centre. This is attributing a symptom to a complex state of things, from overlooking a simple and obvious cause. In any case of vertigo, having excluded obvious possible causes, we should not be content with an ordinary examination of the movements of the eyeball, but should test the patient by coloured glasses and candle in a darkened room.

[The facts of cases of ocular paralysis were then considered as they bear on the physiology of vertigo and of disorder of co-ordination.]

Paralysis of Ocular Movements from Central Disease.—Let us suppose that the right corpus striatum is extensively damaged, there will be left hemiplegia, and for some hours or days the two eyes turn to the right(a). The head often turns in the same direction. The eyes and head turn to the right side for the same reason that the face does. The turning in all three is from the side paralysed, and therefore towards the side of the brain injured. There is no strabismus, for the eyes, although turned to one side, remain parallel. The implied healthy nervous arrangements of the two eyes for the lateral movement have been likened by M. Foville fils to the arrangement of reins for driving two horses. What occurs in the lateral deviation is analogous to dropping one rein (the right one, we will suppose), then the heads of the horses (supposing the left rein to be, so to speak, in tone) turn to the left. The lateral deviation shows that after the nerve-fibres of the ocular nerve-trunks have entered the central nervous system (if we may, for convenience, trace them backwards way), they are —partly, probably, by the intermediation of several centres— redistributed. It shows that far above their points of entrance, or rather exit, the nerve-fibres of the ocular muscles are rearranged in complex arrangements for particular movements of both eyeballs.

There is no such thing as paralysis of the muscles supplied by the third nerve, or sixth nerve, from disease above the crus cerebri. But there is clear evidence that this ocular movement is represented still higher than the corpus striatum. I have long believed that ocular, and indeed all other movements, are represented in the cerebral convolutions; if they are not, the occurrence of convulsion from disease of the cortex is unintelligible. Hitzig and Ferrier's experiments show, it seems to me, that movements are represented in at least some of the convolutions. For many years I have believed that every part of the nervous system is made up of nothing else than of nervous arrangements representing impressions and movements.

In Hitzig and Ferrier's experiments the centres are stimulated; in the experiments by disease, of which I have been speaking, there is destruction. Ferrier finds that stimulation in several parts of the cortex cerebri produces movements of the eyes. He finds lateral movements of the two eyes from stimulation of what he calls the auditory centre; he finds, too, that irritation of the visual centre—the angular gyrus—produces lateral movements of the two eyes in an upward or downward direction, according to the particular part of the gyrus stimulated. He concludes, and I think fairly, that in both these cases the primary irritation is of sensory fibres representing the auditory and retinal expansion, and that the associated ocular movements result from a propagated irritation to what he calls the special motor centre for ocular movements. This special centre is situated at the hinder part of the superior and middle frontal convolutions. Stimulation of it on the right side causes the two eyes to turn to the left, and at the same time there is dilatation of the pupils. I have seen him produce this movement, well defined, exactly according to his predictions before applying the electrode. This, to renew an old illustration, is like pulling the rein which goes to the right sides of the two horses' heads. It is just what one so frequently finds in cases of epileptiform convulsions, due to, at any rate occurring with, lesions of the cortex cerebri by disease. Ferrier is able to produce a convulsion by experimentally irritating the surface of the cerebrum closely, like that resulting from the discharge of that part in disease. It is to lesion in some part of what Ferrier calls the special centre for the movements of the eyes that I should attribute the loss of lateral movements in some cases recorded by Priestley Smith. Priestley Smith has recorded cases in which loss of the lateral movement of the two eyes was the sole paralytic symptom. Such a symptom of necessity points away from lesion of nerve-trunks, and to a lesion of nerve-centres: that centre might be the pons Varolii or cerebellum; but the most likely seat of lesion is, I think, the convolutional centre spoken of.(b)

We see from the experiments of disease, and very clearly from Ferrier's experiments, that the ocular muscles are represented in series of complex movements far apart in each of the two great divisions of the nervous system.

The lateral deviation of the eyes and head is valuable in many ways.

1. By it we estimate the gravity of a lesion; the lateral deviation is the sign of a grave lesion.

2. It will be helpful in diagnosis betwixt drunkenness and apoplexy from local brain disease, as Prévost has insisted.

3. It is an exceedingly valuable symptom, helping us to a methodical interpretation of unilaterally beginning convulsive seizures.

4. It is valuable physiologically; it illustrates the order in which symptoms appear in disease of nervous centres. The deviation appears both in hemiplegia, and in the hemispasm which is its counterpart at a certain stage of gravity of these affections; it illustrates what I call the law of dissolution, using this term as the opposite of evolution.

5. It is valuable in that part of physiology which corresponds to psychology. Its occurrence in hemiplegia and in hemispasm shows us a definite relation betwixt hand and eye movements, and thus betwixt what are psychologically tactual and visual ideas.

I now come to speak of the value of the ophthalmoscope in medical practice. In cases of blindness or great defect of sight we nearly always discover something wrong in the eye. It may seem at the first glance that, when the defect of sight is produced by intracranial disease, we should discover nothing wrong in the fundus, but with rare exceptions we do. In but one case of lateral hemiopia, even with corresponding hemiplegia, have I seen intraocular changes; in that case optic neuritis followed. In a very few cases of entire loss of sight, presumably from cerebral disease, I have seen no abnormal changes, yet I repeat, in defects of sight from or with intracranial disease there is nearly always some definite abnormality to be seen in the fundus oculi. On the other hand, it is an exceedingly common thing in physicians' practice to find very abnormal ophthalmoscopical appearances in patients whose sight is quite good. Hence the ophthalmoscope must have great interest to the truly practical mind. Without this instrument the precise investigation of diseases of the nervous system is impossible. There are some good reasons why the ophthalmoscopical evidence brought forward by physicians has been lightly considered. It is an unfortunate thing that some investigators do not make allowances for differences in the

(a) This was first pointed out by Vulpian and Prévost, Humphry, Hutchinson, Lockhart Clarke, Russell Reynolds, and Broadbent.

(b) Priestley Smith has just published a paper on Double Vision in the *Birmingham Medical Review*, highly deserving the attention of physicians.

appearance of the fundus in healthy people. It is a common thing for the inexperienced to see congestion and anæmia of the optic discs when the experienced see nothing but a physiological redness or pallor associated with a fair or dark complexion. The determinatiou to find something wrong in the eyes, when something wrong is likely, leads to grave blunder. It is obvious that some observers are really largely inferring when they should be only looking. I believe physicians are sometimes guilty of overrating slight appearances, finding something extraordinary when there is nothing particular; and this naturally provokes the scorn of good ophthalmologists, and brings a valuable means of research in medical cases into contempt.

On the other hand, those physicians who do not use the ophthalmoscope at all must frequently overlook an important pathological condition altogether. It is an exceedingly common thing in physicians' practice for a patient, the subject of fatal brain disease, to have extreme optic neuritis, and yet see quite well. I have been urging this for fourteen years, in season and also out of season, and have long since pointed out that the statement does not rest solely on the authority of physicians. I have quoted Bressig, Graefe, Hutchinson, Brudenell Carter, and others on the matter. It is still received in some quarters with great incredulity; but it is true, nevertheless.

When speaking of the error of merely minute investigation and merely definite statement, I by no means wish it to be inferred that we should not note, as carefully as we can, the slightest abnormal conditions of the fundus oculi that are met with. Both by precept and example I have urged it for years. The fault is in drawing decided conclusions from slender evidence, the intellectual vice of speaking definitely when we cannot be exact, and of being minute when we cannot be precise. It is, I think, matter of great importance to note the condition of the optic discs in cases of epilepsy. I know of nothing characteristic in any state of the fundus in epilepsy unless there be organic disease; and herein I agree with Allbutt. But I would still urge this kind of investigation on younger men, who begin with fresher minds. In particular, I would urge the use of the ophthalmoscope during and after paroxysms of epilepsy and epileptiform seizures. Ten years ago I recorded an observation in unilateral convulsion; the patient was myopic, and I had a good view of the fundus all through the fit, and yet I saw no alteration whatever. I allude to this record because I wish to show that, in urging others to work in a very difficult field, I have not shirked trying to do some of the work myself.

There is another class of cases, at least allied to epilepsy, in which ophthalmoscopic examination should be made. As already mentioned, there are cases of sudden temporary defect of sight. These disorders are of two kinds: the physical processes corresponding to spasm and paralysis, from over-function and loss of function of motor centres. There is (1) development of retinal sensation (of clouds of colour), or the more definite spectral projection in some cases of migraine. Thanks to Latham and Liveing, the latter is now well known to the profession. Although I believe these appearances to occur during local discharges of cerebral convolutions, and that the physical process is analogous to that causing convulsion of muscles (strong lateral deviation of the eyes, for example), it is possible that there may be a correlated alteration in the retinal circulation. There would be plenty of time to make careful and precise ophthalmoscopic observatious in the stage of visual phenomena preceding headache in cases of migraine. (2.) In the second set of cases there are sudden and temporary failures of sight, lasting several minutes, without precursory colours. I used to call both these classes of cases epilepsy of the retina; but for many years I have abandoned this fallacious expression altogether, and now call them cases of epileptic amaurosis. It is practically certain that they are due to central discharges; and I have little doubt that they are owing to discharges of those convolutions which Ferrier declares to bo cerebral centres for vision. In the second class of cases the patient becomes suddenly blind for a short time; the only thing is blindness. I have had no chance of investigating the fundus during an attack of this kind, excepting in one where there was double optic neuritis, and the patient's sight was so far affected that he could only just read No. 20 of Snellen. The results were nearly negative. Whilst I was examining him, total blindness came on.

By far the most important thing seen ophthalmoscopically in medical practice is optic neuritis; but I have written so often on this subject that I shall say no more about it than was said before when speaking generally of the value of the ophthalmoscope. It is well known that although optic neuritis may disappear, leaving sight good, and only very trifling, if indeed any, abnormal ophthalmoscopical appearances, it sometimes leaves optic atrophy, with more or less defect of sight. I shall say nothing of this kind of atrophy.

There is another kind of optic atrophy, which is very different clinically as well as pathologically—viz., simple atrophy of the optic nerve—atrophy without precedent neuritis. This is seen in some cases of locomotor ataxy, and is, in difficult cases, a great help to that diagnosis. It is sometimes seen before ataxy begins, before there is auy inco-ordination of the legs. But, even then, in many cases there is a symptom which as certainly belongs to the ataxic group as does the disorder of co-ordination. It will be found that the patients who have simple atrophy have sometimes pains in the legs—the well-known lightning pains. In these cases of simple atrophy, coming locomotor ataxy is possible; and, if there are the particular kind of pains spoken of, it is almost certain; we should always inquire for them in cases of simple atrophy. I do not think I can put the clinical relationship of these cases to locomotor ataxy better than I put it in an old paper:—"We have (1) amaurosis (meaning that with simple optic atrophy), without pains in the legs; (2) amaurosis with pains in the legs only; (3) amaurosis with pains in the legs and difficulty of co-ordinating the movements of the legs; (4) pains in the legs and difficulty of co-ordinating the legs without amaurosis; (5) amaurosis without paius iu the legs and with difficulty of co-ordination. I could now put five patients in a row showing the above set of symptoms" (*Medical Times and Gazette*, September 1, 1866).

Allbutt and Westphal have found simply atrophy of the optic nerve in many cases of general paralysis of the insane. I have made no observations on this matter.

What is called "tobacco amaurosis" deserves the attention of physicians. Mackenzie asserted that tobacco caused blindness, and said that there were those "who would rather smoke than see." Wordsworth drew attention to the subject in the beginning of the ophthalmoscopic era, and asserted strongly the possibility of diagnosis of tobacco cases by the state of the disc. Hutchinson at this point took up the matter, and did his best to so sift the evidence that no further doubt should be possible. He soon came to the conclusion that the statements of those who believed in tobacco amaurosis were well founded, and that it is really a frequent form of defective sight. He presented several statistical reports at intervals of a few years, detailing all cases which had come under his care, and comparing them with others. The result has been a conviction that tobacco amaurosis is the result of tobacco only; that there is no parallel form in women; that it is usually recovered from by abstinence; that it is not attended, as a rule, by other nervous symptoms. Its ophthalmoscopical appearances are, in the first place, congestion and slight haze of the disc, then pallor and atrophy of the side next to the yellow spot. Hutchinson holds strongly that it is not the result of drinking, but occurs rather in those who smoke without taking alcohol to counteract the effects of tobacco. It never occurs except in smokers, and the only cases which at first glance appeared to resemble it in non-smokers, or in women, differ distinctly in their final event, since they result not in arrest or amelioration, but in certain blindness and white atrophy of the whole disc.

There is a very important pathological process which we can watch by aid of the opthalmoscope: the process of embolism. Virchow predicted that the effects of embolism would be seen in the eye—that is, ophthalmoscopically—four years before Graefe, in 1858, did see them. Brudenell Carter showed before the Medical Society, some years ago, a marked case; the effects of the embolic process could be seen. Now, the use of the ophthalmoscope in such a case as this is of vast interest as revealing the cause of the patient's blindness; but it is scientifically of extreme value as a contribution to the study of the process of embolism. The cases of blocking of a branch of the arteria centralis are most interesting. The whole process of embolism is within the eye, and may be looked at and its stages traced. It would, I think, be mere perversity to omit notice of a process we can see, and study exclusively that process, or rather the clinical aspect of it and its post-mortem appearances, in organs concealed from observation during the patient's life. Moreover, ophthalmic surgeons have done their work in these cases with their usual

precision. The first case of partial retinal embolism was recorded by Samisch, the second by Hirschmann, and a third by Knapp. Knapp's case is of very great interest; numerous hæmorrhages were to be seen in the retinal segment supplied by the blocked arterial branch. Now, as Knapp says, this might be called a case of hæmorrhagic infarction of the retina. The interest of such a case is that it helps us to complete our knowledge of the effect—of embolism in general. It certainly is not widely known that the effect of plugging of arteries is commonly not anæmia, as one might at first glance suppose, but hyperæmia and extravasation. The case might be called red softening of the retina: the process is just the same in cerebral red softening; there is arterial plugging leading to extravasation of blood and softening of the brain. In all these cases the blocking leads very quickly to hyperæmia and extravasation. That blocking of arteries can lead to local hyperæmia, to increase of nutrient fluid, is, I think, worth some consideration in regard to the pathology of those diseases, such as epilepsy and chorea, in which the increased expenditure of energy implies of necessity increased nutrition by some process. Late in these cases the blood is absorbed and the disc atrophies. A similar change, making allowance for differences in the organs affected, follows in red softening of the brain: there is yellow softening and red splenic and renal blocks becoming washleather-like. Sometimes there is hemiplegia from embolism, and at the same time amaurosis from plugging of the arterii centralis retinæ. I saw a case of this kind in Sir William Jenner's practice with Dr. Gowers. In this case Sir William's diagnosis was confirmed by the autopsy, and a valuable account of the case has been published by Dr. Gowers. This is the only case of recent retinal embolism with hemiplegia that I have seen. I have seen several cases of hemiplegia in patients who had atrophy of one optic disc from past embolism. It is very important in such cases to note exactly the condition of the disc and its arteries, or we might be misled into the opinion that the atrophy was a consequence of the cerebral disease which caused the hemiplegia. This would be a very serious error; for, so far as I know, no kind of cerebral disease produces atrophy of but one optic nerve except by the process of neuritis, and that is, in physicians' practice, a thing of extreme rarity. Charcot believes that destructive change of a certain part of one cerebral hemisphere causes blindness of the opposite eye, but he says there are no ophthalmoscopic appearances in these cases.

The ophthalmoscope is valuable as revealing to us tissue-changes which are parts of, or local developments of, general morbid states. We may see tubercle in the choroid during acute tuberculosis. The first case of this kind recorded in this country was by Soelberg Wells. Such a discovery may be of very great help towards the very difficult diagnosis of tubercular meningitis as it occurs in the adult.

In some cases we may, so to speak, see syphilis ophthalmoscopically. I can only speak very briefly of some points. Since the discovery that keratitis is a result not of struma, as formerly supposed, but of inherited syphilis, there has followed the observation that disseminate choroiditis is also almost invariably of specific origin. The discovery in the eye of changes due to this disease is of great value, both in respect to the diagnosis of acquired and of inherited taint. Without asserting that they are never due to other causes, Hutchinson holds that their presence warrants the gravest suspicion. In establishing a diagnosis of inherited disease in a family, the patches of disorganisation left by choroiditis are often of the utmost value. They are often present without the patient being aware of any material defect of sight, and may be present in the eyes of one child whose physiognomy is good, but in whose brothers or sisters there may have been reason to suspect syphilis. In such cases their value is almost as great as that of notched teeth, and may often set the matter at rest.

A very peculiar form of very chronic choroido-retinitis, occurring in the subjects of inherited syphilis, and closely simulating retinitis pigmentosa, has engaged Mr. Hutchinson's attention of late years. Its interest for the physician is increased by the fact that it may perhaps be a parallel change to what occurs in some of the insidious and slowly progressive forms of spinal disease met with in the subjects of acquired syphilis. The subject has also been ably written on by Dr. Fitzgerald, of Dublin. This form does not set in suddenly like disseminate choroiditis, but very insidiously, and it progresses, in spite of treatment, to almost entire blindness. It is distinguished from retinitis pigmentosa by its rarely being quite symmetrical, and by the fact that the choroid, as well as the retina, is disorganised.

In a recent number of the *Ophthalmic Hospital Reports* is a report by Mr. Hutchinson on a form of senile amaurosis, the first examples of which were recognised by Mr. Waren Tay. The ophthalmoscopic conditions are peculiar, and have not as yet been illustrated. They consist of numerous round white or glistening dots in the retina or choroid near to the yellow spot or optic disc. At first these are very small, and only to be discovered in the erect image; but they increase, become confluent, and involve ultimately considerable areas. Their subjects are usually in fair health, free from evidence of kidney disease, elderly (or, at any rate, past middle age), and almost always there is a history of vague disorders of the nervous system, slight transitory paralysis, etc. The conditions were in one instance found in several members of one family.

But by far the most valuable ophthalmoscopical signs of tissue-change in constitutional disease are those occasionally occurring with Bright's disease. [The significance of these in medical practice was briefly considered.] The discovery of these changes leads one to take a very grave view of the patient's case. However, it is to be noted that all changes will disappear. I have known a patient who had the appearances of chronic Bright's disease in an extreme degree, who had convulsions and coma, get well—that is, into the state of health he was before his acute illness, the fundus becoming practically normal. It is, however, to be noted that these appearances are not absolutely characteristic of Bright's disease. In some cases of cerebral tumour we find appearances somewhat like them, and occasionally quite like them; and in some cases of renal disease the discs simulate the common optic neuritis from intracranial tumour.

I would draw the attention both of ophthalmic surgeons and physicians to some minute ophthalmoscopical observations by Dr. Gowers in certain cases of Bright's disease. Dr. Gowers is so good an ophthalmoscopist, and, above all, knows so thoroughly well the varied healthy appearances of the normal fundus oculi, that I should accept these minute observations of his as being as exact as it is possible for such difficult observations to be.

Dr. Gowers finds that in a large number of cases of Bright's disease in which there exists increased arterial tension, the retinal arteries may be seen to be distinctly smaller than natural. The diminution in size can sometimes be noticed as an absolute reduction; sometimes it can be best estimated by comparison with the veins—the size of which, on account of their darker colour, can be more easily estimated. In one instance a reduction in size of the arteries was observed to coincide with an increase in arterial tension. Small vessels may be sometimes noticed in conjunction with hypertrophy of the heart without albuminuria, and probably coincide with a pre-albuminuric stage of Bright's disease. When albuminuric retinitis has set in, the contraction of the vessels is often not to be observed, perhaps on account of the disturbing influence of the local condition. It is, however, to be observed that in some cases of Bright's disease without retinal changes, and with high arterial tension, there is no reduction in size of the visible retinal arteries. This would seem to show that arteriole contraction is not the invariable, and therefore not the only cause of increased tension.

Dr. Gowers lately showed at the Pathological Society a drawing of a fundus in which periarterial fibrosis was evident (it was extreme around some of the arteries), and in which some small aneurisms could be seen on some of the vessels. This observation is of interest in relation to cerebral hæmorrhage. I would add that Liouville has found miliary aneurisms in the retina post-mortem, like those found by Charcot, Bouchard, and Charlton Bastian in the brain.

I conclude with mention of research by another physician whose ophthalmological observations are thoroughly trustworthy. Dr. Stephen Mackenzie(c) has drawn attention to spontaneous visible pulsation of the retinal vessels in connexion with aortic regurgitation. Though described with much completeness by Dr. Otto Becker,(d) and referred to by some ophthalmic writers, the condition does not appear to have met with general attention at the hands of physicians. He

(c) *Medical Times and Gazette*, May 1, 1875.

(d) Graefe's *Archiv.* 18 Band, Abth. i., p. 206. Dr. Becker alludes to the previous description by Quincke (*Berliner Klinische Wochenschrift*, 1868, No. 34, and 1870, No. 21). Dr. Fitzgerald (*British Medical Journal*, December 23, 1871) described one case where pulsation was visible in the arteria centralis retinæ.

related eight cases, with detailed observations as to the condition of the heart and vascular system, all showing pulsation in the retinal arteries, or in both the arteries and veins. He pointed out that the phenomenon was generally most marked where the radial pulse was most typical of aortic regurgitation, and where the left ventricle was markedly hypertrophied. Secondary dilatation of the mitral orifice did not necessarily preclude it. He showed that where there was a doubt as to the rhythm of a murmur, or where pulmonary sounds interfered with auscultation of the heart-sounds, the ophthalmoscope might have diagnostic value, and gave a case in illustration of this point.

Dr. Stephen Mackenzie has also (*Medical Times and Gazette*, March 3 and 10) described retinal hæmorrhages in connexion with purpura. Rue had (*Union Méd.*, 1870, No. 48) previously described hæmorrhagic retinitis in connexion with purpura. Dr. Wickham Legg (*St. Bartholomew's Hospital Reports*, 1875, p. 64) has recorded a case of retinal hæmorrhage observed by Mr. Vernon in a case of purpura.

ORIGINAL COMMUNICATIONS.

TWO CASES OF

FEVER WITH HYPERPYREXIA.

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(*Continued from page* 256.)

We may now proceed to enumerate some more direct grounds for the view that pyrexia is dependent on paralysis or derangement of a regulating nerve-centre; and we will take first cases of injury to the spine in man. In Brodie's case the patient lived for twenty-two hours after receiving the injury, breathing for some time before death at long intervals, the pulse being weak and the countenance livid. Shortly before death the temperature between the scrotum and thigh was 111°, and also just after. The fifth cervical vertebra was torn from the sixth; blood was effused within the theca vertebralis, and the lower part of the cervical region of the spinal cord was lacerated.

In the first of Dr. H. Weber's cases there was an injury to the neck, with at first only transitory loss of consciousness, excessive micturition and diarrhœa, contraction of pupils, rapid rise of temperature to 111° in axilla, and development of intense pyrexia, with coma five hours before death. The same temperature (111·2°) was noted three hours later, just before he died. The post-mortem showed fracture and incomplete dislocation of the third, fourth, and fifth cervical vertebræ; the corresponding portion of the cord was considerably injured, especially the posterior half, which was transformed into a dark red pulp. Heart in a state of diastole; lungs intensely congested; blood in heart fluid. Ecchymoses under peri- and endo-cardium.

In the second case there was at first no perfect loss of consciousness or motion; afterwards coma with moist and hot skin. Death seventeen hours after accident. Temperature in rectum immediately after death, 110°; fifteen minutes later, 109·8°. There was fracture and dislocation of the third and fourth cervical vertebræ; the corresponding portion of the spinal cord much crushed, and almost transformed into a red pulp. Brain soft. Intense congestion of lungs. Heart distended with fluid blood; minute ecchymoses on its surface. —(Vide *Clinical Society's Transactions*, vol. i., page 163.)

In Godfray's case (vide *Lancet*, 1874, vol. i., page 904), a man, aged forty, after a fall in which he struck his neck, was perfectly sensible, but all his limbs were devoid of motion and sensation. Temperature 90°; pulse 52; respirations 12. He breathed with great difficulty. Priapism. Bladder much distended, though he had urinated only a short time before. He spoke slowly but distinctly. His temperature began to rise slowly five minutes before death; it was 106° between the scrotum and groin almost at the moment of death, which occurred at 11 a.m. At 11.5 a.m. it was 107°; at 12.30, 105·2° in groin, and 109° in rectum. It was 107° at 1.30 p.m. in same part. The sixth cervical vertebra was torn from its connexion with seventh; its spinous and transverse processes, and also the latter in the one above, were fractured.

Fischer (*Centralblatt*, 1869, page 259) states that in an old woman, who had a transverse fracture of the third cervical vertebra, and in whom the corresponding part of the cord was totally crushed, the temperature in one hour after injury was 39° C. (102·2° F.) in the rectum. It rose to 41° C. (105·9° F.) and to 42·9° C. (109·2° F.), and kept at about the same figures during the few days that life was prolonged. In dogs and rabbits Fischer finds section of the cervical cord to produce an immediate rise of temperature of 0·5° C. (0·9° F.) to 1·7° C. (3·06° F.). This rise of temperature did not ensue when the dorsal or lumbar cord was divided.

Quincke relates the two following cases:—A man, aged thirty-four, fractured the bodies of the fifth and sixth cervical vertebræ. The cervical cord was completely squashed below the fourth vertebra. The extremities and trunk were completely paralysed, and respiration was only carried on by the diaphragm, aided in forced breathing by the sterno-cleido-mastoids. Pulse soon after the injury was 72, full; temperature 37·6° C. (99·7° F.). Pulsation was evident in the veins of the backs of both hands. Death ensued in nineteen hours and a half after the injury. The temperature at the end of twelve hours was 41·3° C. (106·3° F.) in the axilla, and three hours later was 42·5° C. (108·5° F.) in the same situation. This was at 2 a.m. Subsequently the temperature was taken in the rectum. At 6.10 a.m. it was 43·8° C. (110·8° F.); at 6.35, when death occurred, it was 43·5° C. (110·3° F.); at 7.15 it was 43·2° C. (109·7° F.) in the rectum.

The second case was that of a man, aged thirty-nine, who died with caries of the axis and atlas and lower part of the occipital bone. Purulent meningitis had occurred, and the exudation was so abundant that the cord was compressed. Opposite the atlas it was soft and of a uniform greyish-brown colour; below this part it was normal. The patient died comatose. On July 4, at 8 a.m., temperature was 37·5° C. (99·5° F.) in axilla, pulse 126; at 4 p.m. it was 39·3° C. (102·7° F.) in axilla. On 5th, at 8 a.m., it was 39·8° C. (103·6° F.) in axilla, pulse 124; at 2.40 p.m. temperature was 42·7° C. (108·9° F.) in axilla, 43° C. (109·4° F.) in rectum; at 3.10 p.m., when death occurred, temperature was 43·6° C. (110·5° F.) in rectum, and the same reading was found at 5 p.m.—(Vide *Berliner Clinische Wochenschrift*, 1869, No. 29.)

In Mr. Teale's case the fifth and sixth left ribs were broken, there was great pain in the back, the patient was conscious but in a state of collapse a few hours after the accident. For several days afterwards there was some feverishness; the temperature rose to 101°, but became normal in a fortnight. Subsequently meningo-myelitis of no great severity occurred, the pulse rose to 120°, and became thready and scarcely perceptible, while the temperature for nine weeks ranged from 108° to 122° and upwards. The temperature between the thighs was generally nearly the same as that in the axilla, but sometimes when the thermometrical readings were highest the hands, feet, and forehead were icy cold. Once when the temperature was taken in the rectum it was found to be 111°, that of the axilla at the same time being 110·4°. For some time there was intense pain along the spine, but no paralysis of the limbs seems to have occurred. Slight ptyalism was produced by mercurial inunction, and recovery gradually took place.

Mr. P. Teale mentions the case of a gentleman who, at 5 a.m., received a compound fracture of the skull with crush of the brain, and was found at 5 p.m. to have a temperature of 109°, and to be dying.

Billroth had a case under his care of fissure of the cranium without external wound, but with concussion of the brain, in which the temperature rose continuously during the twenty-four hours that life lasted up to 40·9° (105·6° Fahr.)

In a man aged thirty-eight, under Mr. J. Lane's care, who injured the middle of his spine by a fall from a scaffold, and had in consequence complete paraplegia as regards motion, and nearly complete of sensation, with bloody and ammoniacal urine; the temperature on November 23 was 103·8°; on 24th, 101·6° in the morning, 104·8° in the evening; on 25th, 102·2°; on 26th, 102·6°; on 27th, 98·8° in the morning, 101·5° in the evening; and on 28th, 100° in the axilla, and 99·4° in the groin. He died a few days after.

Billroth also reports the case of a man, aged fifty, who had dislocation of the sixth cervical vertebra, with fracture of the spinous process of the fifth and sixth, and of the body of the seventh. The spinal cord opposite the sixth vertebra was completely torn across. The temperature twenty-four hours after the injury was 40·5° C. (104·9° F.); fifty hours after the injury (four hours before death) it was 42·2° C. (107·9° F.).—(Vide *Langenbeck's Archiv*, 1862, vol. ii., pages 482 and 483.) The

patient died of acute œdema of the lungs. Billroth remarks that since subcutaneous fractures of themselves cause no fever, the high temperature is probably to be referred to the injury of the cord.

The cases above cited prove, to my thinking, that, however it may be with dogs, severe damage to the cervical cord in man, sometimes amounting to complete destruction, often produces very high temperature both within and on the surface of the body, in the rectum, and on the skin. The patients in whom this thorough heating occurred were undoubtedly not specially protected against cooling not more than usual, and though there is no record of the amount of heat given off, it seems to me utterly improbable that the rise in temperature was due to retention. A non-febrile person at the end of three hours' warm pack, when cooling must be very much impeded, shows no increase of temperature. The hyperpyrexia does not seem to have been produced by the near approach or commencement of death, for in several of the cases life was prolonged for several hours, or many, after the temperature had become high. The post-mortem records of most of the cases make it difficult to think of the lesion as other than a paralysing one, but in Mr. Teale's patient especially this could hardly have been so; for there could certainly have been no grave injury to the cord as the immediate result of the accident, seeing that a fortnight later the temperature was normal and there was no paralysis. The subsequent symptoms of irritation of the cord, the twitching of the legs, the dysphagia, the intense pain along the spine, seem indicative rather of irritation of some nerves or nerve in the vicinity of the cord, than of any lesion of the cord itself. Such irritation may have acted inhibitingly on the heat-regulating centre, and so indirectly paralysed it. In the cases recorded by Mr. P. Teale and Billroth of injury to the brain and fracture of the skull with high temperature it seems also probable that the pyrexia was produced by inhibitory irritation proceeding from the injured part of the hemispheres, and acting upon the regulating centre.

It is very important to observe that apparently similar lesions of the spinal cord may produce diminution of temperature. Mr. Hutchinson states that, after injury to the spine low in the neck, there may be very high or very low temperature without apparently any reason. A man who had received an injury to his cervical spine, producing paraplegia, had a temperature which never rose above 94·4° F. Mr. Wagstaffe reports a case of fracture and dislocation of the sixth cervical vertebra, in a patient who died in forty-eight hours, having a temperature of 92·3° F. on admission, and of 81·76° F. three hours before death. Fischer relates the histories of two patients who had received an injury of the cervical cord, in whom the temperature fell in one in the rectum to 34° C. (93·2° F.), and in the other in the axilla to 30·2° C. (86·36° F.). In one patient the pulse was normal, in the other it fell to 40. The autopsy showed in both cases a partial injury of the cord, the anterior columns remaining more or less exempt. Fischer concludes from these cases, and experiments on animals in which similar lesions were produced, that the regulating centre is to be looked for in the anterior fibres of the cervical cord. One thing seems to come out pretty clearly from all the observations—viz., that the result is determined by the kind of lesion, its seat, extent, severity, and not by the environment of the patient. Those with low temperature have almost to a certainty been not otherwise circumstanced in this respect than those with high. If, as some experiments presently to be mentioned indicate, the heat-regulating centre is situated about the lower margin of the pons Varolii, it is probably but rarely directly injured. Most accidents which do not kill at once affect the cord below the fourth pair of nerves. The effect of a complete squash of the cervical cord below this point will therefore be to cut off the influence of this centre from all the parts supplied with nerves coming off from the cord at a lower level, and so to raise the temperature. A less severe lesion at or near the same part, which leaves some efferent channels of nerve influence still intact, may either paralyse (inhibitingly) the regulating centre, or excite it, and so produce high or low temperature.

(*To be continued.*)

WOMEN-SUFFRAGE.—A Quarterly General Court of the Governors of St. George's Hospital will be held this day (Friday), to discuss, among other matters, the question of admitting ladies as governors of the Hospital, enabling them thereby to take part in its management, a duty heretofore entrusted to the opposite sex. The general inspection of the Hospital and in-patients took place on Tuesday last.

CASE OF GANGRENE OF THE LUNG.

By BENJAMIN WALKER, L.R.C.P.

WM. H., aged sixteen, farm labourer, the son of healthy parents, of whom he and another brother aged nineteen are the only survivors of a family of thirteen children, three of whom were still-born, and the other eight died in infancy of convulsions, none of them attaining a greater age than six months. This boy is a well-formed, vigorous lad, and has always had good health, with the exception of scarlet fever, which he had in early childhood.

First came under my observation on November 8, when he was suffering from influenza, with severe frontal pain. There was also a puffiness of the eyelids, suspicious of renal disease. His urine, however, was free from albumen or casts. Ordered a saline mixture with small doses of morphia, and to use bismuth snuff. He gradually recovered, and went to work again on November 20. On the 23rd he was exposed to heavy rain on a raw cold day, and walked home about noon with a severe pain in his left side. The least movement gave him most acute lancinating pain over the left lower ribs. Ordered to bed at once, and a linseed and mustard poultice over the painful side, to be followed by continuous linseed poultices, and to take morph. hydrochlor. gr. $\frac{1}{6}$, and liq. ammon. acet. ʒ jss. every three hours. Pulse 132; respirations 32.

November 24.—Short dry cough; no expectoration. Pleuritic rub to be felt. Skin acting freely. Tongue loaded. Pulse 128; respirations 28; temperature 100·9°. Continue treatment. To have plenty of diluent drinks.

25th.—Progressing favourably. Pulse 124; respirations 26; temperature 101·8°.

26th.—Progressing favourably. Pulse 120; respirations 20; temperature 99·3°.

27th.—Progressing favourably. Pulse 108; respirations 25; temperature 100·1°.

28th.—Pain in side has disappeared, and, except for the pulse, which is 106, patient might be said to have nearly recovered. Respirations 20; temperature 98·7°.

29th.—Not so well. Pulse has risen to 126; respirations 30; temperature 101·9°; and there are moist bronchial râles over whole of left lung. In evening had a violent coughing fit, and brought up four or five ounces of frothy and transparent mucus. Covered with beads of perspiration—skin acting copiously. Respirations increased to 40, and oppressed; temperature 102·3°; pulse 126, feeble. Hypodermic injection of a quarter of a grain of morphia; and to take morph. hydrochlor. gr. $\frac{1}{6}$, ammon. carb. gr. v., tinct. chinchon. co. ʒ ss., every two hours. Linseed poultices to chest, and to have milk and beef-tea *ad lib.*

30th.—8 a.m.: Passed a restless night, dozing a little at intervals. Pulse 140; respirations 42; temperature 102·9°. Tongue loaded with a white fur. Expectoration, which is copious, is altered in character, being tenacious, and dark reddish-black in colour, and so offensively fetid as to drive everyone to a distance. His breath has the same odour. Disinfectants sprinkled over the floor, and cloths wrung out of them suspended across the room, and the air kept moist by evaporation of water. To inhale the vapour of turpentine for a quarter of an hour every four hours; to continue the bark and ammonia every two hours, and in the intervening hour to take liq. sodæ chlor. ℥xx. ex aqua every two hours; half an ounce of brandy every hour; milk and beef-tea as before. 1.30 p.m.: Pulse 144; respirations 46; temperature 103·7°. 8.30 p.m.: Pulse 144; respirations 42; temperature 103·1°. Expectoration not so copious, like liquid strawberry jam; not frothy nor tenacious, but fetid as before. To take ol. ricini ʒ ss.

December 1.—8 a.m.: Bowels moved thrice. Much the same as last night. Pulse 144, feeble and fluttering; respirations 48; temperature 103·4°. No pain in chest, nor does cough cause any. Expectoration easy and of same character. Breath is sweeter after turpentine baths, and patient likes them, feeling relieved after each one. One ounce of brandy every hour. Does not like the beef-tea, but takes well of milk. 1.30 p.m.: Pulse 132; respirations 41; temperature 102°. 8 p.m.: Pulse 134; respirations 48; temperature 103·6°. Breathing very oppressed. Expectoration becoming more solid and puriform, but still fetid. Skin acting freely.

2nd.—8 a.m.: Pulse 144, very feeble; respirations 48; temperature 103·6° (same as last night). Has had no sleep. Takes his brandy and milk well. Breath still very offensive. To add twenty minims of carbolic acid to the half-ounce of oil

of turpentine for his vapour-bath. A copious eruption of miliaria has appeared over the whole body since last night. Noon: Pulse 144; respirations 48; temperature 103·4°. 6 p.m.: Pulse 138; respirations 48; temperature 103°. To take, in addition to his other remedies, five grains of sulphate of quinine every four hours.

3rd.—8.45 a.m.: Better this morning. Pulse 116, firmer and of more volume; respirations 36; temperature 102·4°. Skin acting nicely, but not nearly so violently. Had only two doses of quinine during the night, as the others were spoilt in the mixing, and precipitated by the milk. It was therefore ordered in a mixture simply suspended in water, with a little compound tincture of cardamoms (five grains) every four hours. Takes his turpentine and carbolic vapour-bath, but cannot tolerate it more than seven or eight minutes. Is having eight pints of milk and twenty-four ounces of brandy in twenty-four hours. 1.45 p.m.: Pulse 108; respirations 140, easy; and the lad is quite cheerful, and can converse without distress. Cough less frequent; sputum as before. Temperature 101·3°. Cutaneous action reduced, and defervescence marked since the quinine has been exhibited. Tongue cleaning at edges, and moister. 9 p.m.: Pulse 108, fuller and stronger; respirations 36, quite easy; no rhonchus audible. Sputum solid and tenacious, trivial in quantity, and not so fetid. Temperature 101°. Slept an hour this evening for the first time. Brandy reduced to one ounce every three hours.

4th.—10 a.m.: Pulse 108; respirations 30; temperature 99·6°. Cough occasional. Sputum more copious (about one ounce and a half in last twelve hours), not so tenacious, and more fetid. Asks to have the turpentine vapour-baths. Discontinue brandy; takes plenty of milk, and has commenced beef-tea again. 9 p.m.: Pulse 96; respirations 30; temperature 97·7°. Slept for an hour or two several times during the day.

5th.—10 a.m.: Pulse 93; respirations 24; temperature 98°. To have five grains of quinine night and morning only; a lean chop and a glass of port for dinner; continue milk and beef-tea.

6th.—Steadily convalescing. Chop for dinner, and a glass of port three times a day.

Remarks.—The foregoing case is interesting as confirming the success of Professor Skoda's plan of treating this disease by turpentine vapour-baths and full doses of quinine. After the inception of this method on December 3, the pulse fell in the first twenty-four hours from 138 to 108, and the temperature from 103° to 101°; whilst the next twenty-four hours brought down the pulse to 96, and the temperature to 97·7°, or 5·3° in forty-eight hours. The vapour-bath is most easily improvised by pouring into a wide-mouthed jar a quantity of boiling water upon half an ounce of turpentine, and erecting a tent over the patient by means of a shawl and a walking-stick. The amount of brandy (twenty-four ounces daily for three days) consumed, and of milk to the extent of a gallon a day and sometimes more, shows that stimulants and support generally must be given with no niggardly hand.

Spondon, Derby.

Professional Secrecy.—Dr. Berrut, recently summoned before the Court of Assize of the Seine as a witness in a case of abortion, and desired by the President to take the oath, refused on the ground that the facts concerning which he could depose only came to his knowledge during "the exercise of his profession." The President then represented to him that he could first be sworn, and then only depose to the facts which did not relate to his profession, and having again refused to take the oath, he was fined 100 fr.—*Gaz. Hebd.*, May 3.

Meath Hospital and County Dublin Infirmary.—The summer session of 1877 was opened on May 1 by the distribution of the prizes awarded at the close of the past winter session. The "Hudson Prize," awarded for reports on six clinical cases, was divided between Messrs. Charles Hall Penny, James A. MacCullagh, and Henry Sherrard. The Medical Prizes were awarded as follows:—First prize, Mr. Henry Sherrard; second, Mr. John P. Carmody. The following were the successful candidates for the Surgical Prizes:—Mr. William Miley, first senior surgical prize; Mr. Robert Gordon and Mr. James Peacocke (equal), second senior surgical prize. Mr. James Parkinson and Mr. Lucas Middleton (equal) were also awarded the first junior surgical prize; and Mr. George Fisher was awarded a second junior surgical prize.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

EMPYEMA—ASPIRATION—ABSCESS IN LUMBAR REGION—PNEUMOTHORAX—INSERTION OF DRAINAGE-TUBES—COLLAPSE OF LEFT LUNG—ULTIMATE RECOVERY, WITH RE-EXPANSION OF LEFT LUNG.

(Under the care of Dr. ANDREW CLARK.)

[Reported by Mr. Roland D. Smith, Resident Medical Officer.]

Mrs. G., aged thirty-three, married, was admitted into the London Hospital on October 30, 1876, in an almost dying condition. She was poorly nourished and very anæmic, could lie only upon the left side, had extreme dyspnœa, and a short dry cough which seemed greatly to distress her. The whole of the left side of the body was very œdematous, the left arm being at the same time both tender and very painful. Owing to the severe dyspnœa it was impossible at that time to get a history of her illness; each sentence she uttered distressed her much, and so great was her breathlessness that she had to gasp between every two words. A proper examination of the chest was quite out of the question. There was absolute dulness over the whole of the left chest, diminished tactile vocal fremitus, and the heart was felt beating above and to the right of the right nipple. Without any further delay the aspirator was used, the canula being inserted in the eighth interspace posteriorly; ninety ounces of pus were withdrawn. During the operation the patient experienced an unusual amount of dragging pains on the right side, and once almost passed into a state of syncope. An hour after aspiration the heart was felt beating under the sternum, the breathing was greatly relieved, and patient was quietly lying on her right side—a thing she had not done for six weeks. The percussion-note over the left chest was dull, but down as low as the seat of the puncture the breath-sounds and voice-sounds seemed fairly good. In the left lumbar region there was a tumour as large as an orange, elastic, fluctuating, and markedly expanding on coughing.

On October 31 patient gave the following history:—About three months before she came to the hospital she was thrown out of a pony-cart, and fell upon her left shoulder. She thought at the time that there was little more than bruising, but four days before her last confinement, and three weeks after the accident, she began to experience pain in the left side, a "severe pain just below the ribs and passing round to the back." For six weeks she kept to her bed. About fourteen days before she came to the hospital she noticed a lump in the left loin; it gradually increased in size, did not give pain, but caused considerable discomfort when she attempted to lie upon her back. Her urine had been scanty, high-coloured, and voided frequently; no pain on micturition. During the whole of the six weeks previous to admission she was unable to lie upon the right side.

On November 1 she had to be aspirated again: nearly all the conditions present upon admission had returned, although to a less extent. Ten ounces of pus were withdrawn from the lumbar tumour, and after that had been completely emptied sixty ounces were taken from the pleural cavity. Patient fell almost into collapse, but quickly rallied, and was much relieved by the operation. The physical signs afterwards showed that the heart had returned to the left of the sternum, and that the left lung was fairly expanded.

About twenty-four hours afterwards the heart was again beating against right nipple; there was considerable dyspnœa. The whole of the left chest had become very resonant to percussion; there was amphoric breathing and metallic tinkling (pneumothorax).

During the next fortnight patient had to be again aspirated; and on November 17, whilst under the influence of chloroform, a drainage-tube was placed in the left pleural cavity, and another in the lumbar abscess. Pus freely escaped from both at the time, and continued to do so for weeks afterwards. Often during the coughing she complained of great pain all over her back and a dragging across the chest. Air and pus bubbled out through the aperture in the chest-wall whenever she coughed, and on deep inspiration the air rushing into the

pleural cavity caused a whistling sound. Small doses of opium were given to ease the cough and allay irritability, but from this time the chief treatment was to prevent death from exhaustion, which seemed to threaten every now and then. Milk and eggs were ordered, and strong beef-tea, and four ounces of brandy daily.

On November 23 brandy was discontinued, and two ounces of "vin de Baudon" ordered three times a day, about an hour before food. For a month this medicated wine and a liberal diet was her only treatment, and during that time she very greatly improved. She seemed more cheerful; her cough was less troublesome; the discharge from the wound became less, and was less fetid; but, what is most remarkable, whilst the drainage-tube was yet in the pleural cavity, the upper part of the left lung seemed to a certain extent to be regaining its function; and on December 28 Dr. Clark made the following notes:—

"Left Lung: In the supra-clavicular region the inspiration is loud, but unaccompanied by râles; expiration is blowing and wheezy. Just over the inner end of the clavicle the inspiration and expiration are loud and wheezy. Similar state from the clavicle to the nipple, but inspiration is getting shorter and expiration prolonged. Below the nipple and in the axilla the inspiration is very short, and accompanied by a metallic ringing click. Expiration much prolonged and wheezy."

On January 1, Dr. Clark said that the lung had undergone remarkable repair; air was heard entering freely nearly down to the base, and the metallic tinkle had disappeared; and on February 12 he said "that the upper part of the left lung had undoubtedly quite recovered, whilst the lower part was still compressed, no air being able to enter it." The discharge had now ceased, and the drainage-tube was removed after the pleural cavity had been well washed out a few times with a solution of iodine.

On February 19, Dr. Clark said that the air was entering the whole of the left lung even to the base. From this date patient improved gradually but slowly, and often with slight intermissions, owing to attacks of bronchitis. Her treatment remained simple, generally a little saline medicine and a liberal diet.

As a rule the temperature had been irregular; usually there were evening exacerbations. Once or twice the temperature in the axilla was recorded as 105°, and frequently it was above 102°. The pulse varied from 140 to 100, and the respirations from 48 to 20. During the whole of the present month the temperature has been normal, and the patient has been considered convalescent.

CHARING-CROSS HOSPITAL.

CHRONIC BRONCHITIS AND EMPHYSEMA—FATTY AND DILATED HEART—GANGRENE OF LEG—DEATH.

(Under the care of Dr. POLLOCK.)

[Reported by W. B. Houghton, M.D., Registrar.]

H. R., aged fifty-three, a butcher, was admitted on March 13, 1877, under the care of Dr. Pollock, with dyspnœa and cough, aggravated in paroxysms. There was no family history of importance. Patient had been subject to winter cough and rheumatic pains in the joints for several years. For eighteen months before admission he had been short of breath on exertion, and had lost flesh; there had been some night-sweating, and occasional attacks of orthopnœa. During the present winter the symptoms had been more marked, and his leg began to swell soon after Christmas.

On admission, patient was unable to assume the recumbent posture; the features were puffy, but there was no cyanosis; there was marked œdema of the lower limbs and lower part of the trunk. Patient had a cough, usually worse at night, with frequent attacks of severe dyspnœa. Expectoration, which was moderate in amount, consisted of dirty watery mucus, in which were suspended rounded masses of purulent material. Lungs emphysematous, with numerous sonorous and moist râles. Arteries rigid and elongated. Pulse at wrist weak, flagging, and soft. Slight epigastric pulsation was present; the apex-beat was weak, diffused, and "tumbling" in character. The first sound was short and "slapping," and there were no cardiac murmurs. The digestive organs were fairly healthy. Urine was of normal specific gravity, and contained more than a trace of albumen. Patient was placed on a moderate diet, and ordered an expectorant mixture combined with stimulants.

During the next week there was no material alteration, but on the night of March 22 patient woke up, complaining of sharp pain in the left foot and leg. The next morning the pain was still present, and there was partial loss of motion and sensation below the middle of the left leg. On examination the leg was found to be colder than its fellow, of purple colour, and somewhat œdematous; there was intense tenderness along the middle line of the calf, over the course of the posterior tibial vessels. Although the arterial pulsation could not be felt behind the inner malleolus, it was found that the circulation in the leg and foot was not completely arrested. Hot fomentations were ordered to be applied, and the limb was kept slightly elevated; brandy increased to six ounces in the twenty-four hours.

During the next few days the pain continued, and the patient obtained some sleep only after the hypodermic injection of morphia. The purple tint of the leg increased, and the œdema extended along the thigh to the groin. The pain and tenderness soon became most intense in the popliteal space; and the calf of the leg swelled very much. There was increased heat in the entire limb, as far as to about three inches above the ankle-joint; below this situation the limb was much colder than natural; the transition from heat to cold was quite abrupt. The line of demarcation corresponded to the point below which motion and sensation were deficient. On March 26, several dark blotches appeared over the dorsum of the foot, and these gradually increased in size and number. There were, however, no bullæ developed, although from the prolonged application of the fomentation some desquamation occurred in the skin over the heel and great toe. At this time the patient began to complain of great weakness, and the pulse became smaller and softer; the complexion assumed a dull earthy tint, extending also to the conjunctivæ.

On March 29 the lower half of the leg and the foot were of stony coldness, with total loss of motion and sensation; temperature below the knee was lower than that above, but was found to rise gradually from the middle of the leg to the knee. The purple colour of the skin was confined to the lower half of the leg; and there was increased swelling in the calf, partly deep, partly due to œdema of the subcutaneous tissue; the pain and tenderness here were less than previously. Patient became weaker, and died on the evening of March 31.

On post-mortem examination, the left internal iliac artery was found occluded by a recent clot. All the arteries of the left lower limb showed marked atheromatous degeneration; a firm continuous clot, eight inches in length, was found occupying the posterior tibial and the lower end of the popliteal artery. The heart was very large and loaded with fat; it weighed twenty-six ounces. All its right side was dilated; there was some hypertrophy of the wall of the left ventricle, and the aortic semilunar valves were thickened, with irregular margins. The left kidney presented the remains of numerous old embolisms, which had partially lost their wedge-like shape, and presented themselves as more or less irregular yellow patches, reaching to, but not projecting beyond, the surface of the kidney.

Remarks.—In referring to this case, Dr. Pollock pointed out that the condition of the left kidney made it pretty clear that the arrest of the circulation in the leg was of embolic origin, though the valves of the heart were apparently free from vegetations. Dr. Pollock reminded the students of a somewhat similar case that occurred under his care in 1872, in which there was gangrene of the right leg from embolism of the iliac artery. Here, however, there was ample cause for the embolism, as the aortic valves were a mass of vegetations. The patient lived long enough for partial separation of the gangrenous leg to take place. The case is reported at length in the *Transactions of the Pathological Society*, vol. xxiv.

APEX PNEUMONIA.

(Under the care of Dr. GREEN.)

[Reported by Mr. W. P. Biden, Assistant Medical Officer.)

W. W., aged seventeen, a porter, was admitted August 15, 1876.

Family History.—Father died of phthisis, aged sixty-two. Mother alive and healthy; fifty-five. Twelve brothers and sisters died young; cause unknown. One brother and two sisters alive and healthy. He is the youngest member of the family living.

Previous History.—No reason to believe that he has had any

previous lung trouble. Three days ago, on getting up in the morning, he felt quite well, and had his breakfast as usual. About 9.30, having been at work about an hour, he began to feel tired, so sat down. Soon after, in trying to get up, he felt too weak to do so. About noon he was assisted home, and went to bed, feeling very weak, with pains all over him, especially at the lower part of the back, and complete loss of appetite. He had no rigors or sickness. During the following night he wandered. The next day he kept his bed. Thinks he had some shivers; sweated a good deal; was very thirsty; did not feel sick; bowels were confined; urine high-coloured. His breath was short. He had a slight cough, with a feeling of constriction across his chest, and sharp pain in the right mammary region, increased by movement and coughing. Spat some white frothy sputa streaked with blood. Yesterday his cough was rather worse, and he felt weaker. He came as an out-patient under Dr. Irvine, who admitted him.

Present State.—Appears a fairly well-nourished lad. Face anxious and a little flushed. Skin pungent; temperature 102·2°. Complains of pain and soreness all over him; worse in the lumbar region. A sense of constriction across the chest, with pain (not severe) in the right mammary region. Slight dyspnœa. Respirations 24. Slight harsh cough. Spat a small quantity of viscid sputa tinged with blood. Has considerable tenderness in the epigastric region. Bowels confined. Urine scanty, alkaline, pale yellow colour, no albumen. Pulse 76, full, hard.

Physical Signs.—Chest well made; no bulging or flattening. Expansion normal. Right Lung: Vocal fremitus increased in front and behind over the upper part of the lung; dulness, extending in front down to the fourth rib, behind over the whole of the upper part of the lung down to the level of the sixth dorsal vertebra. Remainder of lung resonant. On auscultation, tubular respiration, with an occasional crepitant râle over the whole of the area of dulness; also increased vocal resonance. Some crepitant râles at the base. Left Lung: Vocal fremitus normal; also resonance. Respiratory murmur normal. A few crepitant râles at the base. Heart: Præcordial dulness normal; sounds weak; no murmur. Liver normal. Ordered—℞. Vin. ipecacuanhæ ℥v., mist. pot. bicarb. ʒj., t.d.s. Linseed poultice to right side, back and front. Spoon diet.

August 16.—Slept better during the night; did not wander. Cough about the same. Respirations 44; pulse 80; temperature 103°. Urine acid, more copious. Dulness over upper part of right lung, hard, wooden. Other physical signs the same as yesterday. Evening temperature 103·2°; pulse 88; respirations 44.

17th.—The pain and soreness have passed off. Still feels some constriction about the chest. Cough worse; expectoration more copious, still viscid, and containing blood intimately mixed with it. Physical signs continue much the same. The crepitant râles at apex are more numerous and more distinct. Temperature 102·2°; respirations 36; pulse 96. Bowels have been moved twice a day yesterday and to-day. Evening temtemperature 102·6°; respirations 40; pulse 84.

18th.—Seems better. States he feels hungry. Cough not so frequent; sputa much more copious, viscid, resembling diluted prune-juice. Tongue moist, red at tip and edges; dorsum covered with thick creamy fur. Thirst less. Temperature 101°; pulse 66; respirations 24. Physical Signs: Dulness not so absolute at upper part of right lung. Respiration still tubular. The râles have become almost metallic. Vocal fremitus and resonance the same. Left lung still the same. Evening temperature 99°. Ordered—℞. Mist. quiniæ ʒj. t.d.s.

20th.—Continues to improve. Cough is not so troublesome; spits but little; sputa clear, glairy; no pus; some pigment. The dulness over the upper part of the right lung is not so absolute. Breath-sounds are clearer. A few moist râles on deep inspiration. The râles at the bases have disappeared. Temperature, a.m., 97·4°; p.m., 99°.

23rd.—There is now fair resonance over the upper part of the right lung; the respiratory sounds are less harsh; bronchophony is not so well marked. There is still an occasional râle on deep inspiration. He coughs but little; sputa scanty, glairy, pigmented. Poultices were discontinued on the 21st. Temperature 98°.

25th.—At the apex of the right lung the resonance and respiratory sounds are normal. Below the second rib there is still slight dulness, and the respiratory sounds are weak, somewhat tubular; also the same posteriorly below the spine of the scapula to the angle. The bases of the lungs are normal. Pulse 60, full, regular; respirations 16. Coughs but little; expectoration scanty, viscid, pigmented. Temperature 98·4°.

29th.—Still continues to improve. Slight dulness over the upper half of the right lung. Respiratory sounds rather weak. No adventitious sound. Coughs but little. Still expectorates a small quantity of viscid pigmented sputa. Temperature 99°; pulse 60; respirations 16.

30th.—There is some retraction of the upper part of the right side, involving the supra- and infra-clavicular fossæ. The other physical signs as yesterday. Temperature, a.m., 98·2°; p.m., 99°.

September 5.—Improving in appearance. Still considerable retraction of right apex, the dulness remaining the same. Temperature ranges from 98° (a.m.) to 99° (p.m.). Sputa as before. Ordered—℞. Ol. morrhuæ ʒj. t.d.s.

11th.—Is getting stouter. Appetite exceedingly good. Still expectorates a small quantity of tenacious, glairy, pigmented sputa. Retraction and dulness still remain the same. No auscultatory signs. He continues to have a slight degree of pyrexia at night (99°).

He was sent to the Convalescent Home at Walton-on-Thames on September 13.

November 10.—Expansion nearly equal on the two sides. Still slight impairment of right apex. No adventitious sounds to be heard, and respiration is nearly as full as at left apex. He has no pain, no cough, and is in good general condition.

Remarks.—The diagnosis in this case lay between croupous pneumonia of the right upper lobe, and phthisis with a pneumonic onset. The critical temperature, the non-supervention of other chest-signs, and the almost complete resolution, appeared to be in favour of the former and against the latter hypothesis. The alkaline urine on the fourth day, and the uniformly slow pulse, were exceptional features in the case.

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Medical Times and Gazette.

SATURDAY, MAY 12, 1877.

THE GENERAL MEDICAL COUNCIL.

The General Council of Medical Education and Registration met on Thursday, the 10th inst., when, after the confirmation of the minutes of the last meeting, the first business was the introduction of the new representative of the Royal College of Surgeons of England, Sir James Paget, than whom no more

valuable addition could have been made to the Council. Sir James's pre-eminence among living surgeons, and his rare ability as a speaker, would make him highly welcome there; but, besides all his other qualifications, he has, as is well known, devoted a great amount of time and consideration to the subjects of medical education and examination, and his knowledge and power of influencing others will undoubtedly add greatly to the force and weight of the utterances of the Council. The President then delivered the Address which we have the pleasure of publishing in another part of our columns, and which we commend to the careful perusal of our readers. It came into our hands so late that we cannot in justice make any comment on it; but it will be observed with regret that the President confirms the truth of the rumour that Dr. Stokes has resigned his seat in the Council. Dr. Stokes has been the Crown nominee for Ireland ever since the Council was called into existence, and the President alludes in graceful terms to the regret the Council feel at parting with so long-tried and so valued a colleague. There can be no doubt that the session will be a very busy one. A large amount of important business is already placed on the programme, and some of the matters are of a character only too likely to provoke not a little discussion. Among these may be mentioned the "Registrar's Abstract of Answers sent by Medical Licensing Bodies with respect to the Exemptions of Foreign Graduates"; a report from the Executive Committee "on the Answers from Medical Licensing Bodies to Questions proposed to them in regard to Results of Professional Examinations, and Deficiencies in Preliminary Education"; the consideration of the "Report of the Committee on Recommendations"; the consideration of the question of the Admission of Colonial, Indian, and Foreign Qualifications to the Medical Register, in connexion with documents forwarded by the Lord President of the Council and by the Board of Trade, relating to the employment of licensed Canadian practitioners under the Shipping Act. Sir Joseph Fayrer has also sent to the Council a request that the licentiates and graduates of the three Universities of India (Calcutta, Madras, and Bombay) may be admitted to the privilege of registration as qualified medical practitioners. The vexed question of the Registration of Honorary Degrees will come before the Council, a communication having been sent from the Queen's University in Ireland, with respect to the non-registration of "honorary degrees" granted by that University; and Drs. Acland and G. E. Paget having formulated a request "that the title of M.D. of the University of Dublin be removed from their names on the Register on the first convenient occasion, pending the decision by the General Council of the question as to the legality and expediency of registering such additional titles." It cannot be supposed that the Irish members of Council will not have much to say on this subject. Then the report as to the election of a Registrar by the Executive Committee has to be brought up; and our combative friend, Sir Dominic Corrigan, has given notice that he will move that the selection of a gentleman who is not a member of the medical profession for the appointment of Registrar to the General Medical Council, and to the Branch Council for England, "is contrary to the spirit and intention of the Medical Act of 1858, and has not given satisfaction to members of the Council, or to the profession generally." Such a motion as this—viz., a direct vote of censure on the proceedings of the Executive Committee—cannot well fail to excite a lively, and in all probability a long, debate.

Further, some correspondence that has lately passed between the Royal College of Surgeons in Ireland and the Senior Lecturer of Trinity College, Dublin, on the subject of Preliminary Education and Examination, has been forwarded to the Council; Mr. Macnamara has given notice that he will draw attention to the List, published by the Council, of Examining Bodies whose Examinations fulfil the conditions of the Council as regards Preliminary Examinations, and will inquire what steps, if any, were taken by the Council to ascertain the efficiency of those Preliminary Examinations; and Dr. Aquilla Smith has given notice of motion, "That the nineteen 'Colonial and Foreign Universities and Colleges' of which the Examinations as regards Preliminary Education are recognised by the General Medical Council, be struck out of the List of Examining Bodies for Preliminary Education." These signs of more than usual activity on the part of the representatives of the Irish licensing bodies are anything but assuring in view of the amount of business before the Council; and when we remember the disastrous effect of Irish activity on the progress of business in one part of the Council of the Nation this year they are sufficient to fill the stoutest hearts with dismay. Nor does it lessen our fear of prolonged obstruction to work of the highest importance to notice that one, at least, of the matters taken in hand by the Irish representatives in the Medical Council relates to a difference between Irish bodies. A misunderstanding or difference between Irish and English is not easily settled, but a grievance between Irish and Irish will, we fear, but too probably require a still greater flow of eloquence ere it can be arranged.

Moreover, it must not be supposed that we have noted nearly all the matters that have to be laid before the Medical Council during their present session. The Conjoint Scheme for England is to be submitted for their approval; and though if, as some hold, the Council have only to consider and approve, or otherwise, the proposed combination of the English medical authorities for the purpose of forming a Conjoint Examining Board, this need not occupy much time; yet a long debate may easily be raised on the question whether the Council have not also the right to consider and approve, or disapprove, of the details of the proposed Scheme. Then, besides much routine business, several other subjects of importance have to be considered, such as a communication from the Commissioners in Lunacy, with a report from the Executive Committee to the Medical Council, stating what course they would recommend to be taken, and what changes, if any, they would advise to be made in the law; the question as to the recovery of penalties under Clause XLII. of the Medical Act; petitions for restoration to the Register; and the consideration of cases in which it has been proposed to erase names from the Register; and all these are matters over which much time may very easily be spent.

We have not even alluded to some matters noticed in the President's Address. He mentions three proposed legislative measures upon which the opinions of the Council will be asked. The Council of the Obstetrical Society have drawn up a measure for placing the Education and Examination of Midwives under the control of the Medical Council; and this measure will, by the desire of the Lord President of the Privy Council, be submitted to the Medical Council for their consideration and advice. The Medical Defence Association will lay before the Council a Bill they have prepared for the amendment of the Medical Act, so as to provide for the prosecution of offenders under it. And it is supposed that a third measure, likewise to be brought forward as a private Bill, will also be sent for consideration by the Council. It is a Bill which we think we have seen in a slightly different shape before, and would create a new and additional examining board and qualification.

We need say no more to show that if nearly all the work before the Council is to be got through, the members must be diligent in business, earnest in purpose, and reticent of talk. It will be a very grave default if questions of first importance, such as those relating to professional education and examination, are again postponed, as they have been over and over again. The reputation of the Council is seriously endangered

by such delay and tardiness, and we trust that all the members of that body will more earnestly and more constantly remember to be business-like rather than only busy.

THE WOMEN AND THE UNIVERSITY OF LONDON.

The resolution passed on Tuesday by Convocation of the University of London, upon the question of the admission of women to degrees in medicine, will be received with an unusual amount of attention—and, we may venture to say, satisfaction—not only by the medical members of the University, but by the profession at large. On this occasion a motion was brought forward by two leading members of the Faculty of Arts, "That Convocation thanked the Senate for their resolution to admit women to degrees in medicine," and was supported by the presence of a large body of graduates as well as by several strong speeches from Mr. Stansfeld, Mr. Osler, and others. The medical members proposed an amendment to this motion, to the effect that Convocation considered it unadvisable for the University to admit women to degrees in medicine before it should have considered the more general question of the admission of women to degrees in all faculties. Mr. Savory eloquently proposed this amendment, and Dr. Barnes seconded it; and it was ably spoken on by Dr. Quain, Sir William Jenner, Dr. Wilks, and Dr. Wilson Fox. The resul of the debate was what we had anticipated—the amendment was carried by a considerable majority, and it was finally resolved to address the Senate in the terms just stated.

The resolution thus passed by Convocation of the University of London appears to be at once cautious and temperate, and to the point. It will be observed that Convocation does not commit itself to any opinion on the question of the admission of women to degrees in medicine. On the contrary, the declaration amounts simply to this: that Convocation does not consider that the special question should be entertained by the University until the more general one shall have been discussed. Convocation believes that, whether the degrees of the University are to be thrown open to women or not, the change, at all events, shall not be other than uniform and simultaneous in all the faculties. This seems but fair in itself; and it is supported by many important considerations. Thus, to say that degrees in medicine should at once be granted to women, because, by Russell Gurney's Act, the University is enabled to do so, is only reasoning in a circle, in the face of the still more recent refusal of Parliament to admit women to university degrees generally. Again, the degree in medicine involves a licence to practise, and by conferring first of all its degrees on women the University would magnify a function of which neither its medical graduates nor the graduates of other faculties have ever been proud. The degrees in medicine of the University of London are, without exception, marks of distinction, and not certificates of professional competency. The Senate themselves have quite recently recognised this fact in assenting to the Conjoint Scheme, by which this University virtually relinquishes its licensing faculty as such. And yet within a few months of the adoption of this resolution we find the Senate gravely stultifying it by determining to admit women to degrees in medicine, because some of the sex wish to enter the profession. There does not appear to have been one word raised in the Senate in favour of medicine as one of the very highest departments of science to be cultivated by worthy students; it seems to have been treated as a respectable calling, to which no person should be refused admission who could show a certain proficiency on examination.

But while, as we have tried to show, the resolution of Convocation is cautious and temperate, it is perfectly significant and decided. The members of the University have declared that, in their opinion, the time has not yet come for the admission of women to degrees in medicine. This is virtually a positive dissent from the resolution of the Senate on the same subject. It is, of course, possible that the Senate may turn a deaf ear to this recommendation of Convocation; but as the Executive dare not disregard the voice of Parliament, so, we venture to say, the Senate will not venture to carry out such a revolutionary resolution unsupported by the University. The position of the Senate is, indeed, little other than ridiculous, for if, on the other hand, they accept the recommendation, they will agree to postpone a reform—which they had themselves resolved on—until they shall make the reform more general, which they have already (in 1874, by a very large majority) resolved not to do. The action of the Senate will be watched with the greatest possible curiosity and interest.

POISONING BY CHLORAL.

It is with much pain and reluctance that we find ourselves compelled to make some comments on the evidence given at an inquest held by Mr. Carter, Coroner for East Surrey, one day last week. The inquest was held on the body of a medical gentleman who apparently had died from an overdose of chloral. This gentleman had unfortunately given way to habits of intemperance, and, finding that he had lost the power of self-restraint needful to abandon such habits at home, he came and applied to Mr. Holthouse here in London. It will be remembered that some time ago, when Mr. Holthouse gave up his position at Westminster Hospital, he, with the sanction and support of many influential gentlemen, including some highly esteemed members of our own profession, started in Balham an institution specially intended for the treatment of inveterate cases of dipsomania, and we may add that he has received a fair measure of support in this scheme. Be that as it may, the gentleman above alluded to saw Mr. Holthouse, and determined to become an inmate of his establishment at Balham. How long he had been an inmate there does not exactly appear, but the course of treatment followed is pretty closely indicated. Mr. Holthouse said in evidence before the coroner that he believed that in these cases it was perfectly safe to cut off all supplies of drink from such individuals at once and completely. He said, moreover, that no drink was allowed in his house on any pretence; yet we find the man in charge of the patient giving him, on the night of his death, whisky and milk. But if he did not allow spirits to be given, if he cut off all supplies of stimulant from the patient at once, Mr. Holthouse seems to have freely permitted the use of a much more dangerons substance, namely, chloral. We write only from the sworn testimony given before the coroner, and therefore with a certain diffidence, but the arrangements with regard to the dispensing of this chloral seem to have been as careless as they well could be. Apparently, one hundred grains of chloral were ordered for this patient every evening—half to be given as a matter of course, the other if necessary; and this at the discretion of an attendant. Nay, more, the chloral seems to have been kept in solution and dispensed by a matron or housekeeper; and though on the occasion of the fatal issue this woman distinctly swore she did not pour out more of the fluid than was equivalent to one hundred grains, still there seemed to be some doubt about it. The unfortunate patient, at all events, complained of the unusually strong taste of his first dose, and asked for something to take the taste out of his mouth. This dose not proving efficacious, the attendant some time afterwards gave him half of what remained, making in all seventy-five grains of chloral, and this was in no long time followed by death. We cannot but think that such a dose of chloral should never have been administered in such a way; and we are the more sorry for the result, inasmuch as this accident—if we may call it so—will have a powerful influence

in deterring or postponing the establishment of such institutions as this started by Mr. Holthouse, which we are quite sure would often be of inestimable value. Cutting off stimulants from all habitual drunkards, and putting on chloral, is not to be commended as a mode of treatment. It is a question whether it is not as bad as giving opium persistently and in considerable doses. It certainly is not so safe as the *naïve* plan adopted by a Scotch practitioner of the art of curing inebriates. He proceeded on the principle of "tapering it off." A story is told of a gentleman who once in the Highlands came across a body of respectable-looking individuals, apparently, however, under the control of one who looked what the Lunacy Commissioners abhor to be termed—a keeper; nor was his surprise lessened when, at the word "Time!" from this individual, each man in the company, himself excepted, drew a pocket-pistol and proceeded to take what is sometimes called the "altitude of the sun." The scheme was crude, but at all events it was safer to cut off stimulants by degrees than to do so at once and give enormous doses of chloral.

Since writing the above we have seen a letter in the *Times* from Mr. Holthouse, stating that the unfortunate man had been abusing alcohol since he was eighteen years old, and had also been addicted to the use of chloral. We cannot, we are sorry to say, see that this improves the aspects of the case. Under such conditions the greatest care was all the more incumbent on whosoever took the man in charge; and it is just this want of care which constitutes the ugliest feature in the case.

THE WEEK.

TOPICS OF THE DAY.

On behalf of the House Committee of the Westminster Hospital, Sir Rutherford Alcock has addressed a lengthy communication to the leading journal in explanation of their determination to retain the present site, in opposition to the various suggestions for removing the Hospital. The arguments employed are plausible, although it must not be lost sight of that the sum to be expended in adapting all the modern sanitary improvements to the old building is by no means small; and grave responsibility will rest on the Committee if, after the improvements have been carried out, the results do not justify their expectations. To one, at any rate, of the arguments for the retention of the present site we think there is a very sufficient answer. Sir Rutherford Alcock objects that Battersea, Chelsea, or Pimlico—to which neighbourhood it was suggested to move the Hospital—are not exactly in the most frequented lines of medical practice amongst hospital physicians and surgeons, and that therefore the most experienced of the medical profession might be deterred from giving their honorary services. But many of the London hospitals are established quite as far from the chief centres of practice without suffering from any want of distinguished names amongst the list of their medical officers; while it will be abundantly evident that a large and well-conducted hospital will always attract a sufficient number of students to its school. The resolution for remaining at Broad Sanctuary has, however, been carried; and, if persisted in, we trust that sufficient contributions will be forthcoming to enable the Committee to carry out all necessary improvements.

As we shortly noticed in our last week's number, another, if a slight, improvement has been made in London by the conversion of the disused burial-ground in Drury-lane, belonging to the parish of St. Martin's-in-the-Fields, into a garden for the use of the poor people of the neighbourhood and their children. It will be open on week-days from ten till sunset, and on Sundays between the hours of three and five in the afternoon. On the two sides of the entrance are a mortuary and a keeper's lodge, a few steps leading up to the ancient graveyard. The main area is broken up into gravelled paths and flower-beds; trees have been planted, and seats placed about. Last week the garden was formally opened, and we may fairly hope that the time is not very far distant when all the disused burial-grounds of the metropolis will be similarly converted, instead of being allowed to remain as dreary oases in the centre of a population craving for open spaces, however small. This improvement was, we believe, suggested by Miss Octavia Hill, who has been active in endeavouring to obtain similar indulgences for the working-classes in other localities. On the occasion of the opening of the gardens, such a large number of visitors availed themselves of the opportunity that considerable overcrowding resulted, and some accidental damage to the shrubs, etc., was caused. The grounds had to be summarily closed in order to repair this damage. At first some little supervision will no doubt be required; but Miss Hill has undertaken, if the Vestry feel unable to make the necessary arrangements, to maintain the garden in order for a year.

A Conference on the Health and Sewage of Towns was held last week at the Society of Arts, Mr. Stansfeld, M.P., presiding. Several noblemen and gentlemen attended, and there were also present representatives of many towns where the questions connected with the disposal of sewage are still matters of controversy. On the walls of the hall diagrams were exhibited, showing the healthy and unhealthy parts of towns, and showing at a glance the effects on the health of the inhabitants of particular districts arising from a good or bad sanitary condition of the houses, various colours being used to denote the presence of epidemic and other diseases. It was thus shown that bad drainage tended directly to disease. The chairman, in referring to the increased interest shown in the questions which would come before the Conference, alluded to the different proposals before the public for disposing of sewage and for converting it into a useful product. Mr. Le Neve Foster then read a summary of the returns furnished by various towns, showing the manner in which sewage was dealt with in each locality, the cost of dealing with it in each case, and the population and death-rate in each district. It was shown that the Act of 1876, to prevent the pollution of rivers, was not yet brought into operation, and in most cases where a river runs past a town, the sewage, unpurified, is discharged into the stream; in other cases primitive methods of disposal are still in active use. A long discussion ensued, and the subject is to be resumed at the next meeting.

In continuation of a subject to which we alluded last week, it appears that an influential deputation last week waited upon the Lord Mayor at the Mansion House to consider the expediency and necessity of establishing a hospital or hospitals in the metropolis for the reception of patients who can afford to pay for their treatment, which necessity has long been felt. Mr. H. C. Burdett, who has had ten years' experience as a hospital superintendent, has drawn up a scheme in which he proposes to establish a Home Hospital Association on the model of the Improved Industrial Dwellings Company, inaugurated in 1866, and which has proved a great success. The objects of the Association will be to provide hospital treatment, skilled nursing, a convalescent institution, and other accommodation for the benefit of all classes when attacked by illness, and to assist the medical profession generally; to acquire land and build hospitals; and to co-operate with the managers of the present hospitals supported by private charity, with the object of preventing the abuse of the latter by people who can afford to pay for medical treatment. Also to provide for the assistance of the medical profession, and for the benefit of the public, a well-regulated hospital, to which the former can send with confidence private patients

who can afford to pay adequately for the accommodation which they require, and in which the patients will have the advantage of being treated, if they prefer it, by their own doctor. The promoters of the present movement say it cannot be doubted that there is a decided impulse in the public mind towards the establishment of hospitals for the better classes under proper regulation, to which admission shall be by payment, and by payment alone; but it is said that to be successful such a scheme requires to be organised on a basis which will place the movement above suspicion. The deputation therefore solicited the Lord Mayor to grant the use of the Mansion House for a public meeting on the subject, and to preside thereat, and his lordship has fixed June 27 next for such meeting.

A lamentable case of blood-poisoning is reported from Scotland. Last week, Ann McDougall, sister of a farmer near Greenock, died from suspected poisoning. A post-mortem examination was made, and the intestines were forwarded to Edinburgh for analysis. In performing the post-mortem, Dr. Dougall wounded the forefinger of his left hand. Symptoms of blood-poisoning supervened; and although three doctors were immediately summoned to attend him, their exertions were of no avail, and he died on the 4th inst. It is supposed that he must have scratched his finger against the sharp edge of a bone.

At a recent meeting of the Stafford House Committee for organising aid to the sick and wounded of the Turkish armies, a letter was read from Captain Burnaby, giving a detailed account of his experiences in Asia Minor, where he found many of the Turkish troops in great suffering. He witnessed the most harrowing spectacles of death and mutilation from frostbite on the elevated highlands, and saw the levies from the warmer countries daily falling victims to the severe cold; while he states that from the want of proper medicines and appliances the wounded will have to be treated without chloroform, and with worn-out and blunted surgical instruments, unless supplies of these can be sent from Europe, where alone they can be obtained. It was resolved to spend £1000 in fever medicines, chloroform, and surgical instruments, which will be immediately sent out; and to make an urgent appeal to the public for further funds to mitigate the sufferings of the unfortunate soldiers fighting in defence of their country.

The President of the Local Government Board and the Chairman of the Commissioners in Lunacy will receive a deputation on the 17th inst., to present the report of the Special Committee convened by the Charity Organisation Society, on the education and care of idiots, imbeciles, and harmless lunatics. The report recommends that persons of this unfortunate class should be treated separately from acute cases of lunacy, and should be suitably trained in childhood and youth, whereby the larger number may be made wholly or partially self-supporting, and the cases permanently placed in asylums may be confined to those requiring constant medical aid.

It is stated by a contemporary that there is reason to believe that Major Graham will have no successor in the appointment of Registrar-General, but that whenever a vacancy occurs in the post it will not be filled up, and the General Register Office, instead of continuing to occupy an independent position, will become a department of the Local Government Board.

A few days ago a German sailor was landed at Salcombe from the schooner *St. Lucia*, bound from the West Indies to London, suffering from illness. He was taken to the Workhouse Infirmary at Kingsbridge, and unmistakable symptoms of yellow fever have now manifested themselves. All the other inmates have been removed from the Infirmary, and the Board of Trade has been communicated with.

A correspondent of the *Daily Telegraph* calls attention to a state of things in Paddington Parish which certainly seems to require immediate attention. He says that contiguous to, and running out of, the Harrow-road there is a small thoroughfare known as North Wharf-road, one side of which is rented by contractors for the reception of dust, slops, and manure. There is also a filthy, stagnant canal-basin, where boats are loaded with rubbish. The other side of the road is occupied by the poorest class of working people, whose families are very numerous. During the last week it is stated that there have been no less than seventeen persons removed from this place to the hospital, suffering from small-pox. Nine of them are reported to have been taken out of one boat; and what really seems almost incredible is the assertion that the parish authorities, well knowing the extent of the disease in the locality, have lately diverted the enormous traffic of the Harrow-road through this narrow place teeming with small-pox, in consequence of some repairs needed by the main road.

On Saturday evening last a meeting of the tenants of the Shaftesbury Park Estate was held at the Board schoolroom on the estate, to protest against a recent circular of the Artisans', Labourers', and General Dwellings Company (Limited), sent to the tenants, stating that their rents would be raised. Letters were read from Lord Shaftesbury and a number of noblemen and gentlemen formerly connected with the Company, whose attendance had been invited. After a letter had been read explaining the reasons for the course taken by the directors, Mr. Davey moved a resolution to the effect that the raising of the rents was a departure from the original prospectus of the Company, which expressed their object to be the providing of healthy homes for the working-classes at a moderate rental, and that the meeting called upon the Company to withdraw their circular notice. Mr. Godwin seconded the resolution, which was carried in a meeting of about 600 persons amid great cheering.

Only fifty-four deaths from small-pox in London were registered last week—a lower number than had been returned in any week since the beginning of December last. But the number of new cases admitted during the week into the Metropolitan Asylum District Hospitals was 246, which is the largest number of admissions for any week since the commencement of the epidemic.

THE FAMINE IN THE MADRAS PRESIDENCY.

Surgeon-Major W. R. Cornish, Sanitary Commissioner for Madras, in reference to the disastrous famine which at the present time is prevailing in that Presidency, has published a very able and valuable reply to Sir Richard Temple's Minutes of March 7 and 14 last, as to the sufficiency of a pound of grain as the basis of famine wages. In a letter addressed to the Madras Government, dated February 13, 1877, Surgeon-Major Cornish protested against a suggestion made by Sir R. Temple in his Minute of January 19, that sixteen ounces of cereal grain per diem would suffice for the maintenance of a labouring adult in health and strength. In 1874, during the Bengal famine, Mr. Cornish shows that Sir R. Temple had recommended an issue of one pound and a half of grain per diem for an adult, and that it was only on his arrival in the Bellary district of the Madras Presidency that he recommended the adoption of the smaller rate of allowance. In the difference of opinion which has arisen between Sir R. Temple and Surgeon-Major Cornish on this subject, it is abundantly evident, from the published facts, that the matter has not been viewed by them from the same standpoint. Sir R. Temple has suggested the decreased allowance as "an experiment"; and as a great saving is thereby insured to the Government, he is reluctant to admit that the one-pound ration is a mistake, and he brings forward arguments in its favour, which, when

analysed, are found to be unsound. On the other hand, Surgeon-Major Cornish adduces the experience of many years of personal observation: fifteen years ago, in writing on the subject, he stated that "a free labourer, if he has the means, will use from thirty-two to forty ounces of cereal grain, about two or three ounces of dhall, a similar quantity of meat or fish, and fruits or vegetables in addition. From numerous personal inquiries, I should be inclined to reckon the average consumption of cereal grain per diem of an adult labouring man is rather under than above thirty ounces." When the tried experience of such a man as Surgeon-Major Cornish must have been of great value to the Madras Government in the present exigency, it seems a great pity that he was not consulted before the order for reducing the allowance of grain to one pound per diem was decided upon. Undoubtedly, much dissatisfaction and a great deal of suffering would thereby have been avoided. The whole subject is, however, so important as to deserve further attention.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

At a meeting of the Royal College of Physicians held on Monday, the 7th inst., all the lately elected Fellows were formally admitted, with the exception of Dr. C. G. H. Bäumler, of Freiburg, in Baden, and Dr. William Jelly, of Madrid; and as these gentlemen cannot, without great inconvenience, present themselves at any meeting of the College, they will most likely be admitted *in absentiâ*. Several gentlemen, whose names will be found reported elsewhere in our pages, were admitted Members of the College. Dr. Wybrants, of Shepton Mallet, and Dr. W. O'Neal, of Lincoln, Extra-Licentiates, were elected as Members; and Dr. Michael Comport Grabham, residing in Madeira, was elected a Fellow of the College. The Baly Medal was awarded, on the recommendation of the Council, to Professor Carl Ludwig, M.D. The Treasurer informed the College that the copper-plates of the illustrations in the late Sir James Annesley's work on the Diseases of India had been presented to the College by Mr. Guy Lushington Prendergast; and a formal vote of thanks was passed to that gentleman. The scheme for a Conjoint Examining Board for England, as finally agreed to by the Conference of Delegates of the Medical Authorities in England, was forwarded by Sir James Paget, the chairman, to the College; was again consented to; and directions were given that it should be sent by the College to the General Medical Council for approval.

ROYAL COLLEGE OF SURGEONS, ENGLAND.

Meetings of the Council of the Royal College of Surgeons were held on Thursday, the 3rd, and Monday, the 7th inst., at which, besides ordinary and routine business, various matters of importance were considered. The Jacksonian Prize was awarded to Mr. Harrison Cripps for the best essay "On the Treatment of Cancer of the Rectum, particularly as regards the possibility of curing or relieving the patient by excision of the part affected." Mr. John Marshall's proposal that the Council should reconsider its decision arrived at in 1872, resolving that it was inexpedient to give effect to Section 5 of the Charter, 15th Vict., with respect to the election each year of two members of twenty years' standing to the Fellowship, was agreed to, subject to certain conditions yet to be defined. We understand that, among other things, it will be determined that no Member shall propose himself for election; that every Member shall be proposed by a member of the Council, and the proposal supported by five other members of the Council, to all of whom he is personally known; and that proposals of election shall be made at a January quarterly meeting of the Council, and be decided on at the April quarterly meeting following. The Conjoint Scheme for England, as finally settled by the Conference, was brought before the Council, and, having been agreed to, was ordered to be transmitted to the General Medical Council, for their approval of the union of the medical authorities concerned, for the purpose of forming a Conjoint Examining Board.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

At the ordinary meeting of this Society on Tuesday last, after a short and interesting paper by Mr. Lucas on the removal of a tracheotomy-tube from the left bronchus, Mr. Knowsley Thornton contributed a paper on Ovariotomy, bearing chiefly on the causes and treatment of the subsequent pyrexia. He advocates the use of an ice-cap to the head. This cap, which was the invention of an ordinary working-man of Glasgow, is made of coils of common elastic tubing, through which a constant current of iced water is kept up. Mr. Spencer Wells spoke strongly in favour of it; and also of Mr. Thornton's doctrine that the hyperpyrexia which very shortly follows a surgical operation is probably due to nerve causes, and that, if not checked, it will predispose any parts of the body which may have been interfered with to take on such morbid action as would lead, and does lead, to dangerous and often fatal complications. Mr. Thornton's paper will be found elsewhere.

HEALTH OF THE PORT OF LONDON.

The half-yearly report of the Medical Officer of Health for the Port of London to December 31, 1876, has recently been made public. The contents refer severally to the river, the docks, the school-ships, the canal population, and the epidemic of small-pox. In dealing with the subject of canal population, Dr. Harry Leach observes that there are two very important outlets into the district of this Port Sanitary Authority, severally at Brentford and Limehouse, the terminations of the Grand Junction and Regent's Canals. By these channels a varying number of so-called "monkey-barges" enter and quit the Port daily. The sanitary inspection of these barges shows that the space allotted to cabin accommodation averages about 280 cubic feet, and that in these spaces are housed families consisting of from three to seven persons of all ages and both sexes. Boys and girls of from twelve to twenty-one years of age are found living together in these floating cupboards. Children are born frequently in them, and the inspector has recorded a case in which small-pox was introduced and attacked all the inmates (nine in number), who nevertheless all remained in the barge during their illness. It must, however, be allowed, Dr. Leach remarks, that in every case the cabins were found to be very clean. The treatment of this floating population of men, women, and children, which was stated at the last Census to amount to 15,000, has, the report adds, most decided sanitary aspects, for these boats are known to have been carriers of contagious diseases; and it needs no sophistry to show that the cubic spaces recorded as the respective portions allotted to their occupiers set all sanitary notions at defiance, and the entire conditions of existence, whether viewed in their physical, moral, or educational aspects, are a sarcasm upon civilisation. The practical result of the investigations made goes to prove that an important sanitary as well as moral reform would be effected by the compulsory exclusion of all women and children from these canal-barges. In fact, the report under notice affords additional evidence of the necessity for an early introduction of Mr. Cross's Bill, which is to deal with the subject of the canal population of the country.

MEDICAL PARLIAMENTARY AFFAIRS.

Vivisection.—Not content with the restrictions placed by the Government last year upon the practice of vivisection, a few disappointed agitators have endeavoured to carry a more stringent measure this session. Mr. Holt, in moving the second reading of the Cruelty to Animals Bill, said that the object sought was to remedy a defect in Martin's Act, and

in toto to prohibit the practice of painful experiments upon animals. He explained the provisions of the proposed measure. He objected to the plan of allowing a State Minister the power of licensing painful experiments. He confessed that his aim was to prevent experimental vivisection altogether, and to make the law applicable to all vertebrate animals. Dr. Cameron, in opposing the Bill, remarked that experiments on the lower animals had been of the utmost benefit to the human race, and discoveries in medical and surgical practice could only be made by such experiments. Mr. Forsyth admitted having taken an active part in the agitation against vivisection, but he thought it absurd to prevent experiments on living animals when pain was absolutely annihilated. The supporters of this Bill were bound to show that the Act of last year had failed or been evaded, but no such case was adduced. Dr. Lush said that if British medical science was to maintain its position students must have an opportunity of studying physiology from life as it exists. Sir H. Selwin-Ibbetson, on behalf of the Government, said that the Act of last year was entirely successful. All the tortures of animals alluded to had occurred before the passing of that Act.

Medical Act Amendment.—Dr. Lush obtained leave to bring in a Bill to amend the Medical Act, 1858, and it was read a first time.

Cattle Plague and Importation of Live Stock.—An inquiry was made of Lord Sandon touching the question of compensation for compulsory slaughter of affected animals. Mr. Paget thought that owners of stock would more readily declare the existence of this disease immediately on its outbreak if there was a scale of award at least as liberal as that now in force in cases of pleuro-pneumonia under the Animals Act, 1875. Lord Sandon desired that these matters should be investigated by the Committee now being appointed. The names of Mr. Dease and Mr. McLagan were proposed by Lord Sandon to be added to the Committee, of which the nominees of the Government have been elected. The motion was agreed to.

Army Surgeons.—An inquiry was made by Mr. Mitchell Henry respecting the antedating of commissions under the new Royal Warrant, as was the case heretofore. Mr. Hardy, in his reply, said that previous to the year 1876 the time of instruction at Netley was allowed to count as a period of service. When the ten years' short service was instituted, it appeared undesirable to lessen the term of instruction and to make a difference between those leaving the army at ten years and those who prolong their regimental service.

FROM ABROAD.

Injection of Hot Water in Uterine Hæmorrhage.

In consequence of the favourable reports which have of late been published concerning this procedure, Prof. Gusserow, of Strasburg, requested Dr. Runge, his clinical assistant, to give it a trial. The results of this, conducted in twenty cases, he reports in the *Berlin. Klin. Woch.* for March 26. Of these ten were examples of atonic post-partum hæmorrhage, seven of hæmorrhage after abortion or after labour with retention of portions of the placenta, and three of hæmorrhage accompanying uterine growths. Some of the cases occurred within the Clinic, but most of them were dispensary patients. An irrigator was employed, and in urgent cases, when this was not at hand, a syringe; and the temperature of the water varied from 38° to 41° R. (118° to 125° Fahr.), 40° being that usually chosen.

Of the ten cases of atonic hæmorrhage, in two the success was complete, both women having fallen into a state of critical anæmia, and the usual means of arresting hæmorrhage having been tried in vain. The effect of the injections was most remarkable, not only in promptly arresting the hæmorrhage, but in their beneficial influence on the general condition of women so exhausted. In one of the cases ergot had been given before the injection, so that it may have contributed to the result. In five other cases the hot water was exclusively employed. In four of these it was resorted to soon after the flooding began, and the hitherto relaxed uterus soon contracted. In the other, the uterus, after the expulsion of the placenta, became distended with coagula, the woman being cold and pulseless. Some membranes which obstructed the os were removed, and large coagula forced out by pressure; but as the bleeding did not cease, hot water was injected with immediate good effect. In two other cases the effect was doubtful; and in the tenth case no effect resulted after continuing the injections for thirty minutes.

With respect to the seven cases in which the placenta or portions of it were retained, the injections proved of no use, or only temporarily useful, unless these had been previously removed. Nor did the hot water induce uterine contractions leading to their expulsion. In one case of retention of the whole placenta caused by a strictured state of the os, accompanied by considerable hæmorrhage, the hot water did not diminish the bleeding, while it augmented the partial contraction, the upper segment of the uterus remaining relaxed. The injections were therefore abandoned, and the stricture was removed by mechanical dilatation. After the placenta had been removed, the hot water arrested the still continuing hæmorrhage with promptitude. In other cases the bleeding was arrested, but it returned again until all remains of the placenta had been manually removed. One of the cases well illustrated the effect of the warm water on the emptied uterus. A woman was brought in after an abortion, with profuse hæmorrhage and a gaping os, and the remains of the placenta were removed by the hand. While this was doing, the patient, owing to the abundant hæmorrhage, faint and pulseless, passed into the last stage of anæmia. Hot water was injected, and the hitherto relaxed uterus became immediately hard, the hæmorrhage ceasing. The woman came to herself at once—the beneficial influence of the heat upon her cold, pulseless body being strikingly obvious. In the three cases of uterine tumour with obstinate hæmorrhage the influence of the injections was of but short duration. In two women with fibroids it was always arrested, to return again at the end of some hours or days. In a case of cancer of the cervix, also, abundant hæmorrhage was at once checked, but returned again at the end of some hours. Although the hæmostatic power of hot water cannot be called into question, neither can it be indiscriminately employed as a sovereign remedy. The cases must be carefully considered as regards their etiology. Its greatest efficacy, as seen from what is related above, and in the twenty-two cases published by Jackesch, is found in cases of purely atonic hæmorrhage; but it is of more doubtful value in those in which the uterus is not completely emptied of its contents. In cases of uterine tumour it is of temporary utility; but in what cases and to what extent it may here prove useful, further experience must decide. It must be admitted that in these hot-water injections we have a means of arresting hæmorrhage which is not only not inferior to any other known, but which in certainty and harmlessness surpasses many, and especially the treatment by means of ice. We not only struggle against the hæmorrhage with hot water more successfully than with cold, but we convey to the bloodless body that which is most useful to it, and which it can no longer itself produce—warmth,—in place of still further abstracting this by the external and internal application of ice. It is this conveyance of caloric and the vivifying effects which result from it that entitle these hot irrigations to preference over other means. The sensibility of women to these injections seems to be very various. A full third of these cases bore the temperature of 40° R. without any painful sensation, except in some in whom a slight burning sensation in the perineum was caused by the escape of some of the water from the vagina. Others complained loudly at first of burning in the abdomen and pain in the vagina, but they soon became accustomed to the procedure. When there are any lacerations present, the pain may be so great as to compel the abandonment of the injections, and even when the parts were quite uninjured the temperature has had to be lowered to 38°. An irrigator, by which a continuous stream can be more rapidly and certainly kept up, is much to be preferred to a syringe. Of course a solution of carbolic acid can be substituted for the water. Finally, it may be observed that the contraction of the uterus produced by these injections is peculiar. The uterus, it is true, becomes smaller and harder, but it never attains that degree of hardness—"as hard as a ball"—which we are accustomed to after a normal birth; it remains higher up and softer.

A School for Nurses.

The Paris Société de Médecine Pratique has set on foot a school for the instruction of nurses, at which are to be given evening gratuitous lectures, followed by practical instruction

and examinations. Diplomas are also to be conferred. The following subjects of lectures are announced:—Attendance upon Lying-in Women and New-born Infants; General Ideas concerning Medicine; Care of the Wounded; General Attendance upon the Sick; General Ideas concerning Hygiene; Minor Surgery, Bandages, and Apparatus; Pharmacy; Hygiene of the Aged, and Attendance on the Insane and Paralytic; Anatomy and Physiology; Frictions, Shampooing, and Hydropathy. These various subjects are to be lectured upon by twenty (*soi-disant*) professors—members, we suppose, of the Society.

The *Gazette Hebdomadaire* (April 20) makes some excellent remarks on this somewhat extraordinary programme:—

"This new institution responds to a real want; but, to speak sincerely, we fear that it is conceived under a mistaken idea which will falsify the result through the nature of the proposed instruction. Let us have *instructed* nurses by all means, but instructed strictly in relation to the nature of the duties which ought to be demanded of them. God preserve us from *knowing* nurses, who have their opinions in medicine, even when only elementary, and their minds made up concerning hygienic measures! There are already too many of this sort, and if it is believed that their ideas on these matters can be so rectified as to prevent their becoming insupportable, we believe it is a mistake. . . . The nurse is and should be nothing but the servant of the doctor. She is to him what the cook is to his master. His master would not tolerate the intervention of his cook in his alimentary hygiene, and the doctor should be the absolute judge of what his patient requires. A nurse who has her ideas on hygiene and even on pathology will intervene in the treatment, whatever the practitioner may say, from one end of the case to the other. She will feed the patient, cover him up, warm him, make him lie down or get up, and give him tonic or cooling substances, according to the counsels of her diplomated capacity—without even suspecting that medical measures, even the most plain in appearance, require to be subordinated to a thousand circumstances which vary from one patient to another, from one disease to another, and from one period of the same disease to another, and which can only be appreciated by the experienced practitioner.

"What, then, should be taught to nurses? They should be instructed in their occupation; and their occupation consists, first, in executing what has been prescribed, and, secondly, in well executing it, bringing to all the services required of them punctuality, dexterity, and a practical acquaintance with the means employed. For example, to know how to properly prepare a cataplasm or sinapism, and to vary this according to the more or less complicated nature of the epithem; to apply, according to the rules of art, a bandage or a dressing; to put on leeches skilfully, and to stop the bleeding from their bites; and to adroitly pass a shirt or waistcoat over the head of a patient who is unable to aid himself."

The writer goes on to say that even catheterism in many cases may be confided to nurses—male nurses for men, and female nurses for women; for to resort to this is sometimes a matter of urgency, while greatly employed practitioners often lose the necessary dexterity, especially in large towns, where the practice of medicine and surgery is distinct. A corps of male nurses, now rare to be met with in Paris, would often be found useful for this purpose. In conclusion it is observed that—

"Perhaps the best school for nurses would be a mutual school, in which the most experienced, who may serve as models, both men and women, may instruct novices, under the supervision of one or more practitioners, the pupils being afterwards submitted to an examination in order to obtain a testimony to their capacity."

On Friday, the 4th inst., the Duke of Richmond and Gordon received a deputation from the Obstetrical Society of London at the Privy Council Office, Whitehall, respecting the examination and registration of midwives. The President, Dr. Charles West, briefly explained the object of the deputation. Dr. Priestley and Dr. Barnes also spoke. His Grace thought the question was one for the Medical Council to consider. He would, however, confer with his colleagues and see in what way the desired object could be best attained. The deputation, which included Mr. Spencer Wells, Drs. J. Hall Davis, Graily Hewitt, Aveling, and others, then withdrew.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, May.

Hemianæsthesia and Metallo-Thérapie.

The investigations which have been carried on during the past few months at the Salpétrière, in the wards of Professor Charcot, into the series of phenomena which form the basis for the so-called "metallo-thérapie," have called attention to some of the most curious facts in connexion with the functions of the nervous system that have come to light since Braid made his researches into hypnotism. These investigations are by no means yet concluded, but I will endeavour to lay before your readers a brief account of them so far as they have been carried up to the present time.

In France, whether it be due to a peculiarity of the Latin race, or whether it be the result of the mode of bringing up, there is a greater tendency than in England to the development of the graver manifestations of hysteria—catalepsy and ecstasy are of no uncommon occurrence, and hystero-epileptic fits are certainly far more commonly met with than in England. One of the most frequent manifestations is anæsthesia, either of one side only (which is the rule), or occasionally of the whole body. The anæsthesia is absolute; the skin may be transfixed at any part with pins without the patient being aware of it, and the hardest pinch is entirely unfelt. The anæsthesia is everywhere bounded by the median line, and it involves the special senses as well as general sensation. Ether and ammonia are not perceived with the nostril of the affected side; the field of vision on that side is much diminished, and the appreciation for colours deadened; there is partial or total deafness on that side; and the sense of taste is lost on the corresponding side of the tongue. There are certain other peculiarities: thus, though the temperature is very little, if at all, lower on the anæsthetic than the healthy side, and there is no appearance of pallor or failure of circulation in the skin, yet punctures are said to be generally unattended by bleeding, the contrast between the two sides in this respect being quite marked. In most cases, moreover, there is tenderness on deep pressure in the iliac fossa, which tenderness is affirmed to lie in the ovary. There is, as a rule, no muscular weakness, and the muscular sense is only rarely lost; the patients are able to write, crochet, and perform complex movements with the anæsthetic hand as in health, and, in fact, they themselves rarely call attention to their anæsthesia, there being no sense of numbness or deadness to attract their attention.

This condition is one which is, I believe, only rarely seen in England, whilst in France it is relatively common; there are several such patients in the Salpétrière, and in the other hospitals it is by no means uncommon to find a case. Its existence has long been recognised, and more than twenty years ago Dr. Burg noticed that the simple application of metals to the skin of such patients was frequently sufficient to restore sensation. For many years the statement passed without attracting attention, but lately Dr. Charcot determined to put it to the test in his own wards. The result has been to entirely confirm the observations of Dr. Burg, and the method has now been tested so frequently, both at the Salpétrière and elsewhere, and under the eyes of some of the most competent observers in Europe, that there can no longer be any doubt as to the facts, though their explanation is still the subject of much discussion. I have had frequent opportunities of seeing the method carried out by Dr. Burg himself in the wards of Dr. Charcot, and, through the kindness of other physicians, of testing it myself on patients elsewhere.

The method of application generally adopted is to have a bracelet made of discs of metal strung together, or of gold pieces fastened on to a tape, the bracelet being sufficiently long to make two turns round the forearm. One of the affected limbs (say the arm) is surrounded by this apparatus, and the patient allowed to go quietly on with her sewing or other occupation. If, after a few minutes, the sensibility be tested, it will generally be found that in the neighbourhood of the bracelet, the skin, which was previously completely anæsthetic, has partially or entirely recovered its sensibility, and that, instead of our being able to transfix it with a pin, the least prick now is felt and resented. As time goes on, the area of recovered sensibility extends, until, in some patients, the sensation may be restored over the whole side of the body

by a single application. In other cases it may be necessary to apply the metal to each of the affected limbs, to the tongue to restore taste, in the neighbourhood of the ear to restore hearing, and so on. Twenty or thirty minutes generally suffices to bring back sensation absolutely to the whole side of the body.

But now, in many cases, we meet with a very curious phenomenon. We find that as the sensation has been reappearing on the one side it has been disappearing *pari passu* on the other, beginning at the point on the opposite limb corresponding to the position of the bracelet. At the end of the metallic application, then, we have an exact reversal of the condition previously existing—viz., normal sensation on the previously anæsthetic side, and absolute anæsthesia of the previously healthy side. The effect produced by the metallic application lasts from half an hour to twenty-four hours, or in rare cases to forty-eight hours, and the patient then relapses into her previous condition.

What is the explanation, or supposed explanation, of these curious phenomena? This, as I said before, is the subject of much discussion. On inquiring into the possibilities of the case, there appear to be only two modes in which the metallic application can act. One is, that the metal and the skin give rise to an electric current, the sweat acting as the intermediate fluid, and it may be this electric current which produces the results. The other possible mode of action is through the "moral" effect produced upon the patient by the treatment. Without venturing on any definite expression of opinion as between these two possible methods of causation, there are certain considerations which may eventually aid us in coming to some conclusion.

In favour of the electrical theory, we have the fact that an electrical current, though a very weak one, is present, as can be proved by the employment of a delicate galvanometer. M. Regnard, a former interne at the Salpétrière, ascertained experimentally the strength of this current, and constructed a little voltaic pile which gave a current of the same strength. On passing this current from the nape of the neck to the foot of the affected side, in patients suffering from hysterical hemianæsthesia, he obtained the same results as from the application of a metal. On one occasion, when using this battery, he applied the rheophores for some time before allowing the current to pass, without obtaining any results. He then closed the circuit, and in a short time the sensation was restored.

So far, we seem to have some evidence in favour of the electrical theory. But let us, before attaching any great importance to these facts, look at the matter from another point of view, and see what it involves if we decide that this minute electric current is the principle agent in the production of these phenomena. In the production of sensation we have, speaking roughly, (1) the organs which conduct the stimuli—the nerve-fibres; (2) the organs which appreciate the stimuli—the higher nerve-centres; and loss of sensation may result from a modified condition of either of these parts. Now, I would ask whether, in these cases, where there is absolute loss of sensation in every nerve, both general and special, of one side of the body, it is not far more easy to imagine some functional derangement of the appreciating organs, which has produced an obtuseness in the detection of stimuli of every kind on one side of the brain, than to imagine that all these diverse nerves—smell, sight, hearing, touch, etc.—have universally undergone such a change in their electrical condition that the performance of their functions has become impossible? This view is also favoured by the fact that hysteria can only be said to be a degree removed from strictly mental disease, which would lead us to believe that there must be some modification of the higher centres of the brain. But if it be the brain-centres which are at fault, and not the nerves themselves, how are we to believe that a minute electric current passed through a small portion of the skin of the arm can have been of any efficacy in the modification of this morbid condition? What, moreover, is the meaning of the transference of the anæsthesia? Turning now to an alternative explanation—viz., that the phenomena result from the so-called "moral" effect of the treatment, is it possible to throw any light upon them from this direction?

Apart from metallic applications, hysterical anæsthesia is often of an extremely uncertain character. Thus, there is a woman at present in the Salpétrière, under Dr. Charcot, who is said to have had absolute anæsthesia of the right side for twenty-five years, and of the left side for twelve months. The metallic treatment has been entirely without result in her case. Yet only a very few days ago she suddenly recovered her sensation completely on both sides without any accountable reason. In two cases of hysterical anæsthesia which I had the opportunity of examining in England, a strong stimulus which was unfelt at one minute gave rise to great pain a few minutes afterwards. From these cases it would seem as though a functional derangement existed in the mental centres, giving rise temporarily to what might be called, roughly, a "want of attention" on the part of the patient to stimuli arriving by one path, and then from some cause or other their "attention" is suddenly awakened—in Dr. Burg's experiments the cause being apparently the application of the bracelet. This, in the first place, draws their attention to the limb, and the novel contact for many minutes at length arouses the dormant power of appreciation in the mental centres; and this having been once aroused to impressions from that direction, the power of appreciation extends until all stimuli coming up the sensory path of that side are felt. It is, then, not very difficult to imagine that in a patient with this tendency to obtuseness of appreciation, when her attention has been called to one side, it may be lacking for the other, whence the transference of the anæsthesia.

I may mention that this obtuseness of appreciation—if such it be—is paralleled, as was suggested to me by a distinguished English physician during a visit to the Salpétrière, by the experiments of Elliotson, who produced artificially in certain persons, by purely "moral" means, a very complete insensitiveness without loss of consciousness; whilst the involuntary change of mental attention may be said to be paralleled by the experiments of Braid, who, in hypnotised patients, could concentrate the attention so exclusively on one part, to the exclusion of others, as to profoundly modify not only function but nutrition.

I offer the above suggestions as possible aids in the explanation of these curious phenomena. The more generally received explanation here is the electrical one; but this will be, for some of us, so difficult of acceptance, that we shall be almost driven perforce to the other alternative. As regards M. Regnard's experiments, it is no more surprising that the prolonged application of rheophores should produce a moral effect than that it should be produced by the application of the metallic bracelet; and in the second experiment it is open to doubt whether the result would not have equally followed had he continued the application of the rheophores without closing the circuit for a greater length of time.

GENERAL CORRESPONDENCE.

TRAINING COLLEGE FOR TEACHERS OF THE DEAF ON THE "GERMAN" SYSTEM.

Letter from Mr. A. A. Kinsey.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust you will allow me, as professionally connected with the above proposed College, a few words in answer to Dr. Crozier's letter from America, which appeared in your last issue.

The general tone of that letter might lead some of your readers to suppose that the projectors of the Training College, and others in this country engaged in teaching the deaf, were not acquainted with Mr. Melville Bell's most scientific and ingenious work entitled "Visible Speech," and his son's adaptation of it to the development of articulation in the "deaf and dumb."

Allow me to state that so far from this being the fact, the promoters of the College are specially conversant with the system of "visible speech," and it has been employed certainly in one school in England, as also in private instances by trained governesses. In every case it has been abandoned as unsuited to the teaching of articulation to deaf children.

I have myself studied "visible speech" in England, and in America at Boston under Mr. Graham Bell, and have watched it in operation at different schools. I have also in very many cases seen articulation developed by purely natural means, as in Germany and elsewhere, and infinitely prefer the latter, for reasons which space will not allow me to enter upon in your valuable paper.

So far, then, as to our cognisance of "visible speech." Now, with your kind permission, I should wish to call attention to one or two passages in Dr. Crozier's letter which are

misleading and evidently founded upon a want of knowledge of the methods of educating the "deaf and dumb."

He speaks of the "careful and patient investigation of the German method" in America.

We may safely assert that the first principles even of the "German" method were misunderstood in America in those schools in which, according to Dr. Crozier, it was "laid aside as imperfect and cumbersome in comparison with 'visible speech.'" Dr. Crozier too, in common with many, confounds a system of education with the mere mechanical development of articulation.

To speak of the "German" method being laid aside in favour of "visible speech" is about as correct as saying that the study of music had been abandoned in favour of a new process of producing musical notes, or that the art of painting had been laid aside in favour of an improved way of grinding colours.

We come next to the following passage:—"This work ('Visible Speech') is the basis in this country of all intelligent instruction of the deaf in the art of talking."

It would have been as well, perhaps, if the writer, before placing this statement upon paper, had devoted a little of his time to an examination of the school for deaf mutes in New York, under the direction of Mr. David Greenberger. Should the above-quoted passage meet that gentleman's eye, I feel very confident that he will be able to defend himself from being excluded from the ranks of intelligent instructors.

Having visited a large number of schools for the education of the "deaf and dumb" in various countries, I may perhaps be permitted to say that of the American schools which I saw Mr. Greenberger's was decidedly the best. It was conducted on the "German" method, visible speech being as strictly tabooed as signs and the manual alphabet.

Many German teachers of experience and skill are acquainted more or less with "visible speech," and repudiate it, as involving the pupils in a most laborious and unnecessary process of translating from "symbols" into the written character, and *vice versâ*. Imagine a pupil, after three years' study, articulating a sentence without knowing the meaning of a single word uttered; again, being unable to articulate written words, though knowing the meaning of them. Such is the practice under "visible speech."

In conclusion, allow me to add that I in no way deprecate the study of Mr. Melville Bell's work by *teachers* of the deaf, as it gives them invaluable information in respect of the functions of the vocal organs; but I must emphatically protest against the use of "visible speech" in the instruction of "deaf and dumb" children. I am, &c.,

85, Wigmore-street, W., May 9. ARTHUR A. KINSEY.

LETTER FROM DR. E. SYMES THOMPSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—A letter published under this heading in your last issue draws attention to the subject of "visible speech," and implies that the teachers of the deaf in England are oblivious of this clever invention of their countrymen, Mr. Graham Bell. Such is not the case.

In the *Medical Times and Gazette*, December 19, 1874, this system is described and illustrated by a figure. It has since been used in more than one institution, and rightly forms a part of the education of teachers of the deaf, as it indicates diagramatically the positions of the organs of speech during the pronunciation of various sounds. It has, however, been found necessary to relinquish the system in teaching the deaf, as it introduces an element of complexity where simplicity is essential. The point the oral teacher aims at is to enable the pupil to read words from the lips, and to imitate them. It is found that if the attention is divided between the lips and signs, no progress is made with lip-reading. Again, if the alphabet is taught as a necessary preliminary to the use of words, the same needless difficulty is introduced. Still more is this found to be the case if the pupil is obliged to learn a new alphabet (the visible-speech letters), and has to translate every word into the new language before he can understand it and give it utterance. Much use is wisely made of the visible-speech characters in teaching adults to overcome defective prononciation—for instance, in the case of persons recently operated upon for "cleft palate." But, after earnest and patient trial in a school under my observation, I am satisfied that it introduced needless difficulty, and that the "German system" of articulation and lip-reading, which allows no signs, no manual alphabet, and no alphabet at all, at first, is really far better suited for the deaf than the clever method of Mr. Graham Bell.

In the proposed Training College this pure "German system," as practised in the best continental schools, is to be taught, free from any admixture with signs, symbols, or artificial alphabets.

That this method will commend itself, after due inquiry and investigation, to the profession and the public is the conviction, sir, of Yours, &c.,

May 7. E. SYMES THOMPSON.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, APRIL 20.

DR. BUCHANAN, President, in the Chair.

THE minutes of the previous meeting having been read and confirmed, the report of the Council on the proposals of the managers of the Metropolitan Asylum District respecting the provision for the isolation and treatment of epidemic infectious diseases was considered. The Council are of opinion that adequate provision does not exist in the metropolis for the proper treatment and isolation of infectious disease, and they therefore endorse Section (A) of the managers' proposals. They also think that one central authority should be appointed to act for the whole metropolis in providing accommodation for all classes requiring or desiring hospital accommodation. As regards the constitution of the authority and the admission of patients suffering from epidemic disease, they suggest that it be entirely dissevered from any conditions of a pauperising character; and that the Metropolitan Asylums Board be merged into such central authority, or be itself the authority adapted or altered to existing circumstances.

Mr. LIDDLE said that it would be better for the Asylums Board as existing to take all cases of infection, and make a charge upon the local authority for all non-pauper cases.

The CHAIRMAN explained that the Council desired that the Asylums Board should be something more than an institution for providing proper isolation for one class only of the public—viz., paupers.

Dr. THOMAS spoke in favour of utilising existing arrangements for the treatment of epidemic disease, specially referring to the Fever Hospital at Islington, the managers of which are, it is said, willing to undertake the charge of all fever cases of the non-pauper class (except small-pox) at a fixed rate of payment.

Dr. TRIPE, having made a calculation of the average number of fever cases requiring treatment per annum, said that the proposal of the managers of the Fever Hospital could hardly be entertained, seeing that about 3·5 per 1000 of the population are annually attacked with fever, which gives a total of about 11,000 per annum for the metropolis. He concluded by moving that the report of the Council be adopted (which was seconded by Mr. Whitmore, and carried). Also that a copy of the report be sent to the Asylums Board, to each member thereof, to the President of the Local Government Board, etc.

Dr. DUDFIELD further suggested that the vestries and district boards of the metropolis should also receive a copy.

SOME THEORETICAL ASPECTS OF DISINFECTION.

Dr. E. B. BAXTER read a paper on the above subject. He said:—Authors still employ the term "disinfection" to denote three fundamentally dissimilar operations—viz., the destruction of specific contagia, the arrest of putrefaction, and the neutralisation of gaseous effluvia from organic matters in a state of decomposition, which are often offensive to the sense of smell, and always injurious to health. The term "disinfectant" should be restricted to "agents capable of so modifying the contagium of a communicable disease, during its transit from a sick to a healthy individual, as to deprive it of its specific power of infecting the latter." By allowing disinfectant, antiseptic, and chemo-cathartic operations to be confounded with one another, we help to perpetuate a wrong notion of the evidence on which the value of a true disinfectant should be based. The author criticised the experiments and resulting

conclusion of Dr. Calvert, that carbolic and cresylic acids are the "only true antiseptios" (see *Proceedings of the Royal Society*), as also those of Dr. Joseph Holt on the action of carbolic acid in arresting the progress of an epidemic of yellow fever. Of the two kinds of evidence thus exemplified, one is legitimate so far as it goes—the evidence derived from epidemics. No visitation of cholera takes place without our being assured, on authority above suspicion, that the fatality of the disease was arrested by the systematic adoption of some particular method of treatment. Many as are the fallacies incidental to the determination of the value of therapeutic interference with disease, those that beset our path when we try to ascertain the value of disinfectant measures in checking the spread of an epidemic are more numerous still. Were it possible, in any single case, to exclude all other possible checks to the extension of a communicable disease, then the evidence in favour of the disinfectant employed would be not merely admissible, but conclusive. By an antiseptio we understand an agent capable of preventing the occurrence of putrefaction. Cold, far from being a disinfectant, is probably an excellent preservative of infective products—*e.g.*, frozen vaccine lymph. To isolate the contagium of any communicable disease—to obtain it in a state of purity—is utterly impracticable. Indeed, it is only a few diseases of the communicable class that localise their contagion in such a fashion as to enable us to obtain material of whose infective quality we can feel sure. The difficulties in the way of applying any direct test of disinfectant power become well-nigh insuperable. It is still an open question whether typhus always springs from pre-existing typhus, or whether it may not arise *de novo* from overcrowding. Till we know far more than we do now about contagia it must remain impossible to investigate their relation to disinfectants. Dr. Baxter did not doubt that they all of them "breed truo." An ideally perfect fulfilment of the task of disinfection might rid the world of these infective diseases altogether. In his experiments the contagia employed were vaccine, the virus of glanders, and that of infeotive inflammation, which, strictly speaking, is not a specific virus at all. Five disinfectant agents were examined in relation to some or all of these infective products—viz., dry heat, carbolic acid, potassic permanganate, sulphur dioxide, and ohlorine. Dr. Baxter alluded to the experiments of other authorities. He endorsed two points established by Dr. Hiller, viz.—(1) That vaccine lymph is robbed of its infective power by exposure to a temperature of 100° C. for ten minutes; (2) that its infective power is not abolished by carbolic acid until the proportion of the latter in the mixture amounts to 2 per cent. Broadly speaking, the conclusions of Drs. Vacher and Braidwood, in reference to carbolic acid, potassic permanganate, sulphur dioxide, and chlorine, agree with those arrived at by himself. He then referred to the indirect method of testing disinfectant power. A putrescible substance will not begin to putrefy so long as the access of soptic microzymes is prevented; the degree of putrefactive change is proportionate to their number and reproductive activity. Lastly, the putrefactive process may be checked or arrested at any point by checking or arresting their multiplication. Any agent or condition that will prevent the growth and development of septic microzymes will prevent putrefaction, and is therefore an antiseptic. We have to distinguish between such agents—*e.g.*, cold—as stop the reproductive activity of microzymes (simple antiseptics), and such as deprive them of life (germicides). All germicides are necessarily antiseptic; but it by no means follows that all antiseptics are germicides. A moderately low temperature is effectually antiseptic, while the lowest temperatures hitherto obtained have failed to show germicide power. Carbolic acid is highly antiseptic in relatively small quantities; it does not become a trustworthy germicide till it is present in the proportion of at least 2 per cent. The frequent attempts made to employ antiseptics as a measure of disinfectant power have all ended in failure. But there does seem to be a relation between germicide and disinfectant action sufficiently close to enable us to use the one as an indirect test of the other. For instance, the contagium-particles and septic microzymes are both capable of lying dormant for long periods of time without forfeiting their specific properties; both multiply very rapidly when introduced into suitable media, and the multiplication of both is attended by a constant and characteristic train of physical and chemical changes in their environment; both appear to thrive in alkaline and to perish in acid media; both are destroyed by heat; both seem to enjoy complete immunity from the effects of extreme cold. The difference between the media through which the contagium-particles and the microzymes are respectively disseminated might have something to do with the difference in their susceptibility. The microzymes originally employed in experiment had all been bred in Cohn's solution—consisting of small quantities of ammonium tartrate, magnesium sulphate, and potassic phosphate dissolved in distilled water. This liquid is perfectly neutral in reaction. The virulent liquids employed were mostly alkaline, charged with albuminous principles and saline ingredients. The more nearly the medium containing the infective particles was made to approach the type of pure water, the more easy became the task of disinfection; on the other hand, by suspending microzymes in albuminous and highly alkaline liquids they became less and less amenable to the influence of germicides. This drew attention to the paramount importance, as regards disinfection, of the media in which infection-particles are embedded or suspended. The difficulty of annihilating the reproductive power of septic microzymes depends primarily on the medium in which they happen to be contained. Germicide power may be taken as a measure of disinfectant power, provided full allowance be made for the protective influence of media. Under certain conditions the germs of septic microzymes are less easily killed than any of the contagia hitherto subjected to investigation. We may be able dimly to perceive why particles surrounded by an envelope of dried albuminous matter, or scattered through a semi-solid mass, should be protected against the operation of heat or chlorine; but why they should resist heat better in an alkaline than a neutral liquid, why turnip infusion should differ in protective power from beef-tea, and this again from an infusion of melon, or a solution containing peptones,—these are questions to which no answer can at present be suggested. The problem of the immediate future as regards disinfection must consist less in the search for new disinfectants than for improved methods of employing those we already have. Drinking-water and milk are media widely different in the degree of their protective power. He would not hesitate to drink contaminated water which had been well boiled, but to raise milk to the same temperature, at any rate for a short time, would not be a sufficient safeguard. That minute particles are capable of being conveyed to a considerable distance through the air against the influence of gravity has been conclusively established by the ingenious experiments of Professor Frankland. The "intrinsic" resistance of contagia to destructive agencies is insignificant in comparison with that conferred upon them by their media, and their tendency to elude our efforts by becoming scattered. The success of our operations in any given case must depend on our knowledge (1) of the media in which the infective particles are contained; (2) of the laws that govern their dissemination and propagation. We have two agents that are at once cheap and effectual—heat and sulphurous acid.

On the Practical Aspects of Disinfection.

Dr. Seaton followed with a paper on the above subject. He said:—Heat is the agent most to be relied on for the destruction of the specific poisons. Sulphurous acid, chlorine, carbolic acid, and permanganate of potash are each endowed with true disinfecting properties when used in definite proportions. Aërial disinfection as commonly practised in the sick-room is useless or positively objectionable, owing to the false sense of security it is calculated to produce. Boiling is the safest way of dealing with linen which has become infected, and which requires disinfection before being sent to the wash. When boiling is impracticable, a solution of carbolic acid in the proportion of one in forty would appear the most efficacious. For the bowel and other discharges or secretions the choice would seem practicably to rest between carbolic acid and permanganate. As regards these two the advantages and disadvantages appear to be equally balanced. Dilute freely the discharges, which in typhoid or cholera are already semi-fluid, so as to obtain a fluid more easily acted on. If carbolic acid be prescribed, let the vessel be charged with two ounces of Calvert's No. 4. After use add a quart of water and one ounce of the acid. The disinfection of bedding, carpets, clothes, etc., can only be done by dry heat. 1. The temperature should at all times and in all parts of the chamber be within certain known limits; always ten or twelve degrees above 212° Fahr. 2. The temperature should be easily maintained within the required limits for periods of time sufficient to insure adequate penetration of heat into the interior of bad conductors,

such as beds, etc. 3. The chamber should have a current of heated air passing through it, so as to favour penetration. In disinfection by heat we have two objects to accomplish, viz.—1, to insure the materials being raised throughout to a temperature that can be depended on; 2, to do this without singeing the goods. Penetration takes place much more easily when the article is dry—a horsehair pillow with the normal amount of hygrometric moisture requires to be heated for eight hours. White wool, linen, cotton, silk, and paper may be heated to 250° Fahr. for three hours without apparent injury. A heat of 295° Fahr. continued for about three hours singes white wool (and less so grey), white cotton and white silk, white paper, and linen, but does not injure their appearance materially. For penetration of heat into a bed an exposure of eight hours is required; 250° Fahr. is the best and safest maximum heat to use. It would appear from the samples exhibited by Dr. Seaton (1) that good bed-covers, such as are used in hospitals, bear at least six bakings without material change in aspect; (2) that a slight and gradually increasing brownish tinge, the result of many bakings, occurs, and after a time their appearance and strength are undoubtedly injured; (3) that blankets are less changed. One sample, which in the period of three years had been baked thirty times, and washed as often, was only slightly changed in colour, and none the worse in other respects than one of the same age that had only undergone the same number of washings. The bed-maker who has worked for the Nottingham Borough Disinfecting Institution for thirty years says that since the stoving began he has not used more material for covering beds than before. The injury caused by periodical stoving of bedding, etc., such as that described above does not amount to more than may be called fair wear and tear. At the Borough Disinfecting Station, besides bedding, etc., many articles of dress, some of delicate fabrics of considerable value, are stoved. In no instance has there been any damage to the articles. Dr. Seaton minutely described the construction and method of working the disinfecting chamber. The cost of working this establishment for a year has been £114, including £20 for gas at 3s. per 1000 cubic feet, £13 for horse hire, and the rest (£81) for the time of the men employed. There can be no question that sulphurous acid is the best agent for the disinfection of the empty room. There are many occasions where the clothes of the medical attendant require disinfection, as, for instance, after visiting a group of small-pox or scarlet fever patients. Where the practitioner has been unfortunate enough to have a patient with puerperal fever under his care, the linen requires to be boiled and the other things baked before being worn again at a labour. But it is to the hands that he must pay special attention, and it is here that the disinfecting properties of chlorine are particularly useful. The hands should be well soaked three or four times daily in the chlorinated soda (P.B.). If this is done for a week, baths used at the same time frequently, and the clothes disinfected, practice may be resumed without danger. Length of absence will not compensate for a neglect of these precautions, as the practitioner may communicate the disease after many months.

In the debate following the reading of the papers, Dr. Ransom, of Nottingham, remarked that the question of disinfection must now be treated much on the same principle as that of entozoa. We used to talk vaguely of anthelmintics and vermifuges, but now we study the life-history of worms to find out the remedy required to rid the system of these organisms. So in the future we must ascertain what particular disinfectant will be required for each separate disease.

Dr. Liddle observed that a few years ago, when cattle plague was prevalent, Dr. Ballard disinfected a shed. One year thereafter the shed was reoccupied, and the disease reappeared. Hence carbolic acid may check the spread of fever, but not destroy the germs.

Dr. Tripe said that if clothes were exposed to the necessary heat of 245° for five or six hours the material would be singed and rotten. He said that many thousands of clothes and bedding had been put into the disinfecting chamber in his district lately, and in no case had the disease returned. The Hackney Guardians used Fraser's apparatus, which was heated with coal and coke. The clothes, etc., of fourteen or fifteen cases of small-pox have been disinfected daily. At the same time, he considered that in most houses there was sufficient accommodation for efficient disinfection. He commented upon the important observation of Dr. Baxter, that vaccine virus is inoculable after the cells have been destroyed by heat, the vitality of the microzymes being retained. This does not show that the solid particles are carriers of infection. More probably the fluids are the infecting agents.

Dr. Childs alluded to the conflicting evidence as to the amount of dry heat necessary for disinfection. He thought it a good rule to boil when you can, and failing that to burn. The cheapest and safest treatment for bedding was to burn it.

Professor Wanklyn commented on the difficulty of introducing a thermometer into the centre of a bed and determining the heat therefrom. Every chemist knows the difficulty of causing heat to penetrate to the centre of a solid. The effect of currents of air passing through bedding is that the heat is carried away by evaporation. The temperature is never raised sufficient for disinfection before the structure is destroyed.

Dr. Ransom replied that heated air passed through a chamber will destroy germs. As soon as a bed is deprived of its moisture all parts rise to the required temperature.

Mr. Murphy, of the Fever Hospital, said that the apparatus used there was very satisfactory. He had seen some singeing of the tick before the temperature was sufficiently raised. Superheated steam was better for beds, dry heat for clothes.

The President doubted if Dr. Baxter could affirm the certainty of his proposition, viz., that matters which act upon septic microzymes may be reckoned to act by analogy upon infecting particles—for example, when he said that germicide power is a measure of infective power. What was most valuable was the observation upon substances known to be infective. Officers of health in country districts are better able by isolation to carry out efficient measures for disinfection.

Dr. Baxter, in his reply, said that the observations of Drs. Sanderson and Vacher show that solid particles convey infection equally with fluids, though it is impossible to separate the one from the other. Germicides act by coagulation of the albumen of the particles. Vaccine is composed of particles of organic matter capable of propagating the disease.

Dr. Seaton, in his reply, said that if any agent is more useful than another, it is heat, as proved by the experiments of Dr. Henry, of Manchester, and by Dr. Baxter, and it was therefore unnecessary to occupy the time of the Society by adducing facts in this direction. The evidence that the bedding, etc., has been duly penetrated by heat is proved by the senses.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 24.

Charles West, M.D., F.R.C.P., President, in the Chair.

Note on the Delhi Boil (Furunculus Delhinus).

Dr. John Harley communicated a paper as above, by Dr. H. Vandyke Carter. The author regards this affection as different from any form of syphilis, and from other admitted local manifestations of impaired constitution. A brief summary of characters pointing to its specific nature prefaces the particular observations made last spring and summer (1876) upon specimens of the boil kindly furnished by Dr. Fairweather, civil surgeon at Delhi. Changes in the epidermis and appendages of the skin involved are alluded to, particular mention being made of the "globes epidermiques," which have been already noticed by other observers, and which equally abound in the "bouton de Crête"; and the hypertrophied state of papillæ, with dense cell-infiltration of the whole cutis and subjacent tissue, is mentioned; but the main point recorded is the detection of a mycelium-like growth within certain dilated channels or cavities, which are contained in the midst of these new formations. Alluding to recent disclosures affecting the validity of inference from such mycelioid forms (which may, it seems, be artificially produced), the author yet holds to the significance of the appearances he describes and delineates in a series of figures, some of which, at least, he cannot but regard as indicative of the presence of a true parasitic growth. The appearances are too regular and uniform, and too characteristic, to be mistaken for the effects of reagents; and without further speculation it is concluded that there does exist an affection of man which may be termed "mycosis cutis chronica." Such affection would include the "bouton de Biskra" and the "Delhi boil"; and its signs may doubtless be confidently looked for in other local endemic skin complaints, which have long been regarded by men locally experienced as altogether *sui generis*.

Dr. Thin said that in the case of both the Delhi boil and Aleppo boil many different affections were confounded—syphilis, lupus, and chronic ulcer. Dr. Gaber had shown this effectually in the case of the Aleppo boil, but exact accounts were yet awanting, especially as concerns diagnosis, with regard to the Delhi boil. He did not think that the existence of a fungus had been proved by Dr. Carter in any of his communications, and they had no specimens before them on which to found an opinion.

Sir Joseph Fayrer said the disease was now much less common in India than it had wont to be. The sore was not peculiar to Delhi, but was found in the hotter and drier parts of the North-West Provinces, and also in Syria. After the Mutiny the disease was very prevalent among the troops in Delhi. At that time they drank water from the wells, but when they were moved out of the city and drank the water of the Jumna the disease disappeared, and it was now very rare. As to its not being recognised, the idea was simply absurd; the disease was as well known as cholera. He thought the recent report of Drs. Lewis and Cunningham hardly did justice to former observers, especially Fleming. He could not agree with their idea that the sore was a kind of lupus. The fact of its apparent dependence on drinking-water alone sufficed to show this. The water from the wells in Delhi contained a very large percentage of carbonate of lime, compared with that of the Jumna. In 1864 so many men were disabled by it that an inquiry was ordered, and Dr. Murray then suggested it might be due to the water. He could not agree with Dr. Carter as to the disease being fungoid. Inoculation was said to have reproduced the disease, but there was no good evidence of its contagious nature. In reply to the President, Sir Joseph Fayrer also said that he was not aware that the water had been investigated in other places where the malady prevailed.

Mr. Gaskoin said that a gentleman from Asia Minor had stated to him his conviction that the malady was not due to water, but rather that it was endemic in certain towns. His view was that it was something like the bouton de Biskra, partly climatic.

Mr. Hulke pointed out that it was important to ascertain whether the malady only occurred at certain periods of life, as compared with lupus. As regards the fungus, it must be remembered that this was found in one case only; that the specimen was taken from the dead body of a patient who had long been the subject of an open sore.

Sir Joseph Fayrer said that as the malady was most common among soldiers it would naturally be most prevalent between the ages of twenty-five and thirty. Besides improving the water-supply, other hygienic improvements had been introduced at Delhi.

A Case of all but Universal Paralysis in a Child, following Exposure to Heat.

A paper by Dr. James Andrew and Dr. Dyce Duckworth was read, describing a case as above. The patient was a fairly-nourished, slightly rickety girl, aged two years and a half. She was brought to St. Bartholomew's Hospital at the end of July, 1876. It was found that there was complete loss of motor power in all the limbs, and that the sphincters were involved. It was not clear whether there was total loss of sensation; but there seemed to be anæsthesia of all parts affected with motor paralysis. The muscles of the limbs were wasted and flabby, and did not respond to faradic stimulation. There were no cerebral symptoms, nor were any important physical signs found in the chest or abdomen, save a slight enlargement of the liver, which was probably due to rickets. The history was that the child had always been healthy till its present illness began. At the end of June it had been exposed to great heat while travelling by railway in the United States of America. On July 1, while waiting on a quay at New York before embarking for this country, and being directly exposed to severe sunshine, the child suddenly lost power in its legs and fell, still retaining its consciousness. On the voyage it was at times delirious, and very irritable. [The daily notes of the case, together with a chart of pulse, respiration, and temperature, were appended to the communication.] On admission to the hospital the child was treated with good nourishment, cod-liver oil, and steel. After a few days belladonna was given in full doses, and a faradic current was applied to the paralysed muscles daily. A gradual improvement took place in all the symptoms, and power first began to return in the arms. An intercurrent attack of broncho-pneumonia ensued, which soon cleared off. The child also passed a lumbricus. In three weeks after admission, power was regained in the sphincters, and the child began to feed herself. Faradisation now elicited response from the affected muscles. Strychnine and steel were given, and the belladonna withheld. Voltaism was not employed at any period of the case. At the expiration of two months there were observed albuminuria and slight anasarca, the former lasting rather less than a month and disappearing completely. Ophthalmoscopic examination revealed nothing abnormal. Progressive improvement both in recovery of motor and sensory power was noted, and in three months from the date of admission, and four from the first seizure, the child was quite well. The case was supposed in the first instance to be one of infantile paralysis, inasmuch as the age, previous health, absence of cerebral symptoms, and the electrical condition of the muscles seemed to warrant this view, but the facts of there being sensory paralysis and implication of the sphincters could not be reconciled with this explanation of the feature of the case. The fact of subsequent perfect recovery seemed further to militate against this view. The various forms of infantile paralysis were described, and it was shown that this case fell into none of the classes thus categorically defined. After full consideration of all the facts brought out in the history and subsequent progress of the affection, the authors come to the conclusion that the symptoms were due to a form of heat or sunstroke, affecting more particularly the spinal system, and falling with especial severity upon a somewhat frail and ill-nurtured child. They further suggested the possibility of a concurrent muscular affection, along with the more manifest spinal lesion due also to similar thermic influences. The treatment of such a case at the outset, it was believed, should consist in cold affusion and such measures as are of proved avail in the more common forms of heat-stroke.

The President said the case was one of extreme importance. The symptoms appeared to be due to sunstroke, from which the child had suffered twice. This sunstroke need not depend on the direct access of the sun's rays, but might arise from over-heated air, and under these conditions very general paralysis might ensue. The continued high temperature described was uncommon in infantile paralysis. Perhaps the rash was scarlatina, notwithstanding the absence of sore throat or desquamation, especially as there was albumen in the urine. Improvement seemed to commence as soon as the child was put under fair hygienic conditions. He was not aware of any means of deciding at the beginning of an illness whether the paralysis was likely to be permanent or not. As a rule, hyperæsthesia was an untoward sign. The cases which recovered began to improve early.

Dr. Greenfield suggested the likeness to attacks of paralysis following fever.

Dr. Laidlaw Purves showed a calculating scale for ophthalmological purposes for use by different nationalities.

Mr. Howse showed a case of traumatic hydronephrosis in a boy aged thirteen, following fracture of the ilium. The case was one alluded to in the discussion on "Direct Wounds of the Ureter" at the previous meeting of the Society.

CLINICAL SOCIETY OF LONDON.

Friday, April 27.

Thomas Bryant, F.R.C.S., Vice-President, in the Chair.

Badly united Fracture of the Leg treated by Excision of a Wedge of Bone.

Mr. Christopher Heath read notes of this case. The patient, eighteen weeks before admission, had sustained a fracture of both bones just above the ankle. It was treated with splints and a stout bandage, but great deformity resulted, the foot being twisted outwards and the tibia thrust in, the fibula being correspondingly distorted. The condition was shown by photographs and a cast. Under antiseptic dressings, Mr. Heath removed a wedge of bone from the tibia with Linhart's chisel, and divided the fibula with bone-forceps. The limb was then brought straight, and treated at first with a back-plint and afterwards with side-splints, and the patient recovered with a very useful limb. The patient was shown to the Society.

The Case of Miss Harriet Martineau.

Mr. W. Moore King contributed this report, having been in attendance upon Miss Martineau since 1871. At that time

she was in fair health, and was working hard at correspondence. She was somewhat wasted, but her abdomen was enlarged. The heart's sounds were weak, but there was no murmur. Mr. King was not permitted to make any special examination of the abdomen, but was convinced it contained a large tumour. Miss Martineau attributed the swelling to an enlargement of the heart, displacing all the other organs. The practice of opium-taking had become habitual to the patient, in suppositories, injections, and by the mouth, to the extent of from twelve to fifteen grains daily. There was frequent bleeding from hæmorrhoids, on each occasion of which the patient's health was much reduced. Œdema of the legs ensued, and the patient gradually sank. At the post-mortem examination, made under trying circumstances on June 29, 1876, Mr. King found a pear-shaped tumour, which measured about eleven inches in its broadest diameter, occupying the lower two-thirds of the abdomen; it was hard, and its surface smooth; it was attached by a pedicle formed by the left broad ligament. The tumour contained about half a pint of brown fluid; it was otherwise composed of a mass of light greyish-brown material studded with lardaceous masses. The liver and abdominal contents generally were displaced upwards towards the thorax by the tumour; the liver and the kidneys appeared normal. The uterus was small and unaffected. The thorax was not opened.

Mr. Spencer Wells said he showed the tumour removed from the body of Miss Harriet Martineau at the request of a relative, Mrs. Higginson, of Liverpool. The cyst was single, and contained only about half a pint of fluid, but about ten pounds of a fat-like substance, which, however, seemed to be degenerated epithelium. The cyst was therefore a dermoid one, and had probably occupied a long time in its growth. When seen by Sir Charles Clarke and Dr. Greenhow, in 1841, the enlargement was supposed to be uterine, coupled with retroversion of that organ. But there can now be no doubt that the tumour was ovarian from the first. As long as this remained in the pelvis it gave rise to great inconvenience and much pain, which would be comparatively relieved by the rise of the tumour into the abdomen, and this probably coincided with the period when she supposed herself to be cured by mesmerism. The growth of the tumour after that was probably slow, and the next phase of the disease was in 1855, when she consulted Sir Thomas Watson and Dr. Latham for a supposed heart complaint. Here is Sir Thomas's note:—"January 31, 1855. Miss Harriet Martineau, aged fifty-three. Catamenia ceased three years ago. For a year or more has been short-breathed on exertion, especially when ascending. Has grown much stouter, and began to do so before the catamenia ceased. Speaks of intermissions and subsequent boundings of the heart, felt by her very disagreeably. Has occasional twinges at the back of her neck, as if the scalp were pulled up. A marked vertical arcus senilis. Has dyspnœa occasionally, even in bed, with flutter and bump of the heart. No morbid lung-sounds, but the respiratory murmur is rather louder in the left lung. The heart is heard extensively over the chest—noisy—the first sound approaching a thrum. No actual bruit. Urine made profusely and often during the night. This new to her. It is pale, acid; specific gravity 1011 or 1012; shows no albumen to heat or to nitric acid. A large pear-shaped indolent tumour reaching as high as the lower part of the epigastrium." Notwithstanding the assurances of these two most eminent physicians, Miss Martineau persistently believed that she was suffering from incurable disease of the heart. It was a great pity that a tumour which could have been so easily and so safely removed during life had been allowed to embitter the life of this remarkable woman.

Ascites in a Child, cured by Paracentesis and Copaiba.

Dr. Day read notes of this case. The patient, aged five years and a half, was admitted into the Samaritan Hospital, under his care, on October 4, 1875. She was one of ten children, all born healthy, and had never had whooping-cough, measles, scarlet fever, or peritonitis of any degree or kind. Three months previously she first complained of pain in the stomach, when the body was noticed to be large, and it had increased in size ever since. Two inches above the umbilicus the measurement was twenty-four inches, and the area of liver-dulness was apparently increased, but the outline could not be felt from the amount of fluid. The lower lobes of the lungs were dull on percussion from pressure. Pulse 120; respirations 32. The urine was acid and threw down a copious deposit of white lithates; its specific gravity was 1032; it contained no trace of albumen. The bowels were free. A diet of milk, beef-tea, and eggs was ordered, with ten grains of compound jalap powder every morning and the syrup of iodide of iron three times a day. On October 20 she was thinner in the limbs and more pinched in the face; the umbilical measurement was twenty-eight inches; and the superficial veins of the abdomen were slightly distended; the urine still contained an abundance of lithates. Tincture of digitalis and citrate of potash were ordered three times a day, and the iron omitted. On November 5 the abdomen measured twenty-eight inches and a half. An aperient powder of sulphate of potash and powdered rhubarb was prescribed every other morning, the digitalis was discontinued, and the iron resumed. On the 17th, as the kidneys were not acting so well and the superficial veins were even more enlarged and tortuous, his colleague Mr. Knowsley Thornton tapped the abdomen, and drew off eighty-four ounces of a straw-coloured syrupy fluid, like ordinary ascitic fluid. No enlargement of the liver or spleen could be felt. On the 24th (seven days after tapping) the urine was clearer, and the average quantity was from nineteen to twenty-three ounces in the day and night. On December 1, the urine being clear and the bowels free, the tincture of perchloride of iron, in ten-minim doses, was ordered three times a day. On the 26th she was again increasing in size, and there was a considerable quantity of free fluid in the abdomen. She measured twenty-seven inches round the abdomen. Copaiba was now commenced. On January 5, 1876 (ten days after commencing the copaiba), the urine was clear and free; the umbilical measurement was twenty-five inches. On the 26th the measurement was twenty-three inches and a half. On March 9 the subcutaneous tissue was more developed, and the umbilical measurement twenty-three inches. On the 26th the measurement was twenty-two inches. On May 20 the abdominal measurement was twenty-two inches and a half, and the limbs were firm and strong. She had taken the remedy uninterruptedly for five months, and no other drug, and on June 4 she was in every respect well. The author considered the ascites was of a chronic character, due to cachexia and anæmia, or to some morbid condition of the capillary vessels, in the absence of glandular disease within the abdomen. He inquired the cause of the large belly in delicate children, and thought that it was often attributable to the accumulation of flatus, as the product of ill-digested food, and sometimes attended with more or less secretion of peritoneal fluid. He thought that ascites was sometimes a primary disease, independent of any visceral disorder. If paracentesis were advisable, it ought to be performed before the abdomen was enormously distended. To remove the accumulated fluid in such cases, and so to restore, for a time at least, the normal balance betwixt effusion and absorption, was as rational, it appeared to him, as to bleed in cases of great distension of the right heart, when, as we have reason to know, a balance was once more so restored.

Dr. Burney Yeo said that he had a case now under his care much resembling that of Dr. Day. The patient, a man aged twenty-three, had no signs of visceral disease or of struma. The ascites had been gradually coming on for eight weeks. He thought it probably depended on a subacute or chronic peritonitis.

Dr. Green said that last year a boy of eight, probably suffering from induration of the liver, was under his care for dropsy. The fluid reaccumulated after tapping. Dr. Barlow subsequently took charge of the case, and gave the child resin of copaiba. The dropsy gradually and completely disappeared, and has not returned. The case probably depended on a re-establishment of the circulation.

Mr. Howse thought the real agent was the tapping, as in many cases there was no reaccumulation after this. The improvement rather accompanied than followed the use of the copaiba. The case was probably one of chronic peritonitis.

Dr. Mahomed said he had seen three cases, post-mortem, where the mesenteric glands were enlarged, and where probably in earlier life there had been ascites. Possibly this was the case with Dr. Day's patient.

Dr. Barlow could not accept the view that the dropsy was due to cachexia. He had seen a case where, on subsidence of the effusion, hardened glands were felt. In another case he had given copaiba to a child with very good result. Better results were obtained by giving the copaiba before paracentesis. In many cases the view of chronic peritonitis was the only tenable

one, as he had found the peritoneum studded with small tubercles.

Dr. Day said that in another case he would give the copaiba first. He hardly thought the copaiba acted as a diuretic, but the child's nutrition improved. There was nothing to prove very certainly that the malady was due to tubercular peritonitis.

(To be continued.)

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 3rd inst., and, when eligible, will be admitted to the pass examination:—

Banks, William, student of University College Hospital.
Bridges, Ashley C., of St. Mary's Hospital.
Garrard, Ponsonby, of St. Bartholomew's Hospital.
Gill, J. Wallis, of St. Bartholomew's Hospital.
McCulloch, James, of University College Hospital.
Mitchell, James T., of University College Hospital.
Morgan, William P., of Guy's Hospital.
Neale, William H., of University College Hospital.
Robinson, G. Somerville, of St. George's Hospital.
Tait, E. Sabine, of St. Bartholomew's Hospital.
Thomas, W. Duncan, of St. Bartholomew's Hospital.
Thomas, William F., of University College Hospital.
Vaudrey, Edmund, of St. George's Hospital.
Veale, William E., of St. Bartholomew's Hospital.
Warburton, Arthur, of University College Hospital.
Whitworth, William, of Guy's Hospital.
Williams, P. St. George, of Guy's Hospital.
Wood, Percy M., of Guy's Hospital.

Six candidates were rejected. The following gentlemen passed on the 4th inst., viz.:—

Bartlett, Charles R., of St. George's Hospital.
Hubbard, Henry W., of St. George's Hospital.
Lane, James E., of St. Mary's Hospital.
Lillies, Herbert, of St. Bartholomew's Hospital.
Lofthouse, Arthur, of King's College Hospital.
Lovell, R. Haynes, of St. Mary's Hospital.
Mott, Frederick W., of University College Hospital.
Perkins, George C. S., of Guy's Hospital.
Rake, Beaven N., of Guy's Hospital.
Shapley, Frank, of the London Hospital.
Shaw, W. Wright, of St. Bartholomew's Hospital.
Shepard, Ernest W., of St. Bartholomew's Hospital.
Smith, Henry, of St. Bartholomew's Hospital.
Ware, J. W. Langston, of the Middlesex Hospital.
Warren, Henry G. S., of St. Bartholomew's Hospital.
Wey, Alfred C., of the Middlesex Hospital.
Wickham, Walter, of St. Bartholomew's Hospital.

Seven candidates were rejected. The following gentlemen passed on the 7th inst., viz.:—

Brett, James T., student of Guy's Hospital.
Clowes, Herbert A., of Guy's Hospital.
Crook, J. Siddon, of Guy's Hospital.
Faulkner, Joseph, of St. Bartholomew's Hospital.
Fenwick, E. Hurry, of the London Hospital.
Groom, Henry T., of St. Bartholomew's Hospital.
Hallam, William H., of King's College Hospital.
Hann, H. Frederick, of University College Hospital.
Harries, Arthur J., of University College Hospital.
Hoskin, Theophilus, of University College Hospital.
Hume, Walter A., of St. Bartholomew's Hospital.
Jones, C. M. Handfield, of St. Mary's Hospital.
Routh, Armand J. McC., of University College Hospital.
Preston. Alfred C., of St. Bartholomew's Hospital.
Webb, W. Simpson, of St. George's Hospital.

Nine candidates were rejected. The following gentlemen passed on the 8th inst., viz.:—

Adams, Alexander P., student of St. Bartholomew's Hospital.
Andrews, T. Morgan, of St. Thomas's Hospital.
Bridgeford, W. A. Saunders, of the Charing-cross Hospital.
Farmer, E. W. White, of University College.
Harris, F. W. H. Davie, of University College.
Jones, John, of the Charing-cross Hospital.
Martin, J. Henderson, of the Middlesex Hospital.
Sayer, M. Feetham, of University College.
Waterhouse, G. Beardmore, of the London Hospital.
Wigg, Alfred E., of University College.

Fourteen candidates were rejected. With this meeting the primary examinations were brought to a close, and it may perhaps surprise metropolitan and provincial teachers to learn that, out of 169 candidates examined, as many as sixty-six, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months. The pass examination for the diploma of Membership commences this day (Friday).

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 3:—

Brown, William Perrin, Warrington.
Ground, Edward, Whittlesea.
Haines, William John, Hendon.
Langton, Herbert, Brighton.
Mercier, Charles Arthur, Hackney.
Reader, Jeremiah, Bridport.
Thomas, John Raglan, Llanelly.
Wood, John, Wolverhampton.

In the pass-list of the Arts Examination on April 27 and 28, in the Second Class, the name of "A. P. H. Griffiths" was omitted.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Clapp, Robert, L.R.C.P., M.R.C.S.E.—Junior House-Surgeon to the Royal Albert Edward Infirmary, Wigan.

Doran, Alban H. G., F.R.C.S., L.S.A.—Additional Surgeon to the Out-Department of the Samaritan Free Hospital, Lower Seymour-street, London.

Hookham, Paul, M.R.C.S.—Junior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road.

Meredith, M.B., M.C.—Surgeon to the Out-Department of the Samaritan Free Hospital, Lower Seymour-street, London, *vice* J. Knowsley Thornton, resigned.

Trewman, George T., L.S.A.—House-Surgeon to the Victoria Hospital for Sick Children, Queen's-road, Chelsea, *vice* R. Walford, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office—Medical Department.—Deputy Surgeon-General James Macbeth, M.D., retires upon half-pay; Surgeon-Major Jones Lamprey, M.B., to be Deputy Surgeon-General; To be Surgeons-Major—Surgeons Robert Collins, M.B., Thomas O'Farrell, M.D., William Richard Gore Hinds, M.D., George Bedford Sanders, George Andrew, M.B., William Frederick Ruttledge, William Robertson, M.D., Joseph Eustace Fishbourne, Richard Tobin, Richard Jackson, James Jerome Hanrahan, M.D., William O'Byrne White, Richard Hugh Carew, Charles White, George Joseph Hamilton Evatt, M.D., Arthur William Shedden, M.D., Robert Keith, M.D., Abraham William Bate, M.D., George Fleetwood Churchill, M.B., John William Purefoy, M.D., Henry Waghorn, and George White.

Brevet.—Deputy Surgeon-General James Macbeth, M.D., who retires upon half-pay, to have the honorary rank of Surgeon-General. The undermentioned officer of her Majesty's Indian Military Forces to be granted a step of honorary rank on retirement: To be Deputy Surgeon-General—Surgeon-Major George Richard Pemberton, Bengal Army. The Secretary of State for War has appointed Joseph Tyson, F.R.C.S., L.R.C.P., to be Assistant Visiting Surgeon for Shorncliffe, under the Contagious Diseases Acts 1866 to 1869, *vice* W. Allsworth, resigned.

Admiralty.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet-Surgeon George Irwin Willes, M.D., has been placed on the Retired List, with permission to assume the rank and title of Deputy Inspector-General of Hospitals and Fleets in her Majesty's Fleets.

BIRTHS.

Coke.—On May 4, at Ashford, Kent, the wife of William Harriott Coke, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

Dunlop.—On May 5, at Gravesend, the wife of Robert Dunlop, M.R.C.S., of Drumhead, Dumbartonshire, of a son.

Günther.—On May 4, at Hampton Wick, the wife of Theodore Günther, M.D., L.R.C.P. Lond., of a son.

Head.—On May 3, at East Grinstead, the wife of Robert T. Head, L.R.C.P. Lond., of a son.

Maurice.—On May 3, at Marlborough, the wife of J. Blake Maurice, F.R.C.S., of a son.

MARRIAGES.

Baines—Pitcher.—On May 8, at Holy Trinity, Eltham, Kent, Albert Henry Baines, L.R.C.P., M.R.C.S., of Eltham, to Isabelle Emily, third daughter of the late John Henry Pitcher, Esq., of Doctors' Commons.

Bartlett—Weston.—On May 3, at the parish church, Heston, Edward Bartlett, M.R.C.S.E., of Connaught-square, W., to Lydia Sarah, youngest daughter of Edward Weston, Esq., of Manor House, Southall, Middlesex.

Bell—Hudson.—On May 3, at the parish church, St. Marylebone, John Hougham Bell, M.D., to Sophie Emily Hudson, widow of the late J. A. K. Hudson, barrister-at-law.

Churchill—Kidd.—On May 1, at Kidbrooke Church, Blackheath, Seton Churchill, Lieutenant 44th Regiment, to Elinor Milly, eldest daughter of J. Kidd, M.D., of Brooklands, Blackheath-park.

Curtis—Hutchins.—On May 1, at St. Peter's Church, Leicester, Arthur Curtis, M.R.C.S., L.R.C.P., of Alton, Hants, to Maria Emily, younger daughter of the late Rev. G. W. Hutchins, Vicar of Horton, Northampton.

Davidge—Coleridge.—On April 4, at Kamptee, Madras, India, John Davidge, L.R.C.S.I., Surgeon-Major Royal Artillery, to Frances Elizabeth Senior, fourth daughter of the late Major Walter Coleridge, Madras Army.

Eager—Andrews.—On May 3, at St. John's, Lewisham High-road, Wilson Eager, L.R.C.P., Medical Superintendent of the Suffolk County Asylum, to Mary Jane, second daughter of the late Edward Andrews, of Guildford.

MOFFAT–HYDE.—On May 1, at the parish church, Witney, Oxon, Robert Moffat, of 7, Stratford-grove, Putney, Surrey, to Grace, youngest daughter of Edward Hyde, M.R.C.S. Eng., Bloxham, Oxon.

NESHAM—PINDER.—On April 30, at Newcastle-upon-Tyne, Thos. Cargill Nesham, M.D., to Nellie, youngest daughter of the late John Pinder, of Linton, Yorkshire.

PAGE—GRAHAM.—On April 28, at the parish church, Sandown, Isle of Wight, Frederick Page, M.D., of Newcastle-upon-Tyne, to Margaret Graham, daughter of the late John Graham.

THOMAS—WEEKES.—On May 5, at Holy Trinity, Brompton, George Henry Warren Thomas, M.R.C.S., of Pocklington, York, to Caroline Maria, third daughter of the late Henry Weekes, of Brompton.

TOWNSEND—DENHAM.—On May 3, at 30, Merrion-square North, Dublin, Walter M. Townsend, to St. Clare, youngest daughter of John Denham, M.D.

DEATHS.

COUPLAND, EDWARD, M.R.C.S., at Boston, on May 1, in his 84th year.

FOWLER, CHARLES HENRY, M.D., Colonial Surgeon, at Oakbank, Island of St. Helena, on April 8, aged 45.

HARMON, M. J. K. WIGHT, wife of Frank Harmon, Esq., of Vermont, and daughter of Robert Wight, M.D., at St. John's, Canada East, on April 19.

SANDERS, WILLIAM, M.D., formerly of Gravesend, Kent, at Milton-next-Sittingbourne, on May 3, in his 61st year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Candidates must have a double qualification, medical and surgical, and be duly registered. Testimonials to the Chairman of the Board of Management, on or before May 21. Candidates must state their age.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. Eng. or M.C. of some British University, and L.A.C. Applications, with testimonials, to Mr. C. Rolandson, Hon. Sec., The College, Durham, on or before May 30.

DERBY COUNTY LUNATIC ASYLUM, MICKLEOVER, NEAR DERBY.—Assistant Medical Officer. Candidates must possess a double qualification, and be duly registered. Applications, with testimonials, to the Medical Superintendent, on or before May 15.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Candidates must possess a medical and surgical qualification from one or more British colleges or institutions recognised under the Medical Act.

ROYAL ALBERT HOSPITAL, DEVONPORT.—Resident Medical Officer. Candidates must be registered under the Medical Act, 1858, and be qualified by law to practise both in medicine and surgery in England and Wales. Applications, with testimonials, to the Chairman of the Selection Committee, on or before May 12.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, 59, MOUNT-STREET, W.—Physician-Accoucheur. Candidates must be Members or Fellows of the Royal College of Physicians of London, or, if not, then of some other like College in the United Kingdom. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before May 5. Candidates are requested to attend the meeting of the Managing Committee on Tuesday, May 15, at 4 p.m.

WESTERN GENERAL DISPENSARY, MARYLEBONE-ROAD, N.W.—Honorary Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Testimonials and qualifications to the Secretary, on or before May 14.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Abingdon Union.—Mr. P. Martin has resigned the First District; area 7242; population 5268; salary £107 per annum.

Kington Union.—Mr. John Morgans has resigned the Huntingdon District; area 14,571; population 1551; salary £35 per annum.

Nantwich Union.—Mr. John Lyon has resigned the Audlem District; area 11,045; population 2663; salary £30 per annum.

St. Pancras Parish.—Mr. J. H. Hill has resigned the Workhouse.

APPOINTMENTS.

Alcester Union.—Charles E. Hobbes, L.R.C.P., M.R.C.S., L.S.A., to the Bidford District.

Alderbury Union.—Benjamin C. Gowing, M.R.C.S. Eng., L.S.A., to the Fourth District and the Workhouse.

Maldon Union.—John Betts, M.R.C.S. Eng., L.S.A., to the All Saints District.

Peterborough Union.—John de L. Temple, M.R.C.S. Eng., L.S.A., M.D. Lond., to the Crowland District.

Pewsey Union.—Frederick H. Carter, M.R.C.S. Eng., L.S.A., to the Second District.

Poplar Union.—Wm. Charles Young, F.C.S., as Analyst for the Poplar Board of Works District.

Torrington Union.—James H. Norman, L.R.C.P. Edin., L.R.C.S. Edin., to the Winkleigh District.

SOCIETY FOR PROMOTING LEGISLATION FOR THE CONTROL AND CURE OF HABITUAL DRUNKARDS.—There will be a discussion on the Habitual Drunkards Bill before the Metropolitan Branch of the British Medical Association, at 11, Chandos-street, Cavendish-square, this day (Friday) at 8 p.m. Dr. Cameron, M.P., who introduces the Bill, has promised to be present. Dr. Quain, Dr. Carpenter, and many leading members of the profession have also promised to take part in the discussion.

DR. HANDSEL GRIFFITHS, Dublin, has been elected Foreign Corresponding Member of the Medical Society of Lisbon.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

W. Gerald H.—Mr. Richard Phillips, F.R.S., was some time President of the Chemical Society of London, and successively Lecturer on Chemistry at the London Hospital, at the Government Military College at Sandhurst, at Mr. Grainger's School of Medicine in Southwark, and at St. Thomas's Hospital. He died on May 11, 1851, in his seventy-third year, after a very short illness.

D. D., Chelsea.—Yes, Dr. Thomas Thomson was one of the editors of the "Encyclopædia Britannica" for 1796 to 1800. He also conducted for the Board of Excise a series of investigations on brewing, which formed the basis of Scottish legislation on that subject.

Anon.—The lines are—

"A doctor lately was a captain made:
It is a change of title, not of trade."—*Hay.*

Cæteris Paribus.—The influenza epidemic in this country towards the end of 1847, according to Dr. Farr, was fatal, directly or indirectly, to 5000 persons in six weeks.

Vigilans.—1. No. 2. Dr. Prichard, taking the hue of the hair as the leading character, divides mankind into *three* principal varieties of colour, which he calls the melanic, the xanthous, and the albino. The first includes all individuals or races who have black hair; the second, those who have either brown, auburn, yellow, flaxen, or red hair; and the third, those who have white hair and who are also distinguished by red eyes.

Chemicus.—Yes; Professor Kopp held the chair of Chemistry in the Swiss Confederacy's Polytechnikum in 1870. He began his scientific course as teacher in the Medical School at Strasburg while the old German city was still in French hands, and in 1848 he was elected a member of the Constituanta.

Archæologist.—In 1796 the inhabitants of Lincoln's-inn-fields called the special attention of the Trustees to the contemplated removal of Surgeons' Hall from the Old Bailey to Lincoln's-inn-fields, and the erection there of a "theatre for the dissection of executed criminals." The College of Surgeons are now the freeholders of Nos. 37 to 43 inclusive—a most valuable and productive source of income. As murderers are now interred within Newgate, the College no longer have the power to claim the bodies as they did, to the advancement of anatomical science, for so many years.

Dr. Williams.—Mr. Green was Surgeon to St. Thomas's Hospital, and a Fellow of the Royal Society. In Hadley Church, a tablet, of which the following is a copy, will give you the desired information:—"Sacred to the beloved and revered memory of Joseph Henry Green, F.R.S., D.C.L., President of the General Medical Council of the United Kingdom, and twice President of the Royal College of Surgeons of England, who for the last twenty-eight years of his life dwelt in this village, and worshipped in this church. He was born in London the 1st of March, 1791, and died at The Mount, Hadley, the 13th of December, 1863. His remains rest with those of others of his family in the cemetery at Highgate.—'The Lord ordereth a good man's going, and maketh his way acceptable to Himself.'—Psalm xxxvii. 23."

A QUESTION OF LAW.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A few days ago, in the presence of two gentlemen (one of them holding a high position in the county), a neighbour of mine, a parish minister, stated that I had procured or been privy to a case of abortion in a girl in a neighbouring parish. Previous behaviour proves malice in this case. Query: Is it necessary for me to prove that any direct harm has resulted from such a slander before taking legal steps? or is the slander of itself quite sufficient to entitle me to substantial damages? Of course you see the grave consequences of such a statement if it should spread.

I am, &c., A CONSTANT SUBSCRIBER.

[We fear we can give no useful advice. We would suggest that you consult your solicitor. Where no direct injury has been proved, and a man wants only to clear his character, it is not advisable to claim high damages.—ED. *Med. Times and Gaz.*]

DISEASE AND THE PADDINGTON CANAL BASIN.

With respect to the cases of small-pox which have lately occurred, and been removed from boats in the basin of the Paddington Canal (to which we referred last week), one of the district medical officers called the attention of the Paddington Board of Guardians to the subject at their meeting last week. Considerable discussion took place as to the proper steps to be adopted under the circumstances. It appeared that the canal basin is private property; and all the Vestry could do was to have it frequently cleansed—a suggestion which would do little to remedy the evil, inasmuch as, from the numerous boats always there, it would be forthwith as bad again. The basin is the receptacle of all kinds of filth from the families who live on the boats, and from the boats which there load with manure, dust, etc., considerable quantities of which refuse drop, when loading, into the basin. It was truly remarked that there was, therefore, everything in the basin that would tend to promote disease.

COMMUNICATIONS have been received from—

Mr. B. R. Wheatley, London; Dr. C. Handfield Jones, London; Dr. Bruce, London; Mr. John Chatto, London; Dr. Barlow, London; Dr. J. Hughlings-Jackson, London; Dr. James Dunlop, Glasgow; Mr. T. M. Stone, London; Dr. Sparks, Mentone; The Registrar of the University of London; Dr. R. H. Carpenter, London; Messrs. Martin, Boston, Highlands, U.S.A.; Dr. Seelig Müller, Halle; The Secretary of the National Dental College, London; The Registrar of the Apothecaries' Hall, London; Dr. Reid, Orkney; Dr. Stephen Mackenzie, London; Mr. German Reed, London; Mr. George Field, London; Dr. Alexander, London; Mr. J. C. Morison, London; The Secretary of the Central Throat Hospital, London; Dr. E. Symes Thompson, London; Mr. Charles Gaine, Bath; The Secretary of the Royal Institution; Dr. Griffiths, Dublin; Mr. Gover, London; Dr. Edis, London; The Secretary of the Society of Medical Officers of Health; Mr. Stephen S. Alford, London; Mr. Arthur Kinsey, London.

BOOKS AND PAMPHLETS RECEIVED—

H. Aubrey Husband, M.B., The Students' Handbook of Forensic Medicine and Medical Police—Dr. H. von Ziemssen, Cyclopædia of the Practice of Medicine; vol. xii., Diseases of the Brain and its Membranes—J. Crichton Browne, M.D., and Herbert C. Major, M.D., The West Riding Lunatic Asylum Medical Reports—Herbert Tibbits, M.D., A Handbook of Medical and Surgical Electricity—Richard Herring, A Lecture on Personal Experiences of English Departmental Government—W. R. Cornish, F.R.C.S., A Reply to Sir Richard Temple's Minutes of the 7th and 14th March as to the Sufficiency of a Pound of Grain as the Basis of Famine Wages—William B. Carpenter, C.B., M.D., etc., Mesmerism, Spiritualism, etc., Historically and Scientifically Considered—Annual Report of the Royal Edinburgh Asylum for the Insane—J. D. Everett, M.D., Elementary Text-book of Physics—Francis Vacher, On the Dead Body as a Possible Source of Infection—Joseph Jones, M.D., Explorations of the Aboriginal Remains of Tennessee.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Obstetrical Journal of Great Britain and Ireland—Analyst—Practitioner—Indian Medical Gazette—Transactions of the Odontological Society of Great Britain—Morningside Mirror—Cambridge University Reporter—Transactions of the Cremation Society of England—Western Review of Science and Industry.

APPOINTMENTS FOR THE WEEK.

May 12. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Royal Institution, 3 p.m. Mr. W. H. Pollock, "On Modern French Poetry."

14. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Gladstone, "On the Chemistry of the Heavenly Bodies."

Pathological Society, 8½ p.m. Dr. Vandyke Carter—Memorandum on Leprous Nerve-Disease. Mr. W. Haward—Cystic Disease of Testicle. Mr. Spencer Watson—Melanotic Sarcoma of Choroid. Mr. Butlin—Chondroma of the Submaxillary Gland. Mr. L. Browne—Cancer of Larynx. Mr. M. Baker—1. Pericardial Omental Hernia; 2. Case of Morphœa (living specimen). Dr. Gowers—Specimens showing the State of the Nerve-Centres in Hydrophobia. Dr. F. Taylor—Lymphoma of the Intestine. And other Specimens—by the President, Mr. Wagstaffe, Mr. Godlee, Mr. Nunn, and Drs. Lyell, Crisp, Dunbar, and Goodhart. (Dr. Gowers' Microscopical Specimens will be on view at eight o'clock.)

16. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

17. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Harveian Society, 8 p.m. Clinical and Pathological Evening.

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

18. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society, 8 p.m. Meeting.

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Lieut.-Gen. Richard Strachey, "Physical Causes of Indian Famines."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 5, 1877.

BIRTHS.

Births of Boys, 1294; Girls, 1216; Total, 2510.
Average of 10 corresponding years 1867-76, 2332·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	785	705	1490
Average of the ten years 1867-76	711·8	672·3	1384·1
Average corrected to increased population ...	...	...	1481
Deaths of people aged 80 and upwards ...	...	...	47

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	2	2	...	6	...	2	1	2
North	751729	27	10	5	1	7	...	1	1	1
Central ...	334369	2	9	...	...	1	...	...	...	2
East	639111	6	8	3	...	10	...	2	1	1
South	967692	16	15	6	1	19	3	8	2	3
Total	3254260	54	44	16	2	43	3	13	5	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·917 in.
Mean temperature	41·3°
Highest point of thermometer	53·7°
Lowest point of thermometer	28·1°
Mean dew-point temperature	32·7°
General direction of wind	N.E.
Whole amount of rain in the week	0·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 5, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending May 5.	Deaths Registered during the week ending May 5.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2510	1490	53·7	28·1	41·3	5·17	0·20	0·51
Brighton	102264	43·4	63	31	53·0	32·7	42·0	5·56	0·00	0·00
Portsmouth ...	127144	28·3	90	42	64·0	32·0	45·3	7·39	0·00	0·00
Norwich	84023	11·2	59	39	50·5	30·8	40·1	4·50	0·04	0·10
Plymouth	72911	52·3	40	23	55·0	35·5	43·3	6·28	0·00	0·00
Bristol	202950	45·6	141	82	56·0	26·8	41·4	5·22	0·01	0·03
Wolverhampton ...	73389	21·6	68	19	52·3	27·9	38·6	3·67	0·00	0·00
Birmingham ...	377436	44·9	314	167	...	...	...	...	...	...
Leicester	117461	36·7	69	57	54·5	28·0	40·8	4·89	0·01	0·03
Nottingham ...	95025	47·6	73	42	53·3	30·2	40·0	4·44	0·04	0·10
Liverpool	527083	101·2	423	315	50·9	32·7	39·8	4·34	0·00	0·00
Manchester ...	359213	83·7	279	162	...	...	...	...	...	...
Salford	141184	27·3	141	87	53·8	25·1	39·1	3·95	0·01	0·03
Oldham	89796	19·2	83	62	...	...	...	...	...	...
Bradford	179315	24·8	133	86	50·2	28·6	39·9	4·39	0·02	0·05
Leeds	298189	13·8	225	124	51·0	30·0	40·0	4·44	0·01	0·03
Sheffield	282130	14·4	212	141	52·0	28·5	38·8	3·78	0·00	0·00
Hull	140002	38·5	112	57	53·0	27·0	39·6	4·22	0·02	0·05
Sunderland ...	110382	33·4	93	43	54·0	33·0	41·8	5·45	0·14	0·36
Newcastle-on-Tyne	142231	26·5	131	66	...	...	...	...	...	...
Edinburgh	218729	52·2	166	95	55·6	31·5	40·8	4·89	0·04	0·10
Glasgow	555933	92·1	436	213	...	...	...	...	...	...
Dublin	314666	31·3	218	213	56·4	28·0	44·5	6·95	0·08	0·20
Total of 23 Towns in United Kingdm	8144940	38·3	6079	3756	64·0	25·1	41·0	5·00	0·03	0·0

* At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·92 in. The lowest reading was 29·65 in. at the beginning of the week, and the highest 30·22 in. on Tuesday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

MEETING OF THE
GENERAL MEDICAL COUNCIL,

HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIRST DAY—THURSDAY, MAY 10.

THE annual meeting of the above Council commenced on Thursday, May 10, the chair being taken by Dr. Acland, President.

Dr. HAWKINS informed the Council that the Executive Committee had appointed Mr. W. J. C. Miller to the office of Registrar, in the room of Dr. Hawkins, who had resigned.

Sir DOMINIC CORRIGAN said he had given notice of a motion respecting the appointment of Registrar, which motion had been left out of the report of the Executive Committee. He did not think the Committee ought simply to state to the Council that they had done a certain thing which the Council had not had an opportunity of discussing.

The PRESIDENT said the Executive Committee had come to the conclusion that it was best simply to state the fact of the Registrar's election, and not to initiate any discussion at present.

Dr. WOOD said the Executive Committee had not exceeded its powers in electing the Registrar, and they only informed the Council of the fact for the purpose of introducing the gentleman elected.

Sir James Paget having been introduced by Sir William Gull as the new representative of the Royal College of Surgeons, England,

The PRESIDENT delivered the Annual Address, which we inserted at length last week.

Dr. SMITH then moved, and Dr. Storrar seconded—"That the report of the Executive Committee be received and entered on the Minutes."

Sir DOMINIC CORRIGAN proposed an amendment—"That this Council cannot give their unqualified approval to the report, inasmuch as the proceeding of the Executive Committee, in selecting for the appointment of Registrar to the General Medical Council and the Branch Council of England a gentleman who is not a member of the medical profession, is contrary to the spirit and intention of the Medical Act of 1858, and has not given satisfaction to the members of this Council or the profession generally." He said that as the profession included upwards of 22,000 registered practitioners, there surely must have been some one out of that number fit to take the office. Although the Medical Act did not expressly state that the Registrar must be a member of the medical profession, that was clearly its meaning. According to the Act, neither the President nor any member of the Council need be a medical man, but none but registered members of the medical profession had ever been elected. It had been said that only twenty applications had been received, and that the salary of £500 was not a sufficient inducement to members of the profession to forego their private practice. But he knew numbers of highly educated and qualified gentlemen who would have been thankful to have accepted the appointment. He thought the real reason was the general belief that no one need apply except a resident London man. Had he thought the Committee would have gone outside the limits of the profession, he should have hesitated to confer the power of election upon it.

The amendment not being seconded, the original motion was put and carried.

After the Business and Finance Committees were appointed,

Dr. HUMPHRY moved the following resolution:—"That, having regard to the good spirit in which the visitation of examinations and the reports of the visitors have been generally received by the licensing bodies, and to the improvements which have been made in all, or nearly all, the examinations for admission to the Register, it is desirable not to enter now into a discussion on the Report of the Committee on the Visitation of Examinations, and the Answers of the Licensing Bodies, but to send copies of the Report of 1876 to each of the licensing bodies for consideration." His reason for bringing forward the motion was, that considering the good work which had been done, and was still doing, by the visitations, he thought it would be useless and probably mischievous for questions connected with the subject to be discussed at the present time by the Council. The result of the visitations had been that almost all the examinations in the country were considerably modified, and that without any pressure put by the Council upon the licensing bodies. One of the questions dealt with was, that by some of the corporations the candidates were not examined in all the subjects required by the Council; but between the dates of the first and second Reports that defect had been partly remedied. When the second Report was issued there were only four bodies—the College of Surgeons of England, the Society of Apothecaries of London, the King and Queen's College of Physicians in Ireland, and the College of Surgeons in Ireland—in which the examinations were not complete; but since that time the College of Surgeons of England and the Society of Apothecaries had sought to obviate the difficulty by uniting to form one examination, and the other two bodies had the matter under consideration. The practice of allowing a candidate to pass only one portion of the examination was also undergoing a change; and, although in some cases a candidate might fail in medicine or surgery, and be allowed to present himself again, such a course was not pursued with regard to other subjects. He therefore thought it would be better to send the reports of the visitors to the different licensing bodies for their consideration. When the visitations were instituted again, after the bodies had fully considered the matter, it would be time for the Council to exercise pressure where it was necessary.

Dr. WOOD thought the visitations had been the means of conferring great good on the profession, but there was danger in pushing on too fast. Much more would be accomplished by the moral influence of the Council than by any attempt to force the different bodies into conformity with its wishes. He thought it undesirable to resume the visitation this year, especially as the bodies were rapidly endeavouring to improve their examinations, and had paid great attention to the suggestions of the visitors.

The motion was then agreed to.

Dr. WOOD read the following report of the Executive Committee:—"The Executive Committee, as was remitted to them by the Council, have obtained from the licensing bodies answers in regard to the results of professional examinations and the deficiencies in preliminary education, which they now submit to the Council. The Committee requested Dr. Humphry, who acted as chairman of the Committee on Results, to prepare a report on these answers. This report they have also now to submit for the consideration of the Council. In addition, Dr. Aquilla Smith has furnished the Committee with an analysis of the annual returns of the final examinations furnished to the Council for a series of years, which they also submit to the Council. The Committee recommend that these documents should be entered in the Minutes, and referred to the Committee on Recommendations of last year, which should for that purpose be reappointed and requested to report to the Council with all convenient speed."

After some discussion as to whether an unadopted report should be entered in the Minutes, it was decided to print the report of the Committee, together with the documents specified therein.

Dr. WOOD moved, and Mr. SIMON seconded—"That the documents be referred to the Committee on Recommendations of last year, which should be reappointed for the purpose, and requested to report to the Council with all convenient speed."

Mr. MACNAMARA objected to the documents being referred to the Committee, as there were some points which should be considered by the entire Council, and others to which he, on behalf of his colleagues, wished to offer a strenuous opposition. He suggested that the Council should at once proceed to discuss the matter.

Mr. TURNER thought the Council was in a position to enter at once into the discussion without referring the matter to the Committee. He therefore proposed an amendment to that effect.

Mr. LISTER said he was not prepared to discuss the matter immediately, but thought the Council might do so at the next sitting.

It was thereupon agreed that the subject be discussed as the first business on Saturday.

On the motion of Mr. SIMON, seconded by Dr. HUMPHRY, it was resolved—"That a Committee be appointed with reference to amendments (if any) which may have to be recommended in the Medical Acts, and that the communications received with reference to foreign, colonial, and Indian degrees be referred to this Committee for consideration."

The Committee was accordingly nominated.

Mr. Simon said that last year, when the Bill upon which Russell Gurney's Act was founded was referred to a committee, the Council suggested to the Government that it should be made quite clear that the exercise of the power given by the Act should be optional with the authorities, and that if the authorities chose to exercise that option in favour of the admission of women, they should not, except at the further discretion of the licensing body, be admitted to corporate privileges. The exact words of the Council were: "The Council are of opinion that the qualifications conferred should not, except at the further discretion of the bodies, carry with them any right to take part in the government of the universities or corporations, or any right or privilege beyond that of registration with a view to practise the medical profession." The Council felt that that was the only condition under which the Bill was likely to be acceptable to the majority of the bodies; and it was understood that that recommendation would be accepted by the Government. The Bill had now become law, but instead of containing the proviso suggested by the Council, there was one which gave not the slightest effect to its recommendations. The words of the Act were: "That no person, who but for this Act would not have been entitled to register, shall by means of registration be entitled to take part in the government, management, or proceedings of the universities or corporations mentioned in the Medical Act." The bodies did not wish to be guarded against women becoming corporators because of their registration, but against their becoming such on account of their qualifications. For that reason, some bodies had declined to examine women, and so the insufficiency of the proviso defeated the intention of the Act. He therefore moved—"That it be an instruction to the Medical Acts Committee to consider the legal bearing of the provisions as they stand."

Dr. Storrar seconded the motion, and said that the University of London had consulted the law officers of the Crown on the question, and their opinion was that women, on being admitted to degrees of the University, would not become members of the body corporate.

The motion was put and carried.

On the motion of Dr. Pitman it was resolved that the subject of the recovery of penalties under the Medical Act should not be discussed in the absence of Mr. Ouvry, and that the matter be referred to the Medical Acts Committee.

Dr. Wood produced a table containing the results of professional examinations for degrees, diplomas, and licences granted in 1876 by the medical licensing bodies in Schedule (A) of the Medical Act, and moved that it be entered on the programme, as it contained serious results, the number of rejections being very great.

Dr. Storrar said that if the number of rejections had not actually lessened the number of men entering the Register, there was nothing to grumble about. It had been stated that the supplies to the profession were being stopped because of the rejections.

The motion was agreed to.

Dr. Humphry moved the adoption of the Report by the Executive Committee on Standing Orders, as follows:—"The Registrar having called the attention of the Committee to some discrepancies, repetitions, and errors of arrangement in the Standing Orders, the Executive Committee have deemed it their duty to prepare a revised edition of the Standing Orders, which they now submit to the Council, and in which they have to state that no material alterations have been made."

Dr. Smith moved, as an additional standing order—"That in all cases in which additional qualifications are to be registered, they must be entered in the local register in which the practitioner was first registered."

This motion, however, was not carried, and the Report of the Executive Committee having been adopted, the Council adjourned.

Second Day—Friday, May 11.

The first business selected from the programme was a communication from the Queen's University, Ireland, with respect to the non-registration of Honorary Degrees in Medicine granted by that body, in connexion with an application, of date May 2, 1877, from Richard Eustace, Esq., Honorary Doctor of Medicine of the Queen's University in Ireland, that his honorary degree may be registered as an additional qualification, with counsel's opinion thereupon given to the Registrar of the English Branch Council.

The case submitted to counsel contained the following documents:—

Copy of Minute of the Senate of the Queen's University, April 15, 1876.

Upon the motion of the Vice-Chancellor, a Grace passed the Senate to confer the degree of M.D. *honoris causâ* on Richard Eustace, M.R.C.S.E., Fleet-Surgeon R.N., and it was appointed that the degree shall be conferred at the October meeting of the University. The following grounds for conferring this distinction were submitted to the Senate:—

(*a.*) Award of Gilbert Blane Medal, 1875.

"Admiralty, S.W., November 26, 1875.

"Sir,—I have much pleasure in informing you that, in accordance with the bequest of the late Sir Gilbert Blane, Bart., you have been awarded the gold medal founded by him, for the distinguished professional zeal and ability of which you have given such satisfactory evidence in your Journal of H.M.S. *Himalaya* for 1873. I have further to express a confident hope that in your future career in her Majesty's Service you will continue to afford me the same gratifying proof of the exercise of those high professional attainments which have gained for you this well-merited distinction.

"I am, &c., (Signed)

"A. Armstrong, Director-General.

"Fleet-Surgeon R. Eustace, R.N., H.M.S. *Achilles*, Rock Ferry, Cheshire."

(*b.*) Twenty-one years' service as Assistant-Surgeon in H.M.S. *Monarch*, during the Russian War in the Baltic, Pacific, Kamtschatka (awarded medal).

(*c.*) Promoted Surgeon, 1862. Served as Surgeon of H.M.S. *Cormorant*, on China station, 1862-66; two years as Surgeon of *Satellite*, on Pacific station; on Gold Coast during Ashantee War (awarded medal); thanks of Admiralty for care of sick in troopship home from Gold Coast. Specially promoted Staff-Surgeon in 1874. At present Fleet-Surgeon on board H.M.S. *Achilles*, Rock Ferry, Cheshire.

In further elucidation of part of the evidence which was before the Senate, it may be observed that all senior naval medical officers serving afloat are obliged to forward a medical and surgical journal of their practice, with a classified nosological return of diseases, hygiene of ships, etc., etc., to the Director-General annually. In the year 1830, Sir Gilbert Blane made a bequest of £300 to the Royal College of Surgeons, with a request that a gold medal should be annually awarded for the best medical and surgical journals; the judges and examiners to consist of the President of the Royal College of Surgeons, Director-General of Medical Department of Navy, and the President of the Royal College of Physicians.

Since Dr. Eustace entered the service, years have sometimes passed without any medal being granted.

The Journal of 1873, for which the medal was awarded to Dr. Eustace, contained, amongst other matters, an account of the intermittent and remittent fevers and malarious form of dysentery which decimated the first batch of marines landed on the Gold Coast in the summer of 1873.

Many of those who have received Blane Medals have died or retired from the service. The recipients now remaining are as follows, viz.:—Sir A. Armstrong, K.C.B., F.R.S., LL.D., Director-General Medical Department; W. R. E. Smart, C.B., M.D., W. Macleod, Inspectors-General; A. E. Mackay, M.D., D. L. Morgan, M.D., J. D. MacDonald, M.D., F.R.S., Deputy Inspectors-General; Stephen Bowden, M.D., T. J. Haran, R. Eustace, M.D., T. Colan, M.D., D. McEwen, M.D., Fleet-Surgeons; R. C. P. Lawrenson, H. Hadlow, Staff-Surgeons.

The opinion of the Irish law officers was given in these terms:—

Without expressing any opinion upon the question whether a degree of Doctor of Medicine conferred *honoris causâ* entitles the holder to have it registered as a qualification under Section 15 of the Medical Act, we are of opinion that Dr. Eustace, being already registered by an unquestioned qualification, is entitled to have his honorary degree entered on the Medical Register, either as a "medical title" under Section 27, or as a "higher degree" under Section 30, and we are confirmed in this opinion by the form of Register prescribed by Schedule (D) of the Act, which distinguishes the "qualification" from the "title" of each registered practitioner.

Any proceeding to enforce the insertion of the degree upon the Register must be taken by or in the name of the person aggrieved by the omission, and should be taken upon his own responsibility. The Queen's University may, with propriety, urge their views upon the consideration of the Medical Council, but we cannot advise them to institute any legal proceedings.

(Signed) Ed. Gibson.
March 31, 1877. Gerald Fitzgibbon.

After the reading of the foregoing case and opinion, an animated discussion ensued upon the proposal of the President that Mr. Ouvry, the Solicitor to the Council, should give his advice orally, with some remarks which he proposed to make upon the opinions of the English and Irish counsel—Sir Dominic Corrigan and Dr. Aquilla Smith objecting to such a course being taken, on the ground that Mr. Ouvry would naturally support the view of the Executive; and that, if an advocate were heard on one side, the Queen's University or Mr. Eustace himself ought to be represented by counsel.

Ultimately, it was moved by Professor Thomson, and seconded by Dr. Storrar, and agreed to—"That Mr. Ouvry should be requested to state his views upon the subject."

Mr. Ouvry then read the opinion of Mr. Bowen, Q.C., taken on behalf of the Council:—"I am of opinion that the Registrar is not bound to register Mr. Eustace's honorary degree. Mr. Eustace is not a Doctor of Medicine of the Queen's University, but an Honorary Doctor only. He does not therefore possess one of the qualifications described in Schedule (A) of the Medical Practitioners Act, and I therefore think that the title of Honorary Doctor is not a medical title, diploma, or qualification within Section 27 of the Act. It appears to me to be an academical distinction, and nothing

more, at all events so far as regards the purposes of tho Medical Practitioners Act. I think that Sections 18 to 23 of the Act show the intention of the Legislature to have been that the qualifications mentioned in Section 15 should be real, and not honorary. I think it is a sufficient answer to the claim made that Mr. Eustace is not a Doctor of the University, but an Honorary Doctor only." The learned gentleman then said that, in considering the case and the opinion of the law officers of the Crown in Ireland, he would pass over the earlier part which referred to the grounds upon which the Queen's University conferred the honorary degree upon Mr. Eustace. He wished to state that there was no imputation upon that gentleman, whose services and whose character all must be glad to recognise.

Sir Dominic Corrigan (interposing) said that a very strong imputation was cast by the terms in which it was proposed to refuse the registration, inasmuch as it directly imputed to Dr. Eustace that he was not possessed of medical knowledge.

Mr. Ouvry said that, in his view of the case, no imputation whatever was conveyed, and he hoped that this would not be made a personal question. The point for the Council to consider was, whether an honorary degree is a qualification for registration. With regard to the first paragraph of the Irish opinion, in which it was stated that Mr. Eustace, being already registered by an unquestioned qualification, is entitled to have his honorary degree entered on the Medical Register either as a "medical title" under Section 27 of the Act, or as a "higher degree" under Section 30, he had to observe that there was nothing in Section 27 to warrant that opinion; and with regard to the latter part of that paragraph, in which the law officers of the Crown say, "We are confirmed in this opinion by the form of Register prescribed by Schedule (D) of the Act, which distinguishes the 'qualification' from the 'title' of each registered practitioner," it was to be observed that in the case of a higher degree it is to be entered on the Register by way of substitution for the previous lower degree; whereas in the case of an additional qualification it is to be added to the previous qualification; and since it was obvious that a man could not have a higher degree unless he was previously possessed of a lower one, this section could not apply. Section 26, which says, "That no qualification shall be entered in the Register unless the Registrar be satisfied by the proper evidence that the claimant is entitled to it," was also relied upon in the case laid before counsel; but that appeared to be merely begging the question at issue, which was, Is an honorary degree a "qualification" under the Act, or is it not? Clause 20 was as follows:—"In case it appears to the General Council that the course of study and examination to be gone through in order to obtain any such qualification from any such college or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of that profession, it shall be lawful for such General Council to represent the same to her Majesty's most honourable Privy Council." Section 21 is that "It shall be lawful for the Privy Council upon any such representation as aforesaid, if it see fit, to order that any qualification granted by such college or body after such time as may be mentioned in the order shall not confer any right to be registered under this Act." Those clauses were also quoted, for some reason which he could not understand, because they had reference to a power in the General Council, by which, if they were of opinion that the course of study and examination to be gone through in order to obtain the qualification of any licensing body were not such as to secure the possession of the necessary amount of information, they might then represent the matter to the Privy Council, but in this case there was no question of any course of study whatever having been gone through in the Queen's University by Mr. Eustace. Therefore these clauses were entirely out of question, and the idea that the Registrar had "usurped the functions of the Privy Council" was entirely without foundation. Then there was a statement which he supposed was only introduced to disparage Mr. Bowen's opinion: "It may be right to observe that in 1859 the Registrar, acting under the same legal opinion (Mr. Bowen's), refused to insert the Licence in Midwifery of the King and Queen's College of Physicians in Ireland, and of the Royal College of Surgeons in Ireland; and that, on a notice from Mr. Litton, solicitor to both these institutions, that he would apply for a *mandamus* to the Court of Queen's Bench, and institute an action for damages on the part of the licentiates, the names were inserted." In the year 1859 it so happened that Mr. Bowen, although he now holds a distinguished position at the bar, had not been called, and therefore he could not have given such an opinion. The opinion which was given, and which he now held in his hand, was signed by Hugh Macalmont Cairns and Arthur Hobhouse—(loud laughter and applause),—and so far from that opinion being against the right of registration, it was in favour of it, and upon it the Council did register the names in question, so that there was no yielding to any threat of legal proceedings. Reverting to the opinion of the law officers of the Crown in Ireland, the first observation to be made upon it was that they had not pledged their opinion upon the main question—namely, that an honorary degree is a qualification entitled to registration; but they say, "Without expressing any opinion on the question whether a degree of Doctor of Medicine conferred *honoris causâ* entitles the holder to have it registered as a qualification under Section 15 of the Medical Act, we are of opinion that Dr. Eustace being already registered by an unquestioned qualification, is entitled to have his honorary degree entered on the Medical Register either as a 'medical title' under Section 27, or as a 'higher degree' under Section 30, and we are confirmed in this opinion by the form of Register prescribed by Schedule (D) of the Act, which distinguishes the 'qualification' from the 'title' of each registered practitioner." It certainly was unfortunate that the law officers of the Crown were not informed in the case submitted to them that the column in Schedule (D) headed "Title" has been repealed; so that the foundation of their argument entirely falls to the ground. It was repealed, however, in April, 1859, and the only column that remained was headed "Qualification." Now, it appeared to him (Mr. Ouvry) that nothing could be entered in that column which was not a qualification. Then the law officers of the Crown not saying that it was a qualification under Section 15, which is the main section, are of opinion that it may be entered either as a medical title (he had shown that that column no longer existed) or as an "honorary degree" under Section 30; and this argument he had already disposed of by suggesting that the term "higher degree" presupposed the possession of a lower degree by the candidate for registration, and, as this gentlemen had no degree at all, his advice to the Council was that the opinion of Mr. Bowen was unquestionably correct, and that the Council had no power to register a purely honorary degree.

Dr. Aquilla Smith wished to correct a statement of fact made by Mr. Ouvry with regard to the action of the Council upon a similar matter in 1859. He then gave a detailed history of the case in 1859, when the Council had refused to register certain midwifery qualifications from the King and Queen's College, Ireland. The Council were threatened with forty actions if they were not registered at once, and, under that threat, they struck their flag, and consented to the registration within forty-eight hours of receiving the solicitor's letter. He would like to know the relative dates of Lord Cairns' opinion and the threat of *mandamus*.

Mr. Ouvry stated that the opinion was obtained on May 20, 1859. The letter threatening to apply for a *mandamus*, and to bring, not forty, but one action, was dated May 28, which was therefore, at all events, eight days after the opinion had been obtained. The letter from the Registrar assenting to the registration was dated June 1.

Dr. Aquilla Smith: Then they did not strike their flag until they had got notice of the actions!

The President, in summing up the question, said it was now for the Medical Council to decide, having heard the whole case, whether the Registrar was right in refusing to register this qualification or not.

Sir William Gull moved, and Dr. Rolleston seconded, the following motion:—"That the documents relating to the registration of the honorary degree in Ireland of Richard Eustace, Esq., having been read, and the advice of the Solicitor having been heard, it is the opinion of the Council that the degree in question cannot be registered."

Sir Dominic Corrigan said that Mr. Ouvry, who, with all respect to him, was not a member of the bar, had taken upon himself to deliver an elaborate criticism upon the opinion of the law officers of the Crown, and in the course of that criticism had made assertions which could not be accepted as correct. It was idle to say that no imputation would be cast upon Dr. Eustace by a refusal to register his qualification, when the absence of such a registration would, *e.g.*, disqualify him from any public appointment in Ireland. It was evident that the Executive Committee feared to take the opinion of the

law officers of the Crown in England, which was the proper course for them to adopt, considering that there were opinions of counsel both ways, and had brought in their own solicitor to support their own views, and some members had actually gone so far as to challenge his right to reply to the observations of Mr. Ouvry. It had been said that there was no proof of Dr. Eustace having any medical knowledge. The whole course of his life was a denial of such an assertion. He had been twenty-one years in the navy, he had been through the Russian War, both in the Baltic and in the Crimea, he had served his country in India, he had won the Blane Medal under the circumstances which they had heard read; and then, forsooth, it was said that there was no evidence of his having any medical knowledge! Who were the gentlemen that awarded him that Blane Medal? The President of the College of Physicians, London, the President of the College of Surgeons, London, and the Director-General of the Navy. On that medal it was inscribed that it was the reward of superior surgical and medical knowledge. When a number of our soldiers were wounded in the Crimea, who was chosen to take charge of them on the home voyage? This same Dr. Eustace; and he obtained the thanks of the Director-General of the Army for the care he took of the men under his charge. He really should be ashamed of the Council if it accepted Sir William Gull's proposal. There would be disgrace attaching to the refusal to register in this case, but that disgrace would attach, not to Dr. Eustace, but to the General Medical Council. Since reference had been made to what took place in 1859, he would remind them that this Council had registered upwards of 1000 honorary degrees conferred by the College of Physicians of Edinburgh without any examination whatever, the only qualification required being a certificate by two members of the profession that the applicant was an honest man! He had been applied to by a candidate, and, knowing him to be a drunken fellow, returned no answer to the letter, upon which the Registrar of the College actually had the impudence to demand upon what grounds he refused to certify to the man's fitness. What was the motive for that? Why, they pocketed in that year 10,000 guineas by those transactions, because they registered anybody who came forward with a document which might be obtained for the asking. It was proposed, in connexion with this matter, to take the President and Dr. Paget's honorary qualification off the Register. If that were done he supposed that many other members of the profession would find themselves in the same boat. Now, why was this case chosen for the refusal to register? Because the document issued by the Queen's University told the truth —that it was given *honoris causâ*. He made bold to state that the qualifications upon which this honour had been bestowed upon Dr. Eustace were such as very few members of the profession could show. For his own part he would neither advise Dr. Eustace nor the Queen's University to take any step in endeavouring to enforce registration, but would content himself with moving a distinct negative to Sir William Gull's proposal.

Professor Turner proposed as an amendment—"That as the Council had before them discordant legal opinions, they should instruct their solicitor to take the opinion of the law officers of the Crown in England before coming to a final decision upon the matter." There was a great deal of truth in Sir Dominic Corrigan's remark, that if the Queen's University had simply omitted the words *honoris causâ* the title would have been registered without question; and in relation to one point of Mr. Ouvry's criticism, he would remind the Council that on the Register for the year 1869 appeared the name of a distinguished surgeon—Mr. Syme, who was for a long time one of their body—with the title of M.B. of the University of Dublin, 1867. Now, it was well known that Mr. Syme had no medical title. With regard to Mr. Ouvry's criticism upon the words "higher degree," that gentleman would find, by reading Clause 30 of the Act through, that not only might the higher degree or additional qualification be inserted in the Register *in substitution for*, but *in addition to*, the qualification previously registered. Mr. Eustace was already registered with a surgical diploma, and it might reasonably be argued on his behalf that the honorary degree conferred upon him should be inserted in addition to, and not in substitution for, that in respect of which he was already registered.

Dr. Quain seconded the amendment. He thought the question was one of the very greatest importance, because, if one university were entitled to have its honorary degrees registered, another might claim it, and so the Register might be falsified altogether, and would cease to be of the slightest use. Moreover, if not finally settled now, the question would be always rising up in one form or other; and therefore, although he had personally implicit confidence in the soundness of Mr. Ouvry's advice, he thought that the highest forensic opinion should be taken upon the general question without reference to this particular case.

Mr. Macnamara would prefer meeting the original motion with a direct negative. The Council would be placed in a difficult position if the law officers of the Crown in England were to take a directly opposite view to the Irish law officers. The truth was that legal opinions taken in this way were of very little value. On the other hand, there was no danger of these degrees being conferred recklessly by any of the authorities, because degrees *honoris causâ* brought no fees to the body conferring them. (Laughter.) After all, this was a question not of law, but of the construction of the English language, and he contended that the members of the Council were as well able to give the construction as any court of law in the country. After minute criticism of the words of the Act, he contended that it was the duty of the Council to register this degree. The Council were, above all, called upon to register in this case when they remembered the words which had been put forward in Mr. Ouvry's statement to Mr. Bowen, that the effect of such a registration would be that this candidate for registration would be represented to the public as possessed of medical knowledge without there being any guarantee to the Council that he was possessed of it. Was not the man's whole life a guarantee? Was not his possession of the Blane Medal a guarantee? Was not the thesis upon which he obtained that distinction a guarantee? And was it not the practice in some universities to confer higher degrees merely on the presentation of a thesis without further examination? Impressed with this view, he would much prefer meeting the motion with a direct negative. He hoped the Council would have no further reference to lawyers, but if they wished to get a legal opinion they would go to the Court of Appeal.

Dr. Rolleston said this was purely a technical question. By a reference to the legislation on the subject it would be found that the law of the land forbade the Council to register an honorary title. He also referred Sir Dominic Corrigan to a motion of his, made some years ago, in which he fully concurred—"That the General Medical Council is of opinion that any degree or licence obtained since the passing of the Medical Act without examination ought not to be placed on the Register."

Dr. Andrew Wood moved a resolution to a similar effect, and said that, in fact, this question had been decided by the Council long ago. They had learned one very important fact from this discussion—viz., that her Majesty had a most deserving officer in Mr. Eustace,—but on a purely technical question like this it was idle to appeal to patriotic emotions in favour of the Union Jack or the British Lion.

Mr. Lister wished to express the reasons which prevented him from voting for Sir William Gull's motion. It was not their province to consider whether honorary degrees were good things or not, or to make a law upon the subject, but simply to administer it. It had been suggested that further legal opinion should be taken. The counter-proposal which he had to make was this:—That, as the present defective state of the Medical Act was about to be remedied by an Amendment Act which would require a double qualification for registration, the Council should postpone any action in the matter until they submitted their views to the Legislature upon that Act, when they might embody a clause dealing with this particular matter, allowing Mr. Eustace's degree to be registered under the present circumstances in consideration of a long line of precedent. Further legal opinions would only be expensive, and, after all, would not settle the matter.

Mr. Simon said he must vote against the amendment, partly because the argument of Mr. Macnamara as to the difficulty which would arise by obtaining perhaps conflicting legal opinions had convinced him that, after all, the only satisfactory solution of the question was to obtain the decision of a court of justice, should the necessity arise for it. For his own part, he was quite ready to give effect to the advice of the Solicitor to the Council, and to vote for the motion of Sir William Gull.

Dr. Humphry said, looking to the Act, the titles which they were to register were distinctly stated in Schedule (A). In that schedule there was no mention whatever of the word

"honorary," and there was no provision in the Medical Act for the registration of an honorary degree. To his mind, it appeared a pure question of common sense, and the discussion of it ought not to have lasted five minutes.

Dr. Andrew Wood said he had entered upon this matter with some doubt, which had been greatly increased by the light that had been thrown upon the question during the discussion it had received. He was sorry to be so wanting in the common sense to which Dr. Humphry had appealed as not to be able to see the matter in the same light. In view of possible legal proceedings being taken against the Council, he thought it would be wise to fortify themselves with the best legal advice, and he would therefore vote for the amendment of Professor Turner.

Dr. Aquilla Smith pointed out that the practice of the Council was wholly at variance with the "common-sense view" to which Dr. Humphry had appealed, because, taking up the Register, he could read from a single page such titles as these—Fellow Licentiate of the King and Queen's College of Physicians, London; Fellow Licentiate of the Royal College of Surgeons, Ireland; Fellow or Licentiate in Midwifery of the Royal College of Surgeons, England; and so on,—qualifications which were not contained in the schedule referred to by Dr. Humphry.

Dr. Humphry: "Licentiate in Midwifery" is a "licentiate."

Dr. Aquilla Smith: Ah! but who told you that? (Laughter.) That was the very point that the law officers of the Crown in Ireland enlightened you upon—that that word "licentiate" covered the cases which you refused to register until threatened with legal proceedings.

After some further observations by Mr. Macnamara and Dr. Haldane,

Sir William Gull, in reply, said that it was painful that this Council should have exhibited to the profession such a want of common sense as he felt bound to say that the three hours which they had wasted upon the discussion of this question betrayed. The very intention of the Legislature in appointing the Council was to secure that the degrees registered were the result of examination, and not honorary degrees. They might depend upon it that this day's work would be commented on, and justly, by the medical journals, very much to the discredit of the Council. The question did not admit of argument. Once accept the principle of registration of honorary degrees, and the Register itself became a mere phantasm.

The motion and amendment having been read, the latter was found to have a majority in favour of it, and, upon being put as a substantive motion, was declared to be carried.

Sir William Gull then proposed that a "joint request from Dr. Acland and Dr. G. E. Paget, that the title of M.D. of the University of Dublin be removed from their names in the Register on the first convenient occasion, pending the decision by the General Council of the question as to the legality and expediency of registering such additional titles," be accepted.

After some discussion, in the course of which it was pointed out that this would prejudge the question upon which the Council were about to take advice,

The President said that he had felt this difficulty, but it having been suggested that the fact of himself and the late President having honorary degrees registered might place the Council in a difficulty in discussing this question, they had determined to make this request.

Professor Thomson suggested that Sir William Gull should withdraw his motion (which had been seconded by Mr. Simon), in order that he might move an alternative one to this effect—"That the consideration of this request be deferred until after the opinion of counsel is obtained."

Sir William Gull assenting, this latter motion was unanimously adopted.

The Council then proceeded to consider the case of George Stratton Symmons, who had been convicted at the Liverpool Assizes of a disgraceful offence. Strangers were requested to withdraw during the discussion. In the result, without mover or seconder, the Council directed that the name of this person should be erased from the Medical Register.

Mr. Ouvry then stated that an application had been made on behalf of Samuel Levenston, that his name should be restored to the Medical Register, it having been struck off after a letter was addressed to him, which he did not answer for six months. Strangers were again requested to withdraw, and upon their readmission the Council proceeded to consider a resolution, passed by the members of the North of England Branch of the British Medical Association, of April 27, 1877, and forwarded for the consideration of the Council—"That it is the duty of the General Medical Council to prosecute unqualified medical practitioners."

Dr. Storrar reminded the Council that it had many years ago arrived at the conclusion not to take up this question; and mentioned two arguments in favour of this view—first, that the Council had very small funds at its disposal for carrying on prosecutions; the other being, that it was undesirable to place themselves in the position of a prosecuting body. He had a vivid recollection of a strong opinion which the Council had formed during a former session, confirmed after consultation with gentlemen of high legal authority outside their body, that it was very repugnant to the whole spirit of British law that the power of prosecution and the power of judgment should vest in the same body. That was one of the chief grounds upon which they, after full inquiry in former years, had arrived at their determination upon this matter. He was prepared to move a resolution to this effect.

Sir William Gull suggested that when a matter affects the feelings, if not something more, of the great body of the medical practitioners of the country, it would not be seemly to commence a discussion upon this matter at the close of a long day. He believed the view taken by Dr. Storrar would be adopted, but he thought the matter ought to receive considerable deliberation at the hands of the Council. Considering that they had been for two or three hours discussing a matter which ought not to have occupied as many minutes, he thought the question whether this Council should or should not take some part in correcting the infamous pretensions of the persons referred to in the resolution of the North of England Branch of the British Medical Association should receive mature deliberation at their hands, and he would suggest the postponement of the debate upon it until Monday next.

Dr. Andrew Wood seconded the motion, and the Council then adjourned.

Third Day—Saturday, May 12.

The Council proceeded to consider—

Dr. Humphry's Report to the Executive Committee on the Answers from Medical Licensing Bodies to the Questions proposed to them by the Committee.

In accordance with the request of the Executive Committee at its last meeting, I make to the Committee the following report on the answers from the licensing bodies to the questions on professional examinations and education, which were proposed to them by the Committee in July last:

Answers, containing more or less valuable information and suggestions, have been received from the Universities of Oxford, Cambridge, Edinburgh, Glasgow, and Aberdeen; the Colleges of Physicians of London, Edinburgh, and Ireland; the Colleges of Surgeons of England, Edinburgh, and Ireland; the Apothecaries' Society of London and the Apothecaries' Hall of Ireland; also Recommendations from the Conference of Representatives of the Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow. The Faculty of Physicians and Surgeons of Glasgow "regret that they have not before them sufficient data to form a reliable judgment in regard to many points raised in these queries"; and "the experience of the Faculty of the University" of St. Andrews "is so very limited and exceptional that they do not deem it advisable to submit any opinion." From the letter sent by the Medical Registrar of the University of Dublin it is to be inferred that the questions have not been submitted to the authorities of the University, and that they have, therefore, not had an opportunity of giving to the Council the benefit of their experience and opinion.

1. *Preliminary Education and Examinations.*

The deficiencies in preliminary education noticed by several of the bodies (Colleges of Surgeons of England, Edinburgh, and Ireland; Colleges of Physicians of Edinburgh and Ireland; and the Faculty of Physicians and Surgeons of Glasgow), (a) demand the serious consideration of the Council. They are the more difficult to provide against, forasmuch as they point, as remarked by the College of Physicians of Edinburgh (Answers, p. 38), to "a very unsatisfactory state of secondary education throughout the country," which view is confirmed by the numerous rejections in the "Previous Examination" at Cambridge (p. 34), as well as in various other preliminary examinations recognised by the Council, even in those in which a very moderate standard of education is required. A good school-training in classics, mathematics, or other subjects, is, undoubtedly, the best preparation for medical education; and the defects in professional knowledge shown in the examinations are, as stated by the College of Surgeons of England (p. 28), "evidently, in many cases, attributable to the candidate's having entered upon his professional studies at a time when his general knowledge was inadequate." This, indeed, may be regarded as the root of the evil which leads to insufficient professional knowledge and to rejection in the examinations. Unless a youth has acquired a fair amount of general knowledge, precision of thought, and habits of industry, at the period of commencing professional education, it is doubtful whether he ever will do so. At any rate, he starts at a great disadvantage, and is scarcely likely to master the details of the various professional subjects, and to acquire a sufficient knowledge of them to be able to pass the examinations at the expected time. The fault is often

(a) The last body, in a letter dated April 7, 1877, calls particular attention to the "want of a knowledge of English, especially in the elementary matters of grammar and spelling," shown by the candidates.

less in himself and in his professional teachers than in the early training which he has received.

The Medical Council can hope to bring about an improvement in this respect only through the medium of the Preliminary Examinations. It is an important step gained, in the first instance, that students should be required to pass an examination in general subjects before commencing their professional education. It now remains to provide that this examination fulfils the desired purpose of insuring the requisite amount of knowledge in those who pass it. A difficulty in this has always been felt to be caused by the fact that the examinations are conducted by so many different bodies, the requirements of which vary; and the standard is thereby lowered. The opinion was early enunciated in the Council, and never departed from, that "the examination in subjects of general education should ultimately be left to the national educational bodies" (Minutes, vi. 251). This maxim was held strongly by the Committee on Preliminary Education in 1868, from the report of which the above extract is taken, though the doubt was expressed "how far this would be expedient in the present state of education in the kingdom." A further report of that Committee in the ensuing year was followed by a resolution of the Council "that the attention of the medical corporations be drawn to the recommendation 'that the Examination in General Education be eventually left entirely to the examining boards of the national educational bodies recognised by the Medical Council,' and that their opinion be asked, whether the time has not now arrived when this recommendation should be carried into effect." Assenting to this recommendation of the Medical Council, the College of Physicians of London has discontinued to examine in the subjects of preliminary education.

In order to promote this end, and to effect a reduction in the number of examinations now held and recognised, it will be desirable to communicate further with the licensing bodies on the subject. This duty the Council may probably think fit to delegate to the Executive Committee. In the meantime certain other steps may be advised.

In its last session (Minutes, xiii. 244) the Medical Council passed a resolution directing "the attention of the licensing bodies to the important fact, that from some of the reports of the visitations it appears that many candidates still enter upon their professional studies who are very deficient in preliminary education." This resolution did not call upon the licensing bodies to take any steps in the matter, or make any suggestions which might lead to an improvement. The Answers now furnished, directing more especial attention to this serious evil, suggest a reconsideration of the resolution proposed by Dr. Haldane and seconded by Dr. Storrar (Minutes xiii. 243), the spirit of which is in accordance with the recommendation of the Conference of Representatives of the Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow (Answers, p. 39)—viz., that the licensing bodies should report to the Council any case of ignorance in general education, together with the name of the board by which the candidate has been passed. Such a course might be expected to act as a healthy stimulus to promote a more careful scrutiny, and would therefore prove to a certain extent beneficial.

A letter might with advantage be addressed to each of the examining boards whose certificate is accepted as a test of preliminary education by this Council, directing attention to the complaints that have been made by several of the licensing bodies with regard to the insufficiency of the general education of many candidates presenting themselves for their examinations.

There does not appear to be any sufficient reason for altering or adding to the subjects required at the preliminary examination; and the suggestion of the College of Physicians of London, that the elements of natural philosophy, of botany, of zoology, and of chemistry, should be made compulsory as a part of general education, in addition to the subjects already required in the preliminary education, is scarcely to be recommended, at any rate for the present, because it does not appear that those subjects are yet sufficiently well and generally taught at schools to admit of such a requirement. It may be apprehended that evil, rather than good, would result from the diversion to them of a part of the pupils' time and attention, which, under the existing circumstances, might more profitably be devoted to the ordinary school studies. Regard should be had, not so much to the particular subjects, or the number of the subjects, of the examination, as to the manner in which they have been learned; forasmuch as the real value of the education, as a preparation for medical, or any other study, consists, whatever the subjects taught, in the training being such as to enable the student to apply his mind well to the acquisition of fresh knowledge, and the appreciation of new facts and thoughts. Natural philosophy is perhaps more suitable for school education than any of the other subjects of natural science; and when it has been brought fairly within the school range, as it probably ere long will be, it may perhaps with advantage be placed among the compulsory subjects of the preliminary examination.

2. *Professional Examinations.*

A careful analysis of the annual returns of the Final Examinations by the several licensing bodies, during fifteen years, for which the Council is indebted to Dr. Aquilla Smith, shows that the number of rejections in that examination has steadily increased throughout the period of his investigation. Whereas in 1861 they were only 12·4 per cent., in 1875 they amounted to 23·2 per cent. The increasing ratio is observable in the examinations of each of the several licensing bodies, with one or two exceptions; and the table for 1876 shows that the proportion of rejections has by no means diminished during the past year. This growing proportionate number of rejections proves that the requirements in the examinations have increased in greater proportion—in much greater proportion, in fact—than the attainments of the candidates. The rejections are attributed by the licensing bodies, in their answers, to the imperfect knowledge of the candidates, resulting, in the main, from want of diligence. The recent visitations of the examinations by the Medical Council did not disclose any unfairness or undue severity on the part of the examiners, or give rise to any suggestions for lowering the standard of the examinations. It is clear, therefore, that the efforts of the Council must be directed, not to lower the standard of the examinations, but to raise the standard of the education of the candidates more nearly to a level with them.

The imperfection was found, according to the Answers, in most instances, to be in two or more subjects of the examination; and those who failed in the written part, commonly failed also in the practical and the oral parts. The rejections do not, therefore, appear to be owing to especial difficulty in certain subjects, or in certain methods of conducting the examinations, but to the generally indifferent preparation of the candidates. Some students are unable, in a short time, to express themselves clearly in writing; and some have the same difficulty orally. Those who show the one deficiency commonly show the other; and either is usually combined with, or proceeds from, a want of clear apprehension of the subject.

In their answers to the third question—respecting any suggestions for alterations in the examinations,—the Universities of Cambridge (Answers, p. 33), Aberdeen (p. 47), Glasgow (p. 51), and the Apothecaries' Hall of Ireland (p. 60), suggest the advisability of a limitation of the range of certain of the subjects by schedule, so as to direct the attention of the students to the more important parts of them. A similar recommendation was made by the Medical Teachers' Association at page 21 of their Report, which was published by this Council, together with the Report of the Committee on Professional Education in 1869; and limitations of this kind are to some extent made by certain of the licensing bodies. Having regard to the enlarging area of medical study, especially of late, in the direction of physiology and pathology, it is extremely desirable, if not absolutely necessary, that the range of the examination in certain of the subjects—such as physics, chemistry, and materia medica and pharmacy—should be limited, and that the limitation should be made known. The student will thus be able to direct his attention more definitely to the acquisition of those parts of the subjects which are of most importance, and time will not be lost, as it now too often is, in vague, desultory, superficial reading.

In the case of anatomy and the other subjects, the limitation of the examination by schedule is attended with greater difficulty. It may not, perhaps, be possible to do much more than carry out the opinion expressed by the University of Cambridge, that the examination should be such as will cause them to be "studied in more immediate connexion with science and practice." The burdening of the memory with mere facts, which have no direct or obvious connexion with science or practice—with facts, that is, unassociated with ideas or practical ability—is, on the whole, of little value, educationally or otherwise, and such facts make but a transient impression on the memory. Laboriously crammed together, with efforts worthy of a better purpose, they are with difficulty held till the examination crisis, and then quickly escape with little regret at their departure. Indeed, the examination in each subject of professional study should be restricted to the general principles and the more important facts of the science, and should be of such a character as to induce students, in their preparation for it, to observe and think for themselves more than is now commonly the case. The examinations should be regarded from an educational point of view, with reference, that is, to the influence which they are likely to exert upon the character, the education, and the mental training of the students who are to come after, as well as with reference to their being a test of fitness for admission to the Medical Register. Herein, in accomplishing this double duty, lies the great difficulty in the task of the examiner, especially when the time allotted to the examination is so short, and the ground to be covered is so large. The limitation of the subjects will do something to meet the difficulty. It may be necessary to allow more time for the examination—the *viva voce* part more particularly,—but much must rest with the examiners, whose labours become more responsible as examinations acquire a growing influence over education.

The evils of multiple rejections are referred to by the College of Surgeons of Ireland (p. 39). To avert this evil it is suggested that the candidate should be referred to his studies for an additional three months after each rejection—three months after a first, six months after a second, and so on. The data are not sufficient for an opinion to be formed on this point.

3. *Professional Education.*

It is satisfactory to find that, although the rejections at the examinations are so numerous, there is a concurrence of opinion on the part of most of the authorities that the attainments of the candidates have increased during the last ten or fifteen years. This is, in itself, a sufficient evidence that the growing disproportion between the requirements of the examinations and the attainments of the students indicated by the rejections is not due to a diminution of efforts on the part of the teachers, or of diligence and ability on the part of the students, but to the increased stringency and widened area of the examination.

An improvement has taken place in professional education, as well as in the examinations; but the examinations being the more easily modified, the improvement in them has outstripped that in the education; and the problem which presents itself is—By what means can an additional impulse be best given to the education, so as to bring it up to the level of the examinations?

The improvement in the examinations is, doubtless, to some extent, attributable to the visitations of examinations, which have been made under the direction of the Council; and a corresponding benefit might be expected to result from similar visitations of those medical schools in the United Kingdom, the certificates of which are received by any of the licensing bodies, so as to ascertain the opportunities afforded for instruction, and the method of instruction employed in each. The Medical Council, it is true, has no legal authority to institute such visitations of medical schools, but it may be assumed that its members, if appointed for this purpose, would be well received, and would have every opportunity afforded them of obtaining the required information.

Some of the licensing bodies (the Apothecaries' Society of London, the College of Surgeons of Edinburgh, and the Universities of Edinburgh and Glasgow) express, more or less strongly, the opinion that the period—four years—of professional study is insufficient. On the other hand, the College of Surgeons of England (p. 27) "is not prepared to say that students of average intelligence and fair industry cannot, within the time now generally allowed, qualify themselves to pass their examinations." The College of Physicians of Edinburgh (p. 37) "would not be prepared to make the extension of the period of study obligatory." The College of Surgeons of Ireland regards the four years to be amply sufficient. The University of Aberdeen, the College of Physicians, and the Apothecaries' Hall of Ireland, take the same view; and consider that the time allowed would be sufficient, if the full period of four years were well employed.

However desirable it may be, in many instances, that a longer period should be employed in professional study, it certainly seems only fair and reasonable that the opportunity should be offered to those who can accomplish it, to obtain their qualification to practise at the expiration of four years. If a longer period were rendered compulsory, there is too much reason to fear that the tendency to waste the early part of the time would be even stronger than it now is.

To insure the better employment of that early period is one of the great desiderata.

To this, nothing would contribute more effectually than an improvement in school training, and greater care in the conduct of the preliminary examinations, as suggested in the first part of this report.

The end would be further attained by requiring the student at, or before,

the end of his first year of professional study, to pass an examination in physics and chemistry, elementary anatomy, and pharmacy. This examination, in what may be called "first year's subjects," might be passed at any time during the first year. The opportunity of passing the examination at an early period would thus be afforded to those students who had included one or more of the subjects of it in their preliminary education; but the second year of professional study should not be computed till this examination has been passed.

An early, or "first," examination of this kind is held at the Universities of Cambridge, Edinburgh, Glasgow, and Aberdeen, and at the Queen's University in Ireland. At Glasgow and Aberdeen, elementary anatomy is one of the subjects; and this is found to work well in both instances, and to secure a better and more abiding knowledge of that subject, which is of fundamental importance, and the acquaintance with which can only be obtained in a medical school. In the Report of the Medical Teachers' Association (pp. 18 and 23), such an examination, in chemistry, physics, and the anatomy of the bones, ligaments, and muscles, is recommended.

This should be followed, at some time during the second year of professional study, by the "second" professional examination, in anatomy, physiology, and materia medica; and the third year of professional study should not be computed till this second examination has been passed.

The "third" examination, in pathology, medicine, surgery, and midwifery, would not take place till after an interval of two years from the second examination, and till after the completion of the four years of medical study.

Such a plan must, sooner or later, be generally adopted. It would regulate the course of study, and insure application to it through the whole period of professional education, and especially in the first part of it, more than can at present be done, or than can be done in any other way. Moreover, the student would not be allowed to enter upon the later periods of his time till he had shown a proper acquaintance with the subjects which should be pursued in the earlier periods. Hence that accumulation of work and examination towards the end of the term of professional study, which necessitates cramming, and which is a fertile source of rejections and of indifferent professional education, would be prevented.

The University of Glasgow (p. 52) has gone even further in this direction than is here proposed, and "has taken steps to obtain an alteration in the ordinances, as a result of which the examinations will be conducted in four separate divisions, one at the end of each year of study. It is thus hoped to lessen the burden which falls upon candidates, especially at the final examination, and to lead to greater efficiency both of study and of examinations."

The College of Physicians of Edinburgh observes that "a system of class examinations should be universally established." The University of Aberdeen remarks that "all teaching should be accompanied by a regular system of class examination, oral and written, and the results recorded." The College of Physicians of Ireland "approves occasional examinations of the students by the teacher," but entirely disapproves the regulation requiring a certificate that the candidate has satisfactorily attended such examination. In 1869 the Committee on Medical Education (Minutes, vii. 93) recommended "that the schools institute class examinations in all their subjects (the several subjects of professional education), and that the certificate of study shall attest that the student has undergone these examinations." In 1870 (Minutes, viii. 14) the Committee appointed to confer with the licensing bodies recommended that the custom of class examinations should be "put in force in all schools, and shall be certified by the teachers on the certificates of attendance." There can be no doubt of the importance of this recommendation. Examination, especially *vivâ voce* examination, is one of the very best methods of teaching, or adjuncts to teaching. Indeed, teaching cannot be properly and effectively conducted without it. Unquestionably, private tuition, whatever may be its evils, has won its way with students, and been successful, partly in consequence of the opportunities for this method of teaching which it affords, and the close acquaintance with the mind and progress of the students which is so obtained. It is, and has long been, adopted by many teachers in medical schools, and invariably works well; and there seems no good reason why the certificate of the teacher should not in each instance—and this applies to clinical as well as to other teaching—attest that the student has, from time to time, undergone examination in the subject specified.

The more practical character which is now given to the examinations of the several licensing bodies is the best means of insuring that extension of teaching, in this direction, the need of which is expressed by the Apothecaries' Society of London (p. 10) and the College of Physicians of Edinburgh. It does, however, seem desirable that the suggestion made by Cambridge (p. 14) and the Apothecaries' Hall of Ireland (p. 41)—which is in accordance with a recommendation forming an important feature in the reports of the Education Committee (Minutes vii. 89, and viii. 14)—should be adopted by the Council—viz., "That every person admitted to the Register should have had some practical experience in charge of patients, either in hospital or elsewhere, under the supervision of a competent medical practitioner." By good arrangements in the distribution of dresserships and clinical clerkships in the London and provincial hospitals, and by better utilisation of the out-patient department for teaching purposes, there need be no difficulty in providing means for carrying out such a recommendation efficiently. The compliance with a regulation of this kind is required by the College of Surgeons of England and some other bodies, and should be enforced in all cases.

The Apothecaries' Society of London and the University of Aberdeen express the opinion that the courses of systematic lectures should be reduced in consideration of the greater amount of practical teaching which is instituted. This must without question be done. Systematic courses of lectures have their value, especially if associated with class examinations, in carrying the student through the several subjects, or certain parts of them, in an orderly manner, in directing his attention to the more important features of each, and more especially as a means of instructing him in the principles of the several sciences. But their number should be reduced. The handbooks and treatises on the various subjects render it quite unnecessary to attempt to cover the whole ground of any one in a course of lectures. In a good system of teaching, the three methods—by lectures, by practical work, and by reading—must be combined and adjusted so that they balance and supplement one another. Some students learn best in one way, some in another; and some teachers are most successful in lecturing, some in the conduct of practical instruction. It does not, therefore, appear to be desirable to make any special recommendation under this head; but, in accordance with the recommendation of the Committee on Education (Minutes, vii. 93), the exact order, number of lectures, and amount and kind of practical instruction, should be left to the schools, a guide being furnished to them by a definition of the area in each subject over which the examination will extend.

In accordance with these views the following recommendations might be proposed for the sanction of the Council:—

1. That it is desirable that the examinations in subjects of general education should be now left to the national educational bodies, and that it be delegated to the Executive Committee to communicate with the licensing bodies on this subject, and to report to the Council at its next meeting.
2. That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any case of decided ignorance in general education displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council.
3. That a letter be addressed to each of the examining boards whose certificate is accepted as a test of preliminary education by this Council, directing attention to the complaints which have been made by several of the licensing bodies, with regard to the insufficiency of the general education of many of the candidates presenting themselves for their examinations.
4. That it be a recommendation to the licensing bodies that there be in future three professional examinations—the "first" to be passed before the end of the first year of professional study; the "second" to be passed before the end of the second year; and the "third" to be passed after the completion of four years of professional study.
5. That the first examination be in physics and chemistry, elementary human anatomy, and practical pharmacy; that the second examination be in anatomy, physiology, and materia medica; and that the third examination be in the other subjects of medical study.
6. That a committee be appointed to consider the subjects of the professional examinations to be required, and the limitation of the range of the subjects by schedule; to draw up such schedules in the instances in which it may seem appropriate; and to make, with reference to the subjects of the examinations, such suggestions as may appear desirable.
7. That a visitation of the several medical schools, the certificates from which are received by any of the licensing bodies, be made during the ensuing year; and that the reports of such visitations be laid before the General Medical Council at its meeting next summer.
8. That two members of the Council be appointed visitors of the medical schools, and that their payment be the same as in the case of visitors of examinations.
9. That the appointment of the visitors, and the arrangements for the visitations, be left to the Executive Committee.
10. That certificates of study, attendance at lectures, and hospital practice, be accompanied by evidence of attendance at examinations, from time to time, in the several subjects.
11. That every candidate for the final professional examination be required to give evidence that he has had practical experience in charge of patients, during six months, in hospital or elsewhere, under the supervision of a competent medical practitioner.

April 12, 1877. G. M. Humphry.

Dr. Humphry, in introducing this matter to the Council, recalled the fact that the Council had sent certain questions to the licensing bodies for the purpose of taking these bodies into their counsel on the great subject of medical education. The result had been eminently satisfactory, for nearly all of the bodies had been able to give very valuable information on the subject. It would not be doing them justice to take their replies as in any way representing the amount of work which they had gone through in order to furnish them. He had personal knowledge of two of them—the Royal College of Surgeons of England, and the University of Cambridge—the reports of which had been compressed into a very short compass, but were the fruit of a vast amount of time and labour devoted to the subject. The Council was glad to recognise the hearty co-operation and earnest of goodwill which was shown by the answers embodied in the report. In furnishing the report to the Council he (Dr. Humphry) had made a condensation of the various views which had been put forward for the purpose merely of facilitating their discussion before the Council, and not as being in any way binding upon them. In conclusion, he moved that the Council do resolve itself into a committee for the consideration of the report.

Professor Turner then moved as an amendment—"That as Recommendations 1, 4, 5, 6, 10, in Dr. Humphry's report to the Executive Committee, refer to subjects on which recommendations have been made by the Committee of Recommendations, their consideration be deferred until the report of that Committee comes before the Council." His reason was this: that it was resolved last year that this document, entitled "The Recommendations and Opinions of the General Medical Council," which dealt with the questions of preliminary examinations and registration of medical students amongst other things, should be considered on an early day this session, and he felt sure that it would be more convenient to the Council to consider this document together with Dr. Humphry's report, because it would throw considerable light upon the subject.

The amendment was supported by Dr. Andrew Wood on the ground of convenience, but after some discussion it was lost, and the Council went into committee for the purpose of discussing Dr. Humphry's report.

Dr. Humphry, in moving the following resolution—"That

it is desirable that the examination in general education be left, so far as it can be, to the examining boards of the national educational and examining bodies recognised by the Medical Council, and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this object."—said this view had been so repeatedly laid down by the Council that it was not necessary to detain the Committee in advocating it. The key to the improvement of the whole profession was to be found in securing a thoroughly good general education, and this had always been one of the objects kept in view by the Medical Council, who, in fact, had initiated the requirement of preliminary examinations in general education.

Mr. Macnamara demurred to this statement, and said it was required in the Royal College of Surgeons a hundred years ago.

Dr. Humphry proceeded to say that although that had always been the desire of the Medical Council, it had been found scarcely practicable in former times to carry it out throughout the United Kingdom, and consequently the licensing bodies had themselves been obliged to meet the difficulty by instituting their own examinations. But it was now felt that the time was ripe for carrying out the oft-expressed desire of the Council by so far as possible relieving the medical schools from that duty. The thanks of the profession were due to them for the examination in general subjects which they had instituted in the past, because there were then in many instances no other means of examination of medical students in general education; but things were much altered now, and at the present time there are in England examinations instituted by the universities which were admirably conducted, were open to all students, and the fee for entering which was not more than a pound. His proposition, therefore, was that the Executive Committee should be empowered to place themselves in communication with the several licensing bodies for the purpose of carrying out this wish and recommendation of the General Medical Council. In England they would have no difficulty in making the change. Perhaps in Scotland and Ireland more difficulty might be found. Still, his view was that the time was now come for action in the matter.

Sir Dominic Corrigan criticised the wording of the resolution, and asked what was the meaning of the words "national educational and examining bodies." Would they include the National Board in Ireland or school boards? His friend Dr. Storrar answered "No," but he (Sir Dominic Corrigan) believed that the examinations of the National Board in Ireland were very much superior to some of those recognised by the Council. (Laughter.) He had only to refer to the recent debate in the House of Commons upon the University Commission in support of his statement, when it was averred without contradiction that the terms upon which the B.A. degree of Oxford could be won were a disgrace to the name of education. He confessed that the resolution in its present form was so ambiguous that he must decline to vote for it.

Mr. Simon proposed to substitute the words "universities of the United Kingdom" for the expression "examining bodies, etc."

Dr. Andrew Wood pointed out that this would exclude the colonial universities. He then quoted statistics showing—from the number of students passed, rejected, and who found the papers so difficult that they retired from the contest—the thoroughness of the examination in general education in the College of Surgeons, Edinburgh. He felt sure that the examining bodies would not be prepared at the present moment to carry out such a recommendation as that now before the Council, because they believed that it was of great consequence for students, especially those who came from abroad—as they did in large numbers to the Scotch universities, from India, Japan, and the colonies—that they should have the convenience of a preliminary examination at the same colleges where they were about to enter upon their professional studies. Besides this, he felt that it would not be wise to exact from students who studied with a view of becoming general practitioners such a standard of general education as he thought the Council were bound to demand from men who sought the higher degrees of the profession. He must therefore vote against Dr. Humphry's motion.

Mr. Macnamara was glad that this subject was now being discussed, because he felt that it was one which ought to have received closer attention from the Council twenty years ago. What would be thought of a husbandman who complained of the crop he was gathering in, who had never prepared the earth for its reception? Yet that was the position of the Medical Council, if they did not insure a sound basis of general education in students before entering upon their professional studies. This had been exacted by the body he represented in Ireland one hundred years ago; and from that time the preliminary examinations of that body had been in advance of many others. They were conducted by a separate board, constituted of gentlemen who had attained high academical distinction at Trinity College and other distinguished seats of learning. But it seemed to him that the system of having a list of bodies whose examinations would be recognised by the Council was a fallacious one in this respect—that it was impossible for the Executive Committee, in practice, to insure proper examinations being carried out by distant bodies. He instanced the cases of colonial and foreign universities, in which it was impossible for the Council to have proper data upon which to give its *imprimatur* to their examinations. On the other hand, so convinced was he that this question of preliminary education was an important one, that he trusted some resolution would be arrived at by the Council which would enable them to decide what are the bodies whose examinations are conducted in a satisfactory manner.

Dr. Humphry pointed out that the words he had adopted were the very words used by the Council on a former occasion. He felt that there would be a difficulty about them, but he believed that would be overcome by the amendment to the resolution proposed by Dr. Quain, who suggested that it should stand thus: "That it is desirable that examinations in general education of the United Kingdom be left to the universities, and to such other bodies engaged in general education or examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this object."

Mr. Bradford objected to the resolution and the amendment, because they would have the effect of excluding the Examination in Arts of the Society of Apothecaries of London; and he believed no better examination would be substituted for it, conducted as it was by men of the very highest attainments.

After a few words from Dr. Quain in support of his amendment,

Dr. Rolleston said the education which ought to be exacted from students by the Medical Council was not that which was supposed to be necessary for a medical man, but rather that general education which was calculated to make a man a gentleman. In support of this view he quoted the views of Billroth, the eminent German authority, who insisted upon the necessity of students for the liberal professions all passing through the gymnasia. It was most important that the medical schools should not be hampered with the duty of exacting from students a proper amount of general education; and, adverting to Sir Dominic Corrigan's slur upon the Oxford "pass" degree, he said it was all very well for Mr. Lowe in the House of Commons to sneer at the examinations, but he would recommend any member of this Council who had doubts upon the subject to submit himself to the process. (Laughter.)

The discussion which ensued upon this subject, in which Dr. Apjohn, Sir Dominic Corrigan, Mr. Macnamara, Dr. Rolleston, Dr. Quain, and Dr. Andrew Wood took part, resolved itself very much into a minute verbal criticism of the resolution and amendment.

Dr. Andrew Wood objected to it as a disfranchising resolution, and likened it in its later stages to the Highlander's gun, for by the alterations which had been made in it by the Committee it had new lock, stock, and barrel. (Laughter.)

Sir Dominic Corrigan said the plain fact was that any such action on the part of the Council as that suggested by the resolution would not in present circumstances be submitted to by the medical schools in Ireland or Scotland.

Sir William Gull reminded the Council that the resolution merely suggested permissive action.

Ultimately, after a few words in reply from Dr. Humphry, who stated that the amendment was quite in accord with the spirit of the original resolution,

The President put the amendment, which, after many alterations, was as follows:—"That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council, and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this

object,"—and this was carried by a majority of 11 to 9. Upon being put as a substantive motion, however,

Professor Thomson moved a further amendment, in the following terms:—"That it is desirable that the examinations in general education be eventually left entirely to the examining boards of the national bodies engaged in general education and examination recognised by the Medical Council, and that the Executive Committee be empowered to communicate with the various licensing bodies as to the manner in which this may be carried out."

This was seconded by Dr. Haldane, who said that the object of the amendment really was to leave things as they are at present. The division which had taken place on the former motion showed that the opinion of the Council was so evenly balanced that they were not in a position to enforce any very stringent views upon the licensing bodies. His opinion was that eventually the preliminary examinations would be surrendered by those bodies, but in practice the system worked very well. In the case of Edinburgh, the enormous majority of students passed their preliminary examination before a special board—not an ordinary board of examiners of the University, but specially with a view of entering upon medical studies. He knew of instances in which the value of this system had been strikingly shown, and it was a powerful reason for his objecting to these examinations being put entirely into the hands of the universities.

Mr. Lister agreed with the last speaker, that it would be premature at the present time to force this measure upon the licensing bodies; but he believed that eventually it would be done.

Dr. Quain pointed out that there was nothing compulsory or urgent in the resolution as it stood: it was simply the expressed wish of the Medical Council; and as in the past similar expressions of desire on the part of the Council had met with the hearty co-operation of the licensing bodies, so it was hoped in the present instance the same good result would follow. It should be remembered that this amendment merely suggested to the licensing bodies the recommendation of the Council, without any pretence of coercion whatever.

After some further discussion the amendment was put and negatived.

Mr. Macnamara then moved the adjournment of the debate till Monday, and the Council resumed and adjourned.

Fourth Day—Monday, May 14.

ADJOURNED DEBATE ON PRELIMINARY EXAMINATIONS IN GENERAL EDUCATION.

Mr. Macnamara, in resuming the debate on this subject, said that under no circumstances, unless forced by legal enactment, would the College of Surgeons in Ireland give up its right to conduct its preliminary examinations. From the experience that they had had of cases of preliminary examination by certain bodies who had received the *imprimatur* of the Council, they had found the amount of education exacted very insufficient, and they were now determined to satisfy themselves upon the subject. Instead of having a disfranchising resolution such as that proposed, he would suggest that the Council should take into its own hands the revision of the list in an effectual manner; and he would invite them, if they found, for example, the preliminary examinations conducted by the College of Surgeons of Ireland did not fulfil their conditions, to remove their name from the list, and so on with regard to the other bodies. He was about to propose an amendment, which he would be told was not technically an amendment. It was to the effect that a list should be made of the Colleges whose examinations in general education fulfilled the conditions required by the Medical Council. The supervision exercised by the Executive Committee gave no guarantee, because they actually accepted the verbal assurance of the bodies themselves that their examinations were thorough. As far as his own College was concerned, not a single step beyond that had been taken by the Executive Committee, and he must therefore denounce such a system as a sham. The same supervision which the Council had so effectually applied to examinations on professional education ought to be extended to the examinations in general education; and he would throw this out as a suggestion, which he thought would further the views of the Council as stated in the resolution.

After some further discussion,

Dr. Andrew Wood said he thought that the proposed action of the Council was premature. This was not so simple a matter as some members thought. The effect of the Executive Committee preparing a list of favour in the way proposed would result in this: that if any were excluded from the list their students could not be placed on the Register. Speaking for the body he represented, he had no greater wish in the world than to be rid of these examinations; but he was satisfied that if they were swept away in the manner suggested on the other side of the table, very serious inconvenience would be caused to a number of deserving medical students. He therefore trusted that the Council would agree in the amendment of Dr. Thomson, which was progressive and conservative at the same time.

Dr. Storrar expressed his deep disappointment that progress in this direction had fallen so far short of the original intention of the Council. He was absolutely astonished at the expression that had fallen from Dr. Andrew Wood deprecating what he called "premature change." Why, it was sixteen years ago that expression of opinion was given by the Council that it was desirable these examinations in arts should eventually be left to universities. He was equally astonished to learn yesterday that in the Scotch universities the examination in arts was conducted, not in the ordinary course, but by a special board instituted for the examination of candidates for degrees in surgery. He must inform his Scotch friends that there was a strong desire entertained by a certain class of persons in Scotland that some kind of test in general knowledge should be instituted for Scotchmen—some test which had no connexion with the Scotch universities. About two years ago an application was made to the University of London, asking them to institute local examinations for their matriculation in Scotland. The action of the Senate was this: they never initiate these proceedings, but they respond to all applications made by organised bodies in England; and it appearing that an organisation had sprung up in Scotland which had suitable rooms and subscriptions for the purpose, they responded to that invitation, and the first London university examination was conducted in Edinburgh last January.

The amendment proposed by Mr. Macnamara was, after some discussion, reduced to the following terms:—"That it be remitted to the Executive Committee to revise the present list of examining bodies whose examinations fulfil the conditions of the Medical Council as regards preliminary education, and to report thereon at our next meeting, mentioning, at the same time, the steps that have been taken in each case to ascertain the efficiency of the examinations conducted by the said bodies"; but for want of a seconder this was declared to be lost. The former amendment (moved by Dr. Quain and seconded by Mr. Simon), upon which the debate was adjourned, was then put as a substantive motion:—"That it is desirable that the examination in general education be left to the universities and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this object."

Sir Dominic Corrigan said the resolution as now worded sounded very like coercion upon the medical schools; and he suggested that the words "for the purpose of carrying out this object" should be omitted.

This suggestion was agreed to by the mover and seconder, but

Dr. Aquilla Smith objected to this motion altogether, on the ground that, if carried, it pledged the Council to a recognition of all the examining bodies on the present list, whereas there was a notice on the programme to take away the examining power from a large number of those bodies.

Dr. Fleming said he did not think corporations could submit to this resolution. At the two principal medical schools of Scotland—Edinburgh and Glasgow—there existed, besides the university schools, a strong extra-mural school; and it would be giving the University of Edinburgh, for instance, an undue advantage to give them the privilege of examining students who resort to these medical schools. They created a very wholesome rivalry, which it would be well to continue. The corporations some time ago, at considerable trouble and expense, instituted preliminary examinations both at Edinburgh and Glasgow, and the percentage of rejections amounted to as much as two-thirds—a sufficient proof that the examination was searching. At the same time he agreed with Dr. Macnamara's observation that it was just as important to

visit these preliminary examinations as the professional. Speaking for the Glasgow board (and he might say the samo for the Edinburgh), they would be delighted to receive the visitors of the Council.

The motion then put from the chair as amended by Sir Dominic Corrigan, and carried *nem. con.*

Upon being put as a substantive motion,

Dr. STORRAR proposed to introduce a slight modification after the word "universities" by inserting the words "apart from their medical faculties." It had been stated on Saturday, by a gentleman whose candour with regard to his own body he could not for a moment call in question, that at Edinburgh these preliminary examinations were conducted by a board specially appointed for the purpose, and were not in the proper sense of the word university Arts examinations at all, being under the control of the Medical Faculty.

Professor TURNER denied having stated this.

Dr. STORRAR said that at all events it had fallen from Dr. Haldane, and he thought had been acquiesced in by Professor Turner. Now, Cæsar's wife should be above suspicion; and the surest way to attain this was to relegate the whole matter to the Arts side of the universities.

Professor TURNER denied that the examinations were under the control of the Medical Faculty. Dr. Storrar had used the invidious phrase "special examinations coined for the purpose"; but was he aware that those examinations were regulated by the Scotch Commissioners appointed by the Crown—men of the very highest positions—their chairman being the head of the Court of Session; and was it to be supposed that a Commission presided over by a gentleman of that character would "coin" a special examination for any purpose? Such an expression was entirely unworthy of the subject, and he trusted Dr. Storrar would withdraw it.

Dr. ROLLESTON wished to say a word in seconding Dr. Storrar's amendment, and would be very careful not to tread upon the susceptibilities of Professor Turner. (Laughter.) The object of the Council in this matter was to insure that medical men shall have as good a preliminary training as any of the other liberal professions. He would read to them the words of Professor Green upon this subject:—"I hold it as little less than indisputable that the rightful claim of the profession to its due estimation by society at large can be dependent only upon science, and upon its cultivation in union with the liberal arts and sciences—therefore entitled 'liberal,' because they are cultivated without hire or compulsion on the score of their own worth and dignifying influences. It is herein that we find the ground of a liberal education common to the professions and the gentry of a country—of an education fitted to maintain the continued succession of a class of *Viri Liberales*, of gentlemen, of men imbued with the liberal sciences, of professional men, who, in the full possession of a liberal science, apply it to the needs and benefit of their fellow-citizens. Nor can it be deemed of slight importance that those destined for our profession should partake of that education which is required for the liberal professions, as an integral part of the gentry of the country." That eminent German writer, Billroth, in writing upon the subject of the general culture of clergymen, doctors, and schoolmasters, spoke very strongly upon this point. He says, "In small towns the doctor, together with the lawyer, and another functionary, who is called in German "*Geistliche*," form three pillars upon which the culture of the place is supported." Now, it is a very important thing that the doctor, who forms one of the three supports of the culture of the place, should have gone through the same sort of training as the other two; and they are surely fighting about a very small matter in discussing the means by which this shall be done, in comparison with the importance of the end which they all have in view.

After some remarks from Dr. HALDANE,

Sir WILLIAM GULL said: Since Saturday one has had time to think over the circumstances which induced us to spend so much time upon this subject; and I found the Council still occupied with it when I arrived, rather late, here to-day. It appears to me that every member of the Council agrees in this great fact, that the medical student of the future should be better educated than he has hitherto been before he begins his professional studies; and that what has been done up to the present time is not enough. I believe that up to the present time the preliminary examinations have been conducted very generally by the Medical Faculty, and that is what we want to get rid off. We want to establish that preliminary examinations shall be conducted by persons whose minds are directed purely to education apart from what is technical. I know there is a general feeling that men come into our profession untrained. Ours is an intellectual profession, and it is essential, I believe, that a large number of men should be turned back at first; for I am persuaded that if their education were tested on the threshold of their student's career, they would be advised not to enter upon the study of medicine at all. How little Latin many of them know,—less Greek,—bad spelling,—intellectual training, none,—mathematics, none,—physics, nothing,—the higher training of the mind, nothing! Up to this time, I may say that the preliminary education examination has been good for nothing as a means of selecting men for entering into the profession, or for rejecting those who have not sufficient intellectual training. I do not know what the lawyers want, and I do not know what the Church wants, and I do not know what gentlemen want, but I do know what medical men want. They want a power of thought, a degree of knowledge of the logic of facts, of cause and sequence; they ought to know some of the principles of quantities and qualities;—and they want all this training before they begin the study of medicine. This very morning, one of the most industrious and anxious men in our profession was talking with me upon the matter (not knowing that we were discussing it here), and hoping that he might be able to establish a college at the East-end of London for the very purpose on which we are now deliberating, where men should be fairly trained intellectually for the medical course. We have been a good deal occupied at this board in discussing forms; but I think if it went forth to the world that we are unanimous upon this—that there is at present a very great defect in the intellectual training of the men who enter the profession, and that it should be placed in future upon a much wider and larger educational basis, which should be completed before they enter upon the study of medicine,—it would have a very good effect. I think the unanimous voice of this Council ought to be that such a want should be supplied independently of the corporations or institutions that grant professional degrees, and that the education should be much better than it is—sound training, not mere verbal knowledge, or the translation of some Latin or Greek author, or the writing of a prescription in Latin, which is utterly worthless, and had better be written in English. A man ought to know something of the nature of things before he enters upon the profession of medicine, and therefore I should like to place on record a very strong protest upon the present state of things in that respect. I know, as a matter of fact, that men enter our profession who never should be allowed to enter it; and I think that I am speaking the voice of this Council when I say that it is our conviction that a better educational training should be aimed at year by year, and that we should institute such a test as to exclude from our profession men who are in the nature of the case unfitted for any intellectual occupation whatever.

Dr. ANDREW WOOD said that a great deal of what had fallen from Sir William Gull might be taken as a matter of course, because the Council had been for a great number of years endeavouring to carry it out; but was Sir William Gull unaware of the fact that this Council allowed no man to be registered as a medical student until he had been trained and tested in a very real and satisfactory way? That, he believed, was one of the best results of the introduction of the Medical Act. For this Council had defined what, in its opinion, a man should be trained and tested in before he commenced the study of medicine. He must be trained in the English language; he must write a short essay in order to prove that he understands the construction of the language. In arithmetic he must go up to simple equations. In short, he (Dr. Andrew Wood) had no hesitation in saying that to attempt to push the preliminary examinations much farther would be to exclude from the profession so many men that you would not be able to supply the demand throughout the country. Sir William Gull had said that the students should be "knocked over" at the entrance to the profession. Well, he could assure him that they were at present knocked down like ninepins, as had been shown by the statistics which he (Dr. Wood) had quoted the other day; and a great many of those rejected ones never came back again—at least, they did not come back to Edinburgh. (Laughter.) He would not like what Sir William Gull had stated—viz., that nothing had been done in the direction of improving general culture—to go forth to the public uncontradicted, because he had no hesitation in saying that since the passing of the Medical Act it had been very much im-

proved, and the country possessed a very much higher class of medical men than before,—an improvement which he believed was not so much due to the greater stringency of professional examinations as to the improvement in preliminary education, because he agreed with Sir William Gull, that in exact proportion as a man possessed culture so was his excellence in professional training increased.

Dr. Storrar agreed with every word that had fallen from Sir William Gull, and he might say the same with regard to Dr. Andrew Wood, with the exception that he differed from him when he said that the time had not yet arrived for increasing the stringency of preliminary examinations. On the contrary, he believed this was exactly the proper time. Apart from his duties at the Council, he was very largely engaged in the subject of education, and he could state that there was great activity throughout the country, and a desire for higher education. But with regard to Scotland, except in large towns, there were scarcely any means of furnishing it. As Dr. Andrew Wood had said, the parochial schools in Scotland had been remodelled in such a way that they did not furnish that classical education which formerly young men of the middle classes might obtain; and the consequence was that a number of the sons of opulent merchants in Scotland were sent to Harrow, and Rugby, and Eton for their education. But, unfortunately, that stratum of society which so largely furnished the medical profession could not afford to send their sons to such schools, and thus they did not get the education which was necessary for their preliminary training as professional men. But this should not deter the Council from entering on the right course. He was satisfied that the means would be forthcoming in Scotland, as elsewhere, for building and endowing educational establishments to meet the growing want. The Scotch had become more wealthy; they had become more generous. Witness their munificence with regard to religious and other objects. There was some notion that he (Dr. Storrar) was hostile to Scotland. The was, he was proud to say, he had Scotch blood in his veins; and he had a very strong feeling for the country. Absence from it for two years produced something approach nostalgia; —(laughter)—but no feeling of that sort should deter him from speaking out boldly his opinions upon this subject. He believed he was under some mistake about the preliminary examination in the Scotch universities being under the control of the medical faculties; but he felt strongly that it was a most desirable thing that the Arts education of medical students should be tested by no special board, but by the ordinary university examination. With regard to the statement of Professor Turner that the examinations were under the control of the Commission, he was quite sure that the professors had sufficient independence to be able to get the ordinance changed if it was found insufficient in this respect. He now proceeded to present his amendment in a modified form, so as to deprive it of any sting which it might otherwise possess, and it would read as follows:—"That it is desirable that the examination in general education be left to the Arts Faculties of the universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject."

After some observations from Dr. Humphry,

Dr. Aquilla Smith said he had listened with very great pleasure to Sir William Gull's speech, every word of which he thought indicated the right course for the Council to pursue, particularly with regard to the intellectual training of medical students.

Dr. Andrew Wood, in answer, had stated that the examinations were tested already, but there was a great difference between testing and intellectual training—(applause);—and it was matter of notoriety that, after all that had been done, great ignorance was displayed by students who came up for their final examinations upon matters which ought to have been acquired before they entered upon their professional education. The Council ought to settle a standard for preliminary education. (Applause.) Having fixed that, they might pass on to determine which bodies might be trusted with the preliminary examinations.

The amendment of Dr. Storrar, seconded by Dr. Rolleston, was then put from the chair and negatived.

The President then put Sir Dominic Corrigan's amendment as a substantive motion, and it was unanimously adopted.

Dr. Humphry then moved—"That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council." This resolution was word for word the same as one proposed by Dr. Haldane in the Council a year ago. It was not accepted in its entirety at that time, but in the interim the licensing bodies had given further information on the subject, and had shown that there were great advances in general education. This resolution was in exact accordance with the recommendation of the Colleges of Physicians and Surgeons of Edinburgh and with the Faculty of Physicians and Surgeons in Glasgow, and the object of it was to obtain more definite information as to the licensing bodies which permit students to pass with decided ignorance on the subject of general education.

Dr. Haldane, in seconding the motion, was convinced that it was the duty of the Council to initiate this step. He quite agreed with Sir William Gull that the standard of general education must be raised. It was all very well to say, as Dr. Wood had said, that a standard had been laid down, which, if properly acted up to, would insure a good general education; but the lamentable thing was that that standard was comparatively seldom attained to. The rejections at the College of Physicians, Edinburgh, were as large as 55 per cent. in Latin, 75 in Greek, 40 to 45 in arithmetic, algebra, and geometry, and 40 in French. Thus, a number of incompetent men were no doubt rejected, as far as the College of Physicians of Edinburgh was concerned, but he was confident there were other bodies by which that standard was not kept up; because at every professional examination men came forward who did not even know the elements of English, who could not spell, whose grammar was very defective, and who could scarcely express themselves at all. Such men should never have been allowed to register themselves as medical students. (Applause.) It was therefore proposed that each of the licensing bodies should report those cases where, in the professional examinations, gross ignorance in English, Latin, and other subjects was displayed. This would have a very salutary effect, because it would become the duty of the Council to direct the attention of the examining bodies which had passed such defective candidates to the subject; and thus, without actually inspecting the preliminary examinations, a great amount of good might be indirectly effected.

Mr. Simon hoped that the wording of this resolution would not be understood to convey an idea that it was not already in the power of any examining body on professional education to reject a man for decided general ignorance.

Professor Lister wished to make one remark with regard to defective spelling. He thought it was often due to the hurry with which the examination papers were written.

Mr. Teale could not agree with Dr. Storrar that examiners had the right to reject candidates in professional examinations for defective general education, because it would be unjust to refuse a man his diploma at the end of his academical career, he having passed through all the appointed grades.

Mr. Macnamara, in support of this view, mentioned a case where the son of a poor clergyman had been sent back at the end of his four years, and his father remonstrated with the authorities for having allowed him to incur all the expense of a professional education when they ought to have known that he was unfitted to enter upon it.

Dr. Storrar deprecated the alarm that appeared to be felt at the large percentage of rejections. Fifty years ago, if a man was rejected in an examination, a slur was supposed to attach to him through life, and he had even heard of cases of suicide arising from it; but as the nation had become more accustomed to competitive examinations very little was thought of it, and certainly no disgrace was necessarily attached to it. In fact, men went in with the idea of "having a shot at it," to "see what it was like," and to accustom themselves to it, but with the latent hope that they might by some lucky chance squeeze through. The London University had been obliged to meet this growing practice by imposing extra fees for subsequent examinations,—(laughter)—and they now only allowed a man to go in once for a single fee. One word about spelling. There was a curious psychological question involved in it. (Laughter.) After repeated consultation with schoolmasters and others engaged in education, he had come to the conclusion that there were families the members of which never could be taught to spell, and others by whom

spelling was learned with remarkable facility. The other day he was talking it over with Dr. Ryan, the Civil Service Commissioner, who said, "We shall have 2000 men undergoing examination for 200 vacancies in the Civil Service, and I know from experience that the Irish contingent will get all the appointments, and the Scotch will be nowhere." In reply to a query, he said he had no means of accounting for it, but simply recognised it as a fact that the Irish always come up well prepared in spelling, writing, and arithmetic. He was informed (he said) that if the candidates were tested on other subjects the probability would be that the Scotch would come out better; but as a fact the Scotch could not spell. (Laughter.) It would be a dangerous thing to infer from that that no importance was henceforth to be attached to spelling, but he did wish to impress upon the Council that, provided the spelling of a candidate was not really atrociously bad, there might be slips which would not justify the inference that men were ill-educated. It was a very curious question; and he was not prepared to contradict the theory that there was a psychological peculiarity among the Scotch, making them not so good spellers as other nationalities.

Dr. Andrew Wood felt bound to rise in defence of his country. (Loud laughter.) He did not admit for a moment the accusation of Dr. Storrar; on the contrary, he could prove by experience that, in the examinations which he had conducted, for every Scotchman who could not spell there would be two English, and perhaps three Irish. (Laughter.)

The motion was then put to the Council, and carried unanimously.

PROFESSIONAL EXAMINATIONS.

Dr. Humphry, in moving the first resolutions upon this subject—"That it be a recommendation to the licensing bodies that there be in future three professional examinations"; and "That the 'first' examination be passed before the commencement of the second year of professional study; the 'second' before the commencement of the third year; and the 'third' after the completion of the fourth year of professional study,"—said their object was not to increase the examinations of professional students, nor the number of subjects in which they would be examined, nor the amount of examination which they would have to undergo in those subjects, but to divide the examinations into three, instead of, as was commonly done, into two parts; and the object of that was to give a general direction to medical studies, and to insure a better employment of the earlier period of those studies. A great defect in medical education was the want of good employment in the first year, during which a large number of students wasted their time, and were never afterwards able to make up for it. The best way to insure good work during that period was by having an examination at the termination of it in those subjects in which the student would be best employed—viz., the fundamental objects of study,—so that the student might be better able to pass on to those subjects which were the subsequent objects of his study. This would also avoid the evil of an accumulation of work and examinations heaped up towards the termination of the student's academical career, and it would be insured by not allowing the students to count their studies in more advanced subjects until they had shown that they had acquired the requisite amount of information in those to which the first year was devoted. There would be no increase of expense involved; and altogether the Council, no doubt, would be unanimous in holding that a great improvement would be in this way effected.

Mr. Teale seconded the motion. His experience as a teacher at a medical school taught him that students in practice did their second and third years' work in one year. He had the more confidence in the value of this recommendation because it was the result of the information brought out in Dr. Humphry's very valuable report, based as it was upon the answers of a large number of the bodies, to the effect that three years was an insufficient period for medical education—a fact which was also brought out by the report of the Medical Teachers' Association presented to the Council ten years ago. The North German Confederation and other continental reports also gave four winters and four summers as the proper period of study; and yet that had not attained in England at present, because under the present arrangement it was possible that the first year might be passed by the student anywhere, and without any study at all. On these grounds, and feeling the great importance of facing the fact without any further delay, he seconded the resolution.

Professor Turner would like some explanation as to where the four years of professional study were to be passed. Must they be confined to a medical school? It would also be well to clear away some ambiguity as to the sequence of professional studies. Again, before committing the Council to a statement that there ought to be three professional examinations, some understanding as to what the subjects of study generally were to be must be come to, because clearly the number of examinations that a student should pass must bear some relation to the number of subjects he has to study.

After some remarks from Dr. Thomson, directed to the position which the study of anatomy should take in the student's course,

Dr. Andrew Wood said he quite agreed with the mover of the resolution, that the student should be allowed to carry on his studies from the time of his entering into the school, so as not to have resort to a large amount of cram at the end of his academical career. At the same time he questioned whether it would be wise for the Medical Council to tie up the bodies to such a definite scheme as that suggested in the resolution. He preferred that suggested by the Committee's recommendations last year, which was this:—"That the professional examinations for any licence be divided into two parts—the first, embracing the primary or fundamental subjects, shall not be completed until after the close of the winter session of the second year of professional study." That left it to the bodies to adopt either one or two examinations. He would recommend the Council not to lay down a rule that the examination upon the first branch should be passed before the commencement of the second; it would be better to leave it more indefinitely, and say that the first part, embracing primary and fundamental subjects, should not be completed until after the close of the second year, and that the second part should not be completed till after the close of the four years. He quite agreed with Mr. Teale as to the advantage of having a four years' course of professional study, and in the result he hoped the Council would say that a student, after passing his preliminary examination, shall not be registered until he bring a certificate from his master if he be an apprentice, or his professor if a student, that he has commenced his medical studies. That would be an immense step towards securing four years of professional study—a period which was scarcely sufficient for the average student. At the same time it would be unwise to lay down a fixed rule requiring a longer period, because there were many clever young men quite capable of completing their studies in four years, and passing a brilliant examination.

After some remarks from Dr. Humphry,

Mr. Macnamara inquired whether the result of his proposition was that a student might be four years pursuing his study without having passed his first examination, and therefore without proceeding to any other branch of study.

Dr. Humphry: Any number of years—one hundred years. (Laughter.) He must show that he possesses sufficient knowledge of his first year's subjects before he can proceed with the others, and then he must have three years' work before him.

After some further remarks from Mr. Lister,

Mr. Simon, with the view of saving time, would refer the members of the Council to his written memorandum, which they had in their hands, and limit his observations accordingly. He most warmly concurred in the general tendency of the resolution, which, however, did not quite express the intention which lay at its root, viz., that the curriculum so far as it was fixed should be in divisions, and that studies in the later portions should not be recognised until the examinations in the earlier ones had been passed. If that principle were established it would be the greatest reform that had ever been made in medical education. The recognition of the principle, and its affirmation as regarded practice, if it went no further than to secure that no study should be counted until candidates had passed a satisfactory examination in physiology and elementary pathology, would make an incalculable difference to the welfare and progress of medical students. On that point he could speak from long experience as a medical teacher. The great thing to be guarded against was confusion of studies. Two years, at all events, should be devoted to practical studies, which should not begin to be counted until the preliminary examinations he had mentioned were passed; and if nothing more were done at this meeting of the Council they would have accomplished a valuable work. Taking physiology as the most characteristic study, studies in that subject should

not count in the second year until the student had passed an examination in the elements of human anatomy and such general sciences as would form part of his preliminary education. He hoped for the time when the preliminary examination would relieve the medical curriculum altogether of those elements. In the Greek schools entrance was not allowed until rudimentary mathematics had been learned, and equally entrance should not be permitted into the school of medicine until at least rudimentary chemistry, physics, botany, natural history, and so on, had been mastered. Hereafter three examinations might be insisted on, but care should be taken not to hamper them with too much detail of stipulation—not to say, for instance, that the study of anatomy should not count until the earlier or more general scientific examination had been passed. This was the most important discussion the Council could engage in. Reference had been made to the suicides which sometimes followed rejection at examinations, but a greater evil to prevent was the homicides which would follow the passing of practically unqualified men.

Dr. Rolleston remarked that no reference had been made to the substitution of three examinations for two. They should be passed in a certain order, and students should be allowed to present themselves for the later examinations on showing certificates of having passed the preceding one. This change rested on unimpeachable principles, and they would be doing medical students great injury if they did not allow those able to pass the preceding examinations to gain so much time for their clinical studies. Clever, aspiring young students should not be deprived of that advantage. But they had also to deal with stupid and idle students, and with them the only course to pursue was to keep the examinations hanging over their heads. The only way to do that was to say that if such an examination were not passed, or rather two preliminary examinations, their succeeding studies should not count at all, and that would bring their fathers' influence to bear on them. But that should be done without putting restrictions on quick, clever men. He would therefore propose to add to the resolution a clause providing that if the first two examinations were not passed no subsequent time should count.

Dr. Humphry said that was what the resolution proposed.

Dr. Rolleston had not so gathered. He would not give a man a licence to practise until he had undergone four years of professional study. Getting up work simply for reproduction before a board of examiners was a most hurtful method to all subjects, especially to natural science. Examinations were a necessary evil, and a man should not be enabled to get rid of his acquirements for them in that way, though he should be enabled to pass them, *primo quoque tempore*, at the earliest possible moment. He would accept Professor Humphry's first clause, that there should be three examinations instead of two; but he could not accept the clause following. A definite period should be fixed for the granting of the licence, but none for the examinations.

Dr. Humphry would ask that his first proposition should for the present stand alone, viz., that in future there should be three examinations. Students could gain their information in no better way than with the object of reproducing it in examination; nothing did a student more good than reading for an examination, with the definiteness and precision which it entailed.

The President put the resolution—"That it be a recommendation to the licensing bodies that there be in future three professional examinations; the first to be passed before the end of the first year of professional study, the second to be passed before the end of the second year, and the third to be passed after the completion of four years of professional study."

Dr. Rolleston withdrew his amendment for the present.

Dr. Storrar agreed with Dr. Humphry's general design, but, viewing the whole subject of examinations alike for the simple licence to practise and for degrees, they were incurring the risk of over-regulation. Formerly, in considering this question, the Council had not thought it their duty to go into the details of examinations, but rather to indicate for the advantage of examining bodies. Taking the case of the body he represented (the University of London), it might be said they had already three examinations for Bachelor of Medicine —the First M.B. and the Second M.B. examinations; but there was also a preliminary scientific examination, comprising chemistry, botany, zoology, and what not, which, of course, was equally part of the medical examination; and so they already satisfied Dr. Humphry's resolution. Hitherto the Council had encouraged young men to complete their general studies before beginning their professional curriculum. The proceedings of the Council for 1869 (vol. vii.), at page 131, contained this record:—"That the Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a professional character." Then, at page 134, followed—"That the examination in physics, botany, and natural history may be undergone at an earlier period than the first professional examination."

Dr. Humphry: Which is in exact accordance with this resolution.

Mr. Macnamara said the Council of the College of Surgeons (Ireland) had under consideration four years ago this very question upon the suggestions of the most experienced of their teachers, and they then came to the conclusion that there ought to be three professional examinations—precisely in accordance with Professor Humphry's resolution. Afterwards, upon fully considering the subject, they came to a decision which it might be important to notice in dealing with the next part of the resolution. The question had been thoroughly threshed out by them, and he could produce a programme of the sessional examinations they had held. It was only just to the College of Surgeons in Ireland to say that the system of triple examinations had been already adopted by them.

Dr. Aquilla Smith would not oppose the recommendation. Probably, however, there were one or two bodies which would not be diverted from pursuing systems they had found worked well. The body he represented could not divide their examinations into three parts, because the candidates who came before them were, with scarcely an exception, gentlemen who held surgical qualifications and medical licences. Men who came to them after five or six years' practice as surgeons could not be expected to come up three times. Still, he had no objection to the resolution going forth as a recommendation.

The President proposed the first two lines of the resolution —"That it be a recommendation to the licensing bodies that there be in future three professional examinations." There were 12 for; 4 against;—motion carried. He then read the remainder of the resolution. Professor Rolleston had given the following notice of amendment upon those words, which had been seconded by Sir William Gull—"That these examinations be passed in a certain order, a student being allowed to present himself for either of the two later examinations on a certificate of having passed the preceding examination or examinations."

Mr. Macnamara suggested that the remainder of Clause 4, following the portion which had been carried, should be incorporated with Clause 5, as it was intimately connected with the subjects there mentioned for examination. It would also be desirable that Professor Rolleston's amendment should be discussed in connexion with those subjects; and he would therefore move the adjournment of the debate.

Dr. Rolleston would submit further, for consideration on the morrow—"That no time that might elapse after the first year of professional study should count until the first preliminary examination had been passed."

The President intimated that the mode of conducting the examinations would be further discussed, and the Council then adjourned.

The will of the late Sir William Fergusson, Bart., was proved on the 28th ult., the personal estate in the United Kingdom being sworn under £30,000.

Three lectures on Electro-Therapeutics will be delivered at the National Hospital for the Paralysed and Epileptic, Queen's-square, W.C., by Dr. Herbert Tibbits. The first lecture will be given on the 24th at five o'clock.

The Vacant Female Inspectorship of Pauper Girls' Schools.—The following resolution, on the motion of Mr. Robert Fleming, seconded by Sir Rutherford Alcock, has been unanimously carried by the Guardians of St. George's, Hanover-square:—"That this Board, entertaining a very high appreciation of the services rendered by the late Mrs. Nassau Senior as a Local Government Board inspector, and having a firm conviction that any inspection of thousands of infant children and young girls, to be worthy the name, must be conducted by a practical and intelligent female, do urge upon the Local Government Board the desirability of thus filling up the appointment rendered vacant by the death of the above-named lamented lady."

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ORIGINAL LECTURES.

ABSTRACT OF

THE LUMLEIAN LECTURES

ON THE

MUSCULAR ARTERIOLES:

THEIR STRUCTURE AND FUNCTION IN HEALTH AND IN CERTAIN MORBID STATES.

Delivered at the Royal College of Physicians of London.

By GEORGE JOHNSON, M.D., F.R.S.,

Fellow of the Royal College of Physicians; Professor of Clinical Medicine and Senior Physician to King's College Hospital; etc.

Lecture III.

There yet remain for consideration certain symptoms and results of renal disease which are more or less intimately associated with and dependent upon those impediments and derangements of the circulation to which I directed special attention in my last lecture; and amongst these symptoms there is a peculiar form of dyspnœa, or, as it is sometimes called, *renal asthma*. During the progress of the various forms of renal degeneration which are commonly included under the generic term Bright's disease, a more or less persistent dyspnœa may result from a variety of causes, such as anæmia with a deficiency of the oxygen-carrying hæmatine; bronchitis or œdema of the lungs; fluid in the pleura, or in the pericardium, or in the abdomen; an enfeebled condition of the heart, either with or without valvular disease. But the dyspnœa to which I now refer is of a different character. It is not persistent, but occasional and intermittent, coming on in paroxysms, in some cases soon after food has been taken, and especially after an evening meal; while in other instances it occurs mainly during the night, when it entirely prevents or greatly disturbs the patient's sleep. In some cases the attack resembles one of spasmodic asthma, and there are loud sibilant râles over the lungs, apparently the result of bronchial spasm; but in the more typical cases the phenomena are quite different. The breathing is hurried and laborious, the heart's action is rapid and feeble, and there is more or less lividity of the lips and of the general surface; yet, on auscultation, loud puerile respiration, unmixed with râles or crepitation, may be heard over the whole of both lungs; while in other cases, especially after a long continuance of the dyspnœa, fine crepitation may be heard over the bases of the lungs, but there is obviously no deficiency of respired air, nor any change in the physical condition of the air-passages to explain the distressing symptoms. It can scarcely be doubted that the symptoms in question are the result of a form of uræmia; and they occur with especial frequency in the advanced stages of the contracted granular kidney, with which other forms of uræmic poisoning are so commonly associated.

The question then arises, What is the proximate cause of this uræmic dyspnœa? We know that dyspnœa—a distressing sense of suffocation—arises when, from any cause, the free intermingling of the blood with the respired air is prevented. The respiratory process may be interfered with alike either by an obstruction in the air-tubes hindering the access of air to the pulmonary cells, or by some impediment to the onward flow of blood through the pulmonary capillaries. A plug in the pulmonary artery causes a sense of suffocation as urgent and distressing as an obstruction in the larynx, trachea, or bronchial tubes. I have on several occasions had the opportunity of observing the symptoms which result from an embolon or a thrombus in the pulmonary artery. When the obstruction of the artery is sudden and complete, there is usually a combination of pallor with lividity of the surface, the result of systemic venous fulness, epileptiform convulsions consequent on sudden extreme arterial anæmia of the brain, and death within a few seconds or minutes from arrest of the circulation. When the obstruction of the pulmonary artery is less complete, but permanent, and sufficient to destroy life, the respiration is hurried and laborious, and attended with a distressing feeling of want of breath. One poor girl, who was dying from this cause, panted out the statement, "I feel as if I could not get breath enough"; yet over the whole of both lungs, except over two limited patches where some blood had become impacted in the terminal bronchi, there were unimpaired resonance and loud puerile respiration. The surface of the body in these cases becomes cold and pallid, with more or less lividity of the lips; and the pulse is small and feeble, or even quite imperceptible.

It is obvious that the blood-current through the lungs is the channel by which oxygen reaches the tissues; and, when that current is obstructed, the sense of breathlessness is the result of a call from the tissues for the indispensable vitalising oxygen.

Now, it has occurred to me that the paroxysmal dyspnœa of Bright's disease may be, in part at least, explained by an interrupted circulation through the pulmonary capillaries occasioned by spasm of the pulmonary arterioles, which are stimulated to this excessive contraction by the influence of the impure blood upon the vaso-motor nerves and centre. There are some facts and arguments which support this theory of the pathology of renal asthma.

The panting, laborious mode of breathing and the sense of breathlessness are very like the symptoms which result from a plug narrowing but not completely obstructing the pulmonary artery. A consideration of the *juvantia* and *lædentia* lends support to the theory of arterial spasm of the lungs. In some cases the dyspnœa is speedily and greatly relieved for the time by inhaling the vapour of nitrite of amyl; and this relief is probably due to the well-known influence of this agent in relaxing the muscular arterioles. In many instances, relief is afforded by moderate doses of chloral hydrate, either alone or in combination with bromide of potassium. Ten grains of each of these compounds may be given twice or thrice in the twenty-four hours. This combination probably acts by lessening the reflex excitability of the vaso-motor centre. If, however, the secretion of urine be very scanty, and the blood consequently much contaminated by retained excreta, the chloral may fail to relieve, and it may even add to the distress. In this condition, the breathing is often most effectually relieved by means directed towards the purification of the blood by promoting the free action of the skin and bowels, while the diet is carefully regulated both as regards quantity and quality, an exclusive milk diet being often the most suitable. The dyspnœa is almost invariably made worse by opium in any form; and the probable explanation of this is, that opiates, by checking the secretions of the bowels and kidneys, increase the blood-contamination, and thus intensify the exciting cause of the dyspnœa.

My late distinguished friend and colleague Sir William Fergusson often discussed with Sir George Burrows and me the etiology and treatment of this distressing symptom, from which he himself suffered severely during the last few weeks of his life. He asked me if I could explain the dyspnœa, and I suggested to him the explanation which I have just now given. He said that my explanation appeared to be in accordance with his own sensation, which was that of an obstruction somewhere within the chest; and, as the obstruction was evidently not in the air-passages nor in any of the heart's orifices, it seemed probable that it might be in the pulmonary arteries. He several times described to me an interesting observation which he had repeatedly made upon himself. He found that, by voluntarily increasing to the utmost the respiratory movements—that is, making forcible inspirations and expirations fifteen or twenty times in succession—he could for a time free himself almost entirely from the distressing sensation of breathlessness. Then gradually, in the course of a minute or two after the cessation of the forced respirations, the former feeling of want of air returned; and he explained the temporary relief by suggesting that the deep inspirations had the effect of sending on a larger volume of blood highly charged with air.

Another phenomenon closely allied to this is the œdema of the sound lung, which occurs not unfrequently when one lung has been suddenly consolidated by pneumonia or compressed by a rapid and copious pleuritic effusion. In such a case, moist crepitating sounds may often be heard in the bronchi of the healthy lung: a condition of things which must always be looked upon with anxiety, because an increase of this œdematous effusion into the bronchi may cause a fatal apnœa. There can, I think, be no doubt that the bronchial, and not the pulmonary, vessels are the source of this serous exudation. In consequence of the impervious condition of the inflamed lung, there is a state of partial apnœa; more blood is sent to the sound lung than can be fully aërated; its progress is checked and regulated by the stop-cock action of the pulmonary arterioles; the right cavities of the heart and the systemic veins are engorged; and with this there is bronchial venous

and capillary congestion, and a consequent passive serous exudation into the bronchi. In the condition here described, a timely venesection may sometimes rescue the patient from impending suffocation. The abstraction of blood relieves the distension of the veins and the right cavities of the heart, and at the same time it lessens the work of the lung in proportion as the volume of blood to be aërated is diminished.

A case of tricuspid regurgitation, which came under my care some years ago at the hospital, affords an instructive illustration of the effect of an impediment originating at the right side of the heart acting backwards, first upon the bronchial, and secondly upon the pulmonary, circulation. A woman, aged fifty-two, was admitted with general dropsy, albuminuria, a systolic bellows-sound at the bottom of the sternum (*i.e.*, over the tricuspid valve), distended and pulsating jugulars, and the physical signs of bronchitis. A single dose of elaterium, acting very freely upon the bowels, removed at once the dropsy, the albuminuria, and the bronchial râles. After a few days, however, all the symptoms returned, and the patient soon died. We found, as we had expected, dilatation of the tricuspid orifice, so great that the valve was incompetent to close it; while all the other valves and orifices were normal. The lungs were much engorged. In this case, it is evident that the primary cause of all the symptoms was incompetence of the tricuspid valve. There was consequently reflux of blood into the systemic veins, renal congestion and albuminuria, anasarca, bronchial venous and capillary congestion with a muco-serous exudation into the bronchi, and then a secondary obstruction in the pulmonary capillaries consequent on the pressure of the gravitating bronchial secretion.

It is interesting to note that, on one occasion before her admission, she had spat some blood, the source of which was, in all probability, the overgorged bronchial capillaries. We are familiar enough with hæmoptysis as a result of mitral constriction or incompetence, the source of such hæmoptysis being, in most instances, the pulmonary vessels; but disease on the right side of the heart obviously throws back the strain and pressure primarily and chiefly upon the bronchial vessels.

One of the most constant symptoms and results of chronic Bright's disease is a remarkably dry, harsh, and inactive state of the skin—a state of skin which, in many instances, resists even the diaphoretic influence of the hot-air or the Turkish bath. I formerly supposed, and publicly expressed my belief, that this condition of skin might be due to the fact that the excessive contraction of the hypertrophied subcutaneous arterioles resists the relaxing effect of external warmth which has so powerful a diaphoretic influence upon the healthy skin. My belief was that the deficient cutaneous secretion was a result of a defective blood-supply to the sweat-glands. I take this opportunity of saying that, for some time past, I have abandoned this theory as unsatisfactory and erroneous. The inactivity of the skin is not to be explained by a defective blood-supply. I now believe that the dry and inactive state of the skin which is commonly associated with chronic renal disease is to be sought for in a structurally diseased condition of the sweat-glands themselves.

Another symptom, which some writers on renal pathology have, as I think erroneously, attributed to increased vascular tension, is the copious secretion of urine which is often associated with the small granular kidney. It is possible, though by no means certain, that increased pressure on the *capillaries* of the kidney might cause a more copious secretion of urine; but, in the granular kidney, the firm contraction of the hypertrophied renal arterioles counteracts the injecting force of the strong left ventricle, and thus prevents an increased afflux of blood into the capillaries of the kidney. There is no reason to suppose that high arterial tension has any direct tendency to cause an increased secretion of urine. In cases of contracted granular kidney the two conditions are associated, but in the early stages of the lardaceous kidney the copious secretion of urine occurs without arterial tension. It is probable that in both classes of cases the copious flow of urine is caused by the diuretic influence upon the kidney of some abnormal products in the circulation—an influence analogous to that of sugar in cases of diabetes.

Again, it has been supposed by some that vascular tension may be a direct physical cause of albuminuria. But if, as we have good reason for believing, the increased vascular tension is a result of resistance caused by contraction of the arterioles, it is evident that, just in proportion as the renal arterioles contract and resist the blood-stream, the pressure in the capillaries in front of them will be lessened. And it is a matter of daily experience that in those cases of chronic renal disease which are commonly associated with the highest degree of arterial tension—cases of small granular kidney—the amount of albumen in the urine is least, and not infrequently there is none even, in the advanced stages of the disease. Relaxation of the renal arterioles is more likely to cause albuminuria than their excessive contraction; and the late Dr. Warburton Begbie published some cases in which he believed that the urine became albuminous in consequence of vaso-motor paralysis, resulting in an increased afflux of blood to the Malpighian capillaries.

There is good reason to believe that some of the more formidable *nervous symptoms* which result from uræmia—in particular, uræmic convulsions and a form of transient amaurosis—are directly due to cerebral anæmia consequent on sudden extreme contraction of the muscular arterioles.

There can, of course, be no question that uræmic convulsions are of an epileptic character. A large amount of evidence points to the conclusion that both the loss of consciousness and the convulsions of epilepsy are the results of sudden and extreme anæmia of the brain. In man, and in most, if not in all, warm-blooded animals, a rapid and very copious hæmorrhage usually causes convulsions.

The description of the convulsions artificially produced by bleeding in the lower animals shows that they were essentially the same as epileptic convulsions in the human subject. There was the dilated pupil, the tonic spasm, quickly followed by clonic convulsion so violent as to throw the animal forward to a distance of one or two feet, and sometimes even over the shoulders of the operator. Such experiments obviously could not be performed on the human subject but by compressing the carotids. The result was that the face turned palo; the pupils first contracted and then dilated; the respiration became slow, deep, and sighing; then there was giddinoss, staggering, and unconsciousness, and the men would have fallen if they had not been supported. Compressing the carotids does not, of course, entirely cut off, but only greatly lessens the supply of arterial blood to the brain; but these experiments render it probable that sudden occlusion of all the arteries supplying the brain would as certainly excite epileptic convulsions in man as in the lower animals. And this conclusion is confirmed by observing the results of certain diseases and accidents in the human subject. Thus, convulsions occur almost invariably as a result of sudden suffocation or acute apnœa. It has commonly been supposed that the convulsions thus occurring are caused by the noxious influence of black blood upon the brain. It is far more probable that they are caused by the sudden and extreme anæmia of the brain, consequent on the impeded flow of blood through the lungs into the systemic heart and arteries, as explained in my first lecture. The epileptiform convulsions which often result from the inhalation of nitrous oxide gas admit of the same explanation.

A few years since, the following case came under the observation of my friend Dr. Lavies and myself. A gentleman, about sixty years of age, had been confined to his bed for three weeks with symptoms which pointed to great feebleness of the heart, and probably to fatty degeneration of its walls. There was dyspnœa on exertion, and sometimes on awaking after a long sleep; the heart's impulse and the radial pulse were feeble; there was some œdema of the legs, and over the bases of the lungs there were moist crepitating sounds, probably the result of œdema there. He awoke in the middle of one night, told the nurse that he felt quite comfortable, asked the time, and began to repeat her reply, "Oh, half-past ——," when he suddenly stopped, and the nurse, turning to him immediately, saw that his face was livid and he was in strong convulsions. In a few seconds, and before anyone could answer her call for assistance, the patient was dead. The body was examined, in the presence of Dr. Lavies and myself, by my friend and former colleague Dr. Kelly. The walls of the heart were thin, soft, and fat. The right ventricle was dilated, and contained firm decolorised thrombus, extending from the apex of the ventricle through the tricuspid orifice into the auricle, to the outer wall of which it had evidently been attached and moulded, but, becoming separated from the auricular wall, it had fallen over the tricuspid orifice and completely closed it. Thus the circulation must have been completely and instantaneously arrested. The result was lividity of the face from venous fulness, and epileptiform convulsions from cerebral arterial anæmia. In this case, as in the case of the rabbits with ligatured arteries, it is evident

that the convulsions were caused, not by black blood, but simply by the absence of circulating blood in the cerebral vessels.

When animals are killed by air being forcibly blown into a vein, the breathing becomes hurried, the animal suddenly falls down, and usually dies in convulsions; the contents of the bladder and rectum being frequently expelled at the time of death.

The immediate cause of death in these cases is the arrest of the frothy mixture of air and blood by the contraction of the pulmonary arterioles, the air seldom reaching the left side of the heart; and as a result of this arrest there is, of course, sudden extreme anæmia of the brain, and of every other organ supplied by the systemic arteries. In man, it appears that death from the accidental admission of atmospheric air into a vein during an operation is less frequently preceded by convulsions. Probably the chief reason of the less frequent occurrence of convulsions from this cause in the human subject is that the amount of air accidentally admitted is less, and death consequently is less rapid than when air is forcibly blown into the vein of an animal. It would probably be found, on a careful inquiry, that the occurrence of convulsions in these cases depends upon the circulation being suddenly and completely arrested.

It has been noted, in some cases of suddenly fatal pulmonary embolism, that death has been preceded by convulsions; and Virchow observed, amongst the results of artificial embolism of the pulmonary artery in animals, convulsions and dilatation of the pupil.

We find, then, a large amount of evidence pointing to the conclusion that sudden and extreme anæmia of the brain will cause epileptiform convulsions, and a theory of epilepsy has been framed in accordance with these facts; the theory being that the cerebral anæmia, which is the immediate cause of the convulsion, is the result of spasm of the cerebral arterioles.

According to this theory, then, epilepsy is due to an extreme contraction of the muscular arterioles. This arterial contraction may be determined by two main classes of causes—

1. By a purely nervous reflex influence—such as, for example, may be excited by anger or terror, by the irritation of the gums during dentition, by a calculus in the kidney, the ureter, or the gall-duct, or by worms in the intestines.

2. In the second class of cases a blood-poison is the exciting cause of the arterial spasm and the resulting epileptic convulsion. This includes all cases in which convulsions result from retained excreta, of which uræmic convulsions are a typical example.

From the preceding narrative of facts it appears to be highly probable that uræmic convulsions are directly due to a sudden and extreme anæmia of the brain, resulting from contraction of the cerebral arterioles, and that the arterial contraction is excited by the influence of impure blood upon the vaso-motor nerves and centre.

This theory, moreover, indicates two modes in which uræmic convulsions may be prevented—namely, first, by means directed towards removing the morbid quality of the blood; and, second, by remedies which lessen the reflex excitability of the nervous centre.

Time would not permit, even if it were desirable, to enter into the details of treatment; but I am anxious to direct attention to one or two points of practice. It is a well-known fact that the inhalation of chloroform or ether vapour invariably puts a stop to uræmic convulsions, and often wards off an attack after premonitory symptoms, such as convulsive twitchings of certain muscles, have occurred. It has sometimes been supposed that the anæsthetic acts by relaxing the cerebral arteries; but it appears probable that the anæsthetic vapours prevent or stop convulsions by lessening the reflex excitability of the nervous centre.

The undoubted influence of repeated full doses of bromide of potassium in warding off uræmic convulsions is also probably to be explained by its soothing, sedative influence on the nervous centres. The bromide is a very useful remedy for the painful muscular cramps which are of common occurrence in the advanced stages of all forms of renal degeneration. These cramps, which are especially frequent and severe in the lower extremities and during the night, are no doubt to be classed with the results of uræmic poisoning; and in not a few cases they are the precursors of more formidable nervous disorder. They may, in some cases, be entirely prevented by a draught containing twenty grains of bromide of potassium, with five grains of carbonate of ammonia, at bed-time.

No doubt, some of the many nervous disorders that result from uræmic poisoning are due to the noxious influence of the morbidly altered blood upon the nervous tissue, while others are more probably explained by sudden partial interruption of the blood-supply to certain parts of the nervous system. This statement may be illustrated by a reference to the two forms of impaired vision, which are very frequently associated with advanced renal degeneration. In one class of cases, dimness of sight comes on more or less gradually, affecting one or both eyes, and is permanent. This form of impaired vision is found to be associated with peculiar structural changes in the retina, results of the so-called *albuminuric retinitis*. In the other class of cases the impairment of vision may be so sudden in its onset that, in a few minutes or even seconds, there is complete blindness, which usually passes away as suddenly as it came. These attacks of sudden and transient blindness may recur again and again. That they are closely allied to epileptiform attacks is shown by the fact that they are sometimes immediately followed by general convulsions. The most probable explanation of this sudden transient form of amaurosis is that which attributes it to sudden anæmia of the retina or of the central origin of the optic nerves, the result of arterial contraction, excited by the morbid quality of the blood. It is, in fact, a form of circumscribed partial epilepsy—"epilepsy of the retina," as it is sometimes designated.

There are various forms of nervous disorder of uræmic origin, which probably admit of a similar explanation: sudden and transient impairment of motor power, or irregular spasmodic movements, limited to a particular set of muscles; various disordered sensations in limited portions of the skin; sudden perversions of taste, or smell, or sight, or hearing; sudden impairment of speech, vertigo, confusion of thought, temporary mental excitement and delirium. One or more of these symptoms may occur singly, or variously associated in different cases, the onset and the departure being often equally sudden. In explanation of these phenomena, Dr. Hughlings-Jackson has, with much ingenuity, suggested that they may result from a sudden temporary interruption of the blood-current through one or more branches of the cerebral arteries by spasm of their muscular walls; so that the brain-tissue within a circumscribed "arterial region," having its nutritive supply arrested or limited, would suffer a suspension or impairment of its proper functions. Our increasing experience of the various forms of nervous disorder which may result from so purely mechanical a cause as embolism of cerebral vessels lends support to this theory. An arrest of the circulation through a portion of the brain involves immediate suspension of function in that part, with perhaps a disorderly action in subordinate or correlated parts. Thus, amongst other symptoms of nervous disorder, maniacal delirium, with mental illusions, and acute chorea, have been found associated with, and probably have been directly caused by, mechanical plugging of minute cerebral vessels; the plugging being a result of embolic particles of fibrin, detached from the so-called warty vegetations on a damaged cardiac valve. In like manner, sudden and complete blindness may result from embolism of the arteria centralis retinæ, partial and patchy blindness from embolism in one of its branches. The results of the mechanical plugging of vessels are thus seen to bear so strong a resemblance to those which are due to uræmic poisoning as to afford much support to the theory of arterial contraction as the immediate cause of some at least of the characteristic symptoms.

There is another class of cases in which the theory of obstructed circulation being the result of arterial spasm receives confirmation from the fact that very similar phenomena result from a demonstrable mechanical block of the same system of vessels. I refer now to the striking resemblance between the symptoms of cholera-collapse and the results of embolism or thrombosis in the pulmonary artery.

In both classes of cases there is evidence of an impeded pulmonary circulation, the result of spasm of the muscular arterioles. In cholera the arterial contraction is a primary result of the irritant action of the poisoned blood upon the vessels and the vaso-motor nerves; while in asthma the arterial spasm is a secondary result of a partial apnœa occasioned by primary spasm of the bronchi. Using the words "asphyxia" and "apnœa" in their strictly literal sense to express pulselessness and breathlessness, we may say that in cholera-collapse there is a primary asphyxia, and a secondary apnœa consequent on the blood-stasis in the arterioles before it can reach the capillaries to be aërated. On the other hand, in asthma there

is a primary apnœa caused by bronchial spasm which cuts off the air from the pulmonary vesicles, and a secondary asphyxia the result of arterial contraction.

ORIGINAL COMMUNICATIONS.

CASE OF

HYSTERIA WITH HEMIANÆSTHESIA AND OVARIAN HYPERÆSTHESIA OF THE OPPOSITE SIDE.

By THOMAS BARLOW, M.D., B.S.,
Assistant-Physician to Charing-cross Hospital, and to Children's Hospital, Great Ormond-street.

Florence V., aged eleven years and a half, was brought as an out-patient to Great Ormond-street, November 23, 1876. Her mother was a pale, weakly woman, but not hysterical so far as I could gather. The father, it was said, was very nervous, and his mother had been hysterical. This child's brothers were easily frightened. Her troubles were referred to the fact that two years before she had been knocked over by a dog. The dog had scratched her a little, but had not bitten her. Very soon afterwards she was noticed to be dark round the eyes, and she began to have singing and dancing fits, and at other times would do nothing but say her prayers and hymns. Her "manifestations" after a while settled down into a definite form, the order of which the mother told me was as follows:—In the midst of any occupation (most frequently when seated) she would begin to nod and pull faces, then to "claw" and pick at her frock, then to push forwards her head and chest. When her relations held her she tried to bite them, and threw herself into violent movements all over. At length she would "fall down as if she were shot, and go to sleep." More frequently after falling down she would scream out, complaining of a "man with a white sheet coming to her." In all cases after she "came to" she was very cold, wanted to pass water, then came and sat by the fire, and asked for something to eat. When the child came to the out-patient-room there was nothing specially noteworthy in her appearance. She was a timid, pale, languid-looking girl. She walked into the room, and made no complaint of pain. There was neither "contracture" nor paralysis, but all down the right side of the body and also on the left cheek there was absolute anæsthesia. She allowed a pin to be introduced anywhere over this region for nearly a quarter of an inch without manifesting any sign of pain, whilst she promptly resented any pin-prick on the left side except on the left cheek. The region of anæsthesia, with this exception, was strictly marked by the middle line, and over this region she was unable to localise a pin-prick. When gently pinched on the right sido there was no blush, whilst on the left side a blush readily appeared. The muscles of the right side responded readily to faradism, but she did not flinch when the index of the single-cell Stöhrer was raised to the full, whilst on the left side a very moderate current caused her to wince. Neither the child nor the mother had been aware of this loss of sensation.

On examining roughly the child's "field of vision," I found it considerably limited. But it appeared to me to be equally so all round, and to an equal amount in both eyes. There was a small crescent at the apparent upper part of the disc in each eye; and Mr. Nettleship, who was good enough to examine the eyes within a day or two afterwards, told me that there was hypermetropia and astigmatism, but only to a small amount. Moderate pressure on the *right* inguinal region did not elicit any expression of pain, nor could anything abnormal be felt; but on the left side, at a spot one inch above the middle of Poupart's ligament, an olive-shaped body was felt, having its long axis parallel to Poupart's ligament. It had an elastic feel, and was slightly movable. The child's abdomen was so thin and flaccid that it was quite easy to make a thorough examination. I am quite certain that this body was separate from the intestine, and it appeared to me too low and too elastic for a mesenteric gland. The skin over it was not hyperæsthetic, but the slightest deep pressure caused the child to flinch. I have no doubt that the body felt was the left ovary; and that was the independent opinion of several others who examined the child. A few days afterwards, when showing this case to my friend Dr. Allen Sturge, he predicted that the application of faradism for a few minutes would restore sensation to the anæsthetic side. So, indeed, it proved. After faradising the limbs for a few minutes, the child became able to localise pin-pricks; and presently, although she did not feel pain so acutely as on the other side, yet she winced a little when she was pinched. Subsequent faradism caused her to wince to the faradic current, and much more to the pin-prick, than she had done at first. The left ovary was felt, but was not quite so tender as on the previous day. Three days afterwards the anæsthesia had disappeared, and the left ovary could not be felt. The "field of vision" was certainly larger. The anæsthesia has never reappeared—at all events, at the times when she has been in the out-patient room,—so that I have been unable to try, as I had wished, the effect of "metallo-therapeutics."

At the end of November and beginning of December she had at home some more fits of the kind previously described. In January, however, a perfectly new symptom began. She had what her mother called "blind fits." For several hours at a time she would find her way about solely by "groping." She was brought to the out-patient room one morning in one of these "blind fits." It was very difficult to investigate. When I held up my fingers and asked her how many there were, she immediately began to feel with her hands, just as a blind person might. A moderate faradic current about the forehead and temples soon, however, "enabled her" to decide, and she certainly walked home without groping. Two or three times subsequently she was faradised in like manner, always with benefit, and these "blind fits" ceased about the middle of March. I regret that I did not examine her at that time for achromatopsy—the more so because, on inquiry lately from her mother as to whether the child had ever made any mistakes as to colour, it appears that she had very often done so; about the time of her blind fits had brought a black reel of thread for her mother instead of white, and *vice versâ*, etc. She has greatly improved in general condition, and therewith become much less interesting as a "nervous case," under treatment by the best of all nervine tonics—cod-liver oil: she has no anæsthesia, the ovary cannot be felt, her field of vision is greatly improved, and there is no colour blindness. She has had lately one or two attacks of globus.

This case is of interest, because it is contrary to the ordinary rule laid down by M. Charcot—viz., that the ovarian hyperæsthesia is on the same side as the anæsthesia ("Leçons," page 291).

I presume that the ovary was slightly enlarged at the time it was felt. The mother was quite positive that neither after nor at any other time was there any menstruation. It is likely enough that other sensory defects—viz., of the special senses in addition to sight—might have been found if looked for; and I do not doubt that, if zealous investigation were pursued, other interesting phenomena might become manifest, but whether for the patient's advantage is another question.

The Cork District Lunatic Asylum.—The twenty-seventh Annual Report of the Cork District Lunatic Asylum of the city and county of Cork for the year ended December 31 last has recently been published. From the statement of the Resident Medical Superintendent, Dr. James Alexander Eames, it appears that the number of patients remaining in the Asylum on the last day of the year was 742—391 males and 351 females. The daily average number of patients in the Asylum during the year was 726, being 28 over that of last year. In the rate of mortality there was a slight decrease as compared with that of last year, being 10·3 per cent. of the daily average. The percentage of recoveries was 38·4 on the admissions, being also a slight decrease as compared with last year; this is ascribed in a great measure to the unfavourable nature of the cases admitted, many of which were old and debilitated, and suffering from long-standing mental derangement, as well as from the overcrowded state of the Asylum. The general health of the establishment is reported to have been good, few cases of acute disease and none of an epidemic character having occurred. The majority of the deaths were due to the existence of chronic mental disorders, producing debility, with diminished powers of resistance to any attack of bodily ailment. It is evident that increasing demands on the resources of the Asylum will necessitate more accommodation; and the governors will do well to take immediate action to prevent the overcrowding alluded to by their medical superintendent.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

WEST NORFOLK AND LYNN HOSPITAL.

CASES OF RHEUMATISM TREATED BY SALICYLIC ACID AND SALICIN.

(Under the care of Dr. DALE.)

[Reported by CHAS. GLASIER, M.B., House-Surgeon.]

Case 1.—R. H., groom, aged twenty-four, admitted November 20, 1876, with acute rheumatism of three days' standing. No previous attack; previous health good; temperate habits; ankles, knees, and right shoulder affected; pulse 100, full, hard, and bounding; temperature, evening 102·8°; slight perspiration; tumultuous action of heart, but no murmur. He was ordered seven grains of salicylic acid every hour. 21st: Does not complain of any pain; motion in joints more free; temperature 101°; pulse 95. He is now sweating profusely, and says he could not sleep at all on account of perspiring so freely; to take the salicylic acid every two hours; temperature, evening 102°. 22nd: Temperature 99·6°; slept well; slight pain in left shoulder; perspiration much diminished; to take salicylic acid every four hours; temperature, evening 100·4°. 23rd: Good night; some pain in left shoulder and arm; eruption over neck and back like that of scarlet fever; temperature, morning 99·4°, evening 98·4°. 24th: More pain in left arm; temperature, morning 99°, evening 102°. 25th: No pain, but stiffness; to take salicylic acid every six hours; temperature, morning 99°, evening 100°. 26th: Temperature, morning and evening 99°; the eruption has disappeared. 27th: Temperature, morning 99°, evening 100°. 28th: Slight pain in left shoulder; temperature, morning and evening 99°. 29th: No pain; temperature 99°. 30th: Temperature normal. Patient says he feels quite well. To prevent relapse, ordered to continue the salicylic acid three times a day. December 5: Has had no relapse. Discharged cured.

Case 2.—H. T., fisherman, aged seventeen, was admitted on December 2, 1876, with acute rheumatism on seventh day of illness. First attack; previous health good. Both wrists and ankles affected. Temperature, evening 100°; pulse 98. No affection of heart. Ordered ten grains of salicylic acid every four hours. 3rd: Much easier. Perspired freely after the first few doses. Temperature normal. 4th: No pain or swelling. Feels quite well. To take the salicylic acid three times daily. 13th: Has had no return of the affection. Discharged.

Case 3.—C. C., boots, aged twenty-seven, was admitted on January 24, 1877, with chronic rheumatism, from which he has suffered at intervals during the last twelve months. For the last fortnight, however, the pain has been continuous, at times being very severe. Is addicted to intemperance. The joints are the parts affected, chiefly the knees and wrists. Ordered to take ten grains of salicin four times a day, and twenty grains of chloral hydrate at night. December 26: Better. To discontinue the chloral. 31st: Feels no pain whatever, but his joints are somewhat stiff. February 10: Discharged, patient stating that he feels fit for work.

Note.—The first case is of special interest on account of the scarlatiniform rash, which must not be forgotten amongst the occasional toxic effects of salicylic acid. Attention was called to this condition by Dr. Weber at the Clinical Society in January last. At the same meeting Sir William Jenner referred to a case of scarlatiniform eruption in a child who was treated for an extensive burn with salicylic acid externally. It is to be noted that occasionally under carbolic acid treatment of wounds an extensive erythematous rash may occur, which has sometimes been mistaken for erysipelas.

GUY'S HOSPITAL.—Mr. John Birkett, the senior Vice-President of the Royal College of Surgeons, has just been unanimously elected Consulting-Surgeon to the above Hospital, and Dr. J. F. Goodhart Assistant-Physician.

THE annual meeting and dinner of the Birmingham Medical Benevolent Society will be held at the Hen and Chickens Hotel, Birmingham, on Friday, May 25, at 4 p.m., under the presidency of Dr. Balthazar Foster.

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Medical Times and Gazette.

SATURDAY, MAY 19, 1877.

THE GENERAL MEDICAL COUNCIL.

THE first matter of business before the General Medical Council, after the President's Address, was a resolution that the Report of the Executive Committee in reference to the election of Mr. Miller as Registrar be received. As the Council had, in June last year, delegated to the Executive Committee without reserve the power to elect a Registrar, the acceptance of their appointment could hardly be more than a matter of form. Sir Dominic Corrigan, however, thought otherwise, and moved, in a slightly altered form, as an amendment, the resolution which we mentioned last week, and which was in spirit a vote of censure on the Executive Committee for not having selected a medical man for the appointment. No one was found, however, to second the amendment, and it therefore fell to the ground. As no restriction whatever had been placed on the power given to the Executive Committee, and no instruction to elect a medical man rather than any other, the members of Council—all but Sir Dominic—felt, no doubt, that they could not in common reason and fairness object to the choice made, even if they would have preferred the appointment of a member of the profession; and Sir Dominic Corrigan had to console himself by voting against the motion to receive the Report, and by requiring that the "names and numbers of those voting for and against the motion, and of those who declined to vote, should be taken down." He stands in the Minutes in the glorious minority of one; and the representative of the University of Durham, with the President of the Council, declined to vote. It may be remembered that on the last day of the session of the Council last year, the Report of the Committee on Visitations of Examinations was received and ordered to be entered on the Minutes, and that the Council resolved that "The Report of the Committee on the Visitations of Examinations of June 25, 1875, and the Report of the Committee

of Visitations of June 5, 1876, be considered on the first day of the session of 1877"; but when this subject came before the Council on Thursday, last week, the first day of the present session, Dr. Humphry, who was the Chairman of the Committee of Visitations, moved that it was not desirable to enter then into a discussion "on the Reports of the Committee on the Visitations of Examinations, and the Answers of the Licensing Bodies; but to send copies of the Report of 1876 to each of the licensing bodies for consideration." He was moved, he said, to take this course because almost all the examinations in the country had, as a result of the visitations, been considerably modified, and that without any pressure put by the Council upon the licensing bodies. He thought, therefore, that it would be better to send the Reports of the Visitors to the different licensing bodies for their consideration; and that when the visitations were instituted again, after the bodies had fully considered the matter, it would be time for the Council to exercise pressure where it might be necessary. This was seconded by Mr. Teale, who seconded the motion of last year which we have quoted; was supported by Dr. Andrew Wood on the "moral influence" ground; and was agreed to without opposition. We must venture, even against the opinions of such men as Dr. Humphry and Dr. Andrew Wood, to regret the decision of the Council. It seems to shadow forth a continuance of the policy of delaying and postponing the consideration of all the most important matter as regards professional education and examination. We believe the Council have not yet discussed any of the reports of the Committee on Visitations of Examinations, etc.; and certainly when the Council last year decided to "consider" the reports of that Committee on the first day of the present session, it cannot be supposed that they had any idea of again shelving them.

On the motion of Mr. Simon, a Committee was appointed, and nominated, to consider any amendments which may have been recommended in the Medical Acts; and the communications which have been received with reference to foreign, colonial, and Indian degrees. Mr. Simon then drew the attention of the Council to Mr. Russell Gurney's Act of last year. He observed that the Council had suggested to the Government that it should be made quite clear not only that the exercise of the power given by the Act should be optional with the licensing bodies, but also that should any of the bodies choose to admit women, these should not, except at the further discretion of such licensing bodies, be admitted to corporate privileges. But the Bill, as passed, instead of providing, as the Council had recommended—that "the qualifications conferred should not, except at the further discretion of the licensing bodies, carry with them any right to take part in the government of the universities or corporations, or any right or privilege beyond that of registration with a view to practise the medical profession"—provided that "no person, who but for this Act would not have been entitled to register, shall by means of registration be entitled to take part in the government," etc.; thus guarding against women becoming corporators on account of registration, instead of, as recommended, on account of their possessing qualifications. For this reason, Mr. Simon said, some bodies had declined to admit women to examination, and so the intention of the Act had been defeated; and he moved—"That it be an instruction to the Medical Acts Committee to consider the legal bearing of the provisions as they stand." The motion was agreed to; and it was also resolved that the subject of the recovery of penalties under the Medical Act should be referred to the same Committee.

When the Council met on Friday, the 11th, the first business taken was the communication from the Queen's University in Ireland with respect to the non-registration of honorary degrees in medicine granted by that body. The matter was raised by an application from Fleet-Surgeon Richard Eustace, M.R.C.S.E., for the registration, as an additional qualification, of the M.D. degree conferred upon him *honoris causâ* by the Queen's University in Ireland. A copy of the Minute of the Senate of the University, stating the grounds for conferring the distinction, was laid before the Council; as also was an opinion given by the Irish law officers, to the effect that Dr. Eustace, "being already registered by an unquestioned qualification, is entitled to have his honorary degree entered on the Medical Register, either as a 'medical title' under Section 27, or as a 'higher degree' under Section 30"; but not advising the Queen's University to institute any legal proceedings to enforce the registration. The President proposed that Mr. Ouvry, the Solicitor to the Council, should be invited to advise them on the subject, and give them the benefit of his remarks on the opinions of the English and Irish counsel who had been consulted; and, after much discussion, the proposition was agreed to. Mr. Ouvry then read the opinion of Mr. Bowen, Q.C., taken on behalf of the Council, which is to the effect that the Registrar is not bound to register Mr. Eustace's honorary degree, because that gentlemen is not a Doctor of Medicine of the Queen's University, but an Honorary Doctor only. "He does not therefore possess," Mr. Bowen says, "one of the qualifications described in the Schedule (A) of the Medical Practitioners Act; and I therefore think that the title of Honorary Doctor is not a medical title, diploma, or qualification within Section 27 of the Act. It appears to me to be an academical distinction, and nothing more—at all events, so far as regards the purposes of the Medical Practitioners Act. I think that Sections 18 to 23 of the Act show the intention of the Legislature to have been that the qualifications mentioned in Section 15 should be real, and not honorary." Mr. Ouvry then went on to argue at some length the point whether an honorary degree is a qualification for registration. He pointed out that the column in Schedule (D) headed "Title" had been repealed in 1859, and that therefore the argument founded by the law officers of the Crown in Ireland on that column fell to the ground; and he contended that a "higher degree" was to be registered by way of substitution for a lower degree, while in the case under consideration there had not been any possession of a lower degree, and that a registrable qualification must be one obtained after due study and examination. After the case had been heard, Sir William Gull moved a resolution to the effect that "it is the opinion of the Council that the degree in question cannot be registered." To this Sir Dominic Corrigan strongly objected, dwelling at length on Mr. Eustace's services and distinction, which no one can question, but which, in fact, have really nothing to do with the point in dispute—the registrability of an honorary degree; and Professor Turner and Dr. Quain proposed, as an amendment, "That as the Council had before them discordant legal opinions they should instruct their solicitor to take the opinion of the law officers of the Crown in England before coming to a final decision upon the matter." Dr. Rolleston, who seconded Sir William Gull's resolution, observed that the question was a purely technical one, and said that a reference to legislation on the subject would show that the law of the land forbade the Council to register an honorary title, and he happily reminded Sir Dominic Corrigan of a motion that he had himself made some years ago, "That the General Medical Council is of opinion that any degree or licence obtained since the passing of the Medical Act without examination ought not to be placed on the Register." Dr. Humphry remarked that the titles which they were to register were distinctly stated in Schedule (A); but that schedule made no mention of the word "honorary," and the Act contained no provision for the registration of an honorary degree. He thought the question purely one of common sense, and that the discussion on it ought not to have lasted five minutes. The discussion lasted, however, some three hours, and ended in the decision to take

the opinion of the law officers of the Crown in England. The question at issue was a purely legal one, which could not be determined by any amount of discussion at the Council Board, and the determination to take further legal advice on it might have been arrived at without the waste of three hours in dispute. The consideration of the request of Dr. Acland and Dr. Paget to have the title of M.D. of the University of Dublin removed from their names in the Register pending the decision of the Council on the question of the registration of honorary degrees was deferred till after the opinion of counsel shall have been received. The name of George Stratton Symmons was ordered to be erased from the Medical Register.

During the session of last year the Council appointed a Committee to consider a table showing the Results of Professional Examinations for degrees, diplomas, and licences granted in 1875, with reference to the large number of rejections; and the Committee reported that, "in order to arrive at any conclusions on the causes of the rejection of so large a number of candidates in the examinations," it would be necessary to obtain information and opinions from the licensing bodies on the subject; and they recommended that this should be done by the Executive Committee. The Council having adopted the report, delegated to the Executive Committee the authority to obtain the desired information, and to report to them thereon at the present meeting. The report of the Committee was received on the first day of the session. It consists of the answers obtained from the licensing bodies in regard to the results of professional examinations and the deficiencies in preliminary education, with a report on these answers by Dr. Humphry, who acted as chairman of the Committee on Results; and an analysis by Dr. Aquilla Smith of the annual returns of the final examinations furnished to the Council for a series of years; and on Saturday, the third day of the session, the Council went into committee to consider Dr. Humphry's report. In introducing the subject to the Council, Dr. Humphry gracefully acknowledged the hearty co-operation and earnest of goodwill shown by the licensing bodies in sending the valuable answers which had been received—answers which could only have been produced by means of a great expenditure of time and labour. This praise was well deserved, and Dr. Humphry himself deserves the heartiest thanks of the Council for his valuable report on the answers. This report, which will be found at page 525, furnishes the Council with a clear and able condensation of the various views put forward in the answers, and suggests a series of recommendations in accordance with those views for the consideration of the Council. The preparation of such a report must have been a work of no little time and labour, and the Council must have felt grateful for the aid it gave them. The first resolution, moved by Dr. Humphry, as an outcome from the answers, was—"That it is desirable that the examination in general education be left, so far as it can be, to the examining boards of the national educational and examining bodies recognised by the Medical Council, and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this object." He said that it had always been the desire of the Council to carry out the views expressed by the resolution, but it had been hardly found practicable in former times to do this throughout the United Kingdom, and therefore the licensing bodies themselves had been obliged to institute their own examinations. Some one or more of them had already given up that work, and it was felt that the time was now ripe for carrying out the oft-expressed wish of the Council by so far as was possible relieving them from that duty. The discussion that followed lasted through the whole of the time that the Council sat on Saturday, and was chiefly remarkable, perhaps, for the praise bestowed by various members of the Council on the preliminary examinations carried out by the bodies they respectively represent. Sir Dominic Corrigan asked the meaning of the words "national educational and examining bodies; would they include the National Board in Ireland or the school boards?" and he asserted his belief that the examinations of the National Board in Ireland are very much superior to some of those recognised by the Council. Dr. Andrew Wood quoted statistics, showing, from the number of students passed and registered, and of those who retired from the contest, the thoroughness of the examination in general education at the Royal College of Surgeons, Edinburgh. Mr. Macnamara demurred to the statement made by Dr. Humphry, that the Medical Council had initiated the requirements of preliminary examination in general education, affirming that this had been done one hundred years ago by the body he represented, and that from that time the preliminary examination required by that body had been in advance of many others. Mr. Bradford objected to the resolution, because it would exclude the examination in Arts of the Society of Apothecaries of London; and he believed that no better examination would be substituted for it, conducted as it is by men of the very highest attainments,—and so on. Eventually, the discussion was in great part a verbal criticism of the wording of the resolution, though strong opposition was made to the spirit of it also. Mr. Macnamara declared that "under no circumstances, unless forced by legal enactment, would the College of Surgeons of Ireland give up its right to conduct its preliminary examinations." And Dr. Haldane, in opposing the resolution, stated that in the case of Edinburgh "the enormous majority of students passed their preliminary examination before a special board—not an ordinary board of examiners of the University, but specially with a view of entering on medical studies." We could understand an examination in general education with a view to a special profession being instituted in Ireland, but in Scotland!—well, it sounds curious. And, remembering that last year proofs were placed before the Council that many men come up for their professional examination showing very defective general education, it is difficult to quite agree with Dr. Andrew Wood when he says that the Council allows no man to be registered as a medical student "till he has been trained and tested in a very real and satisfactory way." The resolution underwent many alterations, and at last, on Monday, on which day the Committee of the whole Council resumed the discussion on the subject, it was carried in the following form:—"That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination as may from time to time be approved by the Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject."

On the same day also, the following resolutions moved by Dr. Humphry were agreed to:—

"That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council." "That a letter be addressed to each of the examining boards whose certificate is accepted as a test of preliminary education by this Council, directing attention to the complaints which have been made by several of the licensing bodies, with regard to the insufficiency of the general education of many of the candidates presenting themselves for their examinations." "That it be a recommendation to the licensing bodies that there be in future three professional examinations."

SIR RICHARD TEMPLE'S EXPERIMENTS ON THE MADRAS FAMINE.

Few, if any, of our readers can have forgotten the Bengal famine of 1874. An intense feeling of sympathy for the starving populations in India was excited throughout the length and breadth of the land at home, and by means of public meetings and through Parliament the measures taken by the Government for the relief of the sufferers was keenly watched and criticised. But the terrible famine from which our fellow-subjects in the Madras Presidency have been and still are suffering—a famine at least as severe as that which afflicted Bengal—has excited comparatively little notice. This is, of course, partly because the attention of the public and of Parliament is so greatly absorbed by Turkey and Russia, but it is, no doubt, to a great extent due to the fact that the supervision and control of the famine relief in Madras had been committed by the Indian Government to Sir Richard Temple, Bart., and K.C.S.I., who had won fame and reward by his eminent services in relieving the sufferers by the Bengal famine. Unhappily, however, Sir Richard Temple was not content to act only on the large experience he gained on that occasion. In the opinion of some judges, much more money was then spent than was at all necessary, and Sir Richard seems, therefore, to have determined that he would not, at any rate, run the risk of being charged with extravagance in ruling the rate of relief to be given to the Madras sufferers. In a Minute written in 1874, Sir Richard says, "This rate (three-quarters of a seer, or about a pound and a half per head, for men, women, and children) at which grain should be provided was assumed after due consideration and discussion." And he quotes, in justification of it, the lowest diet provided in Bengal gaols for non-labouring prisoners; the ordinary diet of a labouring adult; the diet prescribed for adult Bengalee emigrants on shipboard, and for Bengalee sailors; and adds, "In practice it was found that even to ordinary paupers, who did not do any work, local committees had to give two-thirds of a seer of rice daily, besides one *pice* (three-eighths of a penny) for the purchase of salt and condiments; to women in delicate health, and to persons reduced by previous hunger, a still larger daily dole had to be allowed"; and even in January, 1877, in a Minute written at Sholapur, in Bombay, Sir Richard seems to have accepted without question the fact that the relief wages in Bombay were calculated on the basis of one pound and a half of grain per diem for an adult. But later in the same month, after visiting the Bellary district of the Madras Presidency, he lays down a new and reduced scale of ration for adoption by the Madras Government. After referring to the one pound and a half of grain per diem rate, he says:—"There might, indeed, be a question whether life cannot be sustained with one pound of grain per diem; and whether Government is bound to do more than sustain life. This is a matter of opinion, and I myself think that one pound per diem might be sufficient to sustain life, and that *the experiment ought to be tried.*(a) Possibly the gangs might not perceptibly fall off in condition. After *a week's or a fortnight's experience*(a) it would be seen whether they so fall off or not; if they were to seriously fall off, then the point could be considered." On this it was determined to make one pound of grain per diem the basis of relief for an adult, half an anna being given in addition, to buy condiments, etc., to an adult for a full day's work. Against this, Surgeon-Major Cornish, Sanitary Commissioner for Madras, whose ability and high efficiency are too well known to require any praise from us, strongly protested in a Minute dated February 13, 1877. He pointed out that Sir Richard Temple had given no reasons for his new "opinions," which "are in direct contradiction to the accumulated testimony of scientific observers in every country in which this question of the quantity and variety of food essential to keep a labouring man in health and strength has been the subject of investigation"; and that in 1863 a carefully and very extensive inquiry was made, by order "of the Secretary of State for India, regarding the nature and quantity of food of the various classes of the people in India, and of the prison dietaries," and that amongst all the reporters "there was this combined testimony, that the minimum grain allowance of a man in health and in work was *not less than twenty-four ounces.* . . . For Bellary and Cuddapah the average daily allowance of dry cereal for a labourer was reported to be thirty-three and forty-eight ounces respectively." He observed that "a feeble vitality might be maintained for a certain length of time on a diet the staple of which is a pound of rice per diem, but *labour* on public works on such a dietary is out of the question." The body soon begins to die on it, and if this slow death goes on for too long a time, "the Indian labourer finds himself precisely in the condition of the Edinburgh physiologist (Dr. Stark, who tested in his own person the effects of a reduced dietary): he is the victim of a form of starvation from which no amount of subsequent liberality in feeding can save life." The whole paper was masterly, and concluded by showing that it was not possible during the dearth that a man engaged in task-labour, and paid at the rate of one pound of grain per diem, and half an anna in cash, could, either in shape of meat, fish, dhall, milk, or butter-milk, procure a sufficiency to eke out the defects of his grain ration, and by pointing out that "if the one pound of rice be inadequate for the daily ration of a labouring man, it is sufficiently obvious that if he attempt to divide this amount of food with young children, or to do without food one day in the week (on Sundays), the breakdown in strength will come only the faster."

Sir Richard Temple replied to this by two Minutes, dated March 7 and 14 respectively. He adheres to his "opinion" that the new rate might suffice for a relief labourer, and admits that certainly it "was not based on so-called scientific evidence," but "rather on probabilities practically deduced from the condition of the poorer classes in ordinary times, and on the results of general experience"; and insists on the "experiment" being made. But he conceded one point to Dr. Cornish's arguments—viz., he recommended that a subsistence allowance should be granted to children who accompanied their parents to the works, but were too young to work. The "scientific argument" he rather sneers at, but, "having since had the opportunity of making some inquiries on the subject," attempted at the same time to answer it; and to both these Minutes Dr. Cornish makes a crushing reply, in a paper dated April 6. He points out that the "statistical inquiry" alluded to in his first paper was an official one made with great care by every administration in India, and that the experience of the gaols, and the whole experience on which he had rested his opinion as to the insufficiency of the one-pound diet scale, is "Indian experience"; and he expresses his surprise that Sir Richard Temple, "who knew so well in 1874 what the ordinary food of the people was, should write as if there had never existed any periodical medical literature in India, should ignore the fact that every Indian medical authority who has written on the subject of food for prisoners is opposed to his recent opinions." He shows the impossibility of securing anything like a sufficiently accurate observation of the effects of Sir Richard's "experiment," the relief works being "scattered over many thousands of square miles of country," and but indifferently supervised, while "in no instances are the native supervisors qualified to test the results of any special system of feeding or payment, as regards the health of the people"; and he observes that Sir Richard does not seem to be aware of the fact that "a week or two" of low living, while doing much mischief, might still give

(a) The italics are our own.

no results measurable by the eye or by weighing. He states again what is the most usual daily amount of food consumed by a labouring adult, as learnt by himself "after a close practical study of the food of the people of Southern India for the last fifteen years." He then takes up, one after another, Sir Richard Temple's "crucial tests" as regards the alleged discrepancies in theory and practice as to the amount of nitrogen necessary to a successful dietary, and shows in every instance that the amount actually consumed had been incorrectly given, or the dietary quoted had been found disastrously insufficient, or that Sir Richard had been misled by a clerical error in the statement upon which he had relied. And then, as a further unanswerable proof of the terrible insufficiency of the new diet-scale, Dr. Cornish speaks of the result of his experience gained by visiting and examining the condition of the people fed in relief-houses, lunger-khanas, and by private charity. He has been forced to the conclusion that "the famine is pressing with peculiar severity upon certain sections of the labouring classes, who average from 20 to 30 per cent. of the population of the several districts; that amongst these classes there has already been a very large mortality, primarily due to bad and insufficient feeding; and that the condition of the survivors is in many cases critical in the extreme, as shown by the rapidly increasing proportion of persons who are unfit to work, and who have to be fed entirely at the Government expense, to keep the feeble vitality they have from being altogether extinguished"; and he shows that among this class of the population in the Madras camps during the ten weeks ending March 31, the total deaths had been 1571 in a mean strength of 11,005,—"this enormous mortality simply meaning an annual death-rate equivalent to 930·8 per mille of the population constantly under observation, and, in fact, being a death-rate which wipes out nearly the whole of the living within a year." This fearful death-rate was going on, Dr. Cornish asserts, in every relief camp in the country. He found "but little difference in the proportion of deaths, whether in North Arcot, Cuddapah, or Madras"; and the deaths were not due to cholera or small-pox, for "the Madras camps had been singularly free of the former, and by means of vaccination the small-pox epidemic had been controlled." The deaths were due almost entirely to diseases which invariably, in India, attack under-fed and starved people—viz., extreme wasting of tissue and destruction of the lining membrane of the lower bowel. Surgeon-Major A. M. Ross has weighed coolies on the relief works at Nellore, and found their average weight very markedly below that of average "under-trial" prisoners in gaol; and at Madras, Surgeon-Major Porter reported that the average weight of bodies of full-grown men who had died in the relief camps, and whom he had examined, "had varied from fifty-seven to eighty-five pounds." Dr. Cornish may well observe that "it is enough to record this fact to show the extreme wasting going on during life." Dr. Cornish gives statistics which show also that an "appalling mortality" was going on in the famine districts, though, "with the village establishments panic-stricken, and the village messengers away at relief works, it was quite certain that the death registration had been most incomplete." But we cannot afford space for any more quotations from Dr. Cornish's paper, which reflects the highest credit on his ability, industry, and courage, and is an invaluable exposure of the famine policy carried out in Madras. We have surely, however, said enough to show that a most disastrous and unwarrantable "experiment" has been tried on the famine-stricken population in Madras,—disastrous, as is only too clearly proved by Dr. Cornish's statistics; unwarrantable, because such an experiment could only be justifiable when based on fairly-well grounded reasons, the effects carefully watched by scientific observers, and the results recorded with sufficient accuracy to be of value for future use. Whereas in this case none of these conditions are present; the "experiment" here tried was apparently based on the "opinions" only of Sir Richard Temple—opinions which are opposed to experience, and to scientific knowledge; it has been, and for aught we know is being, tried on a scale that precludes the possibility of skilled observation; and no means have been provided for obtaining full or perfect records of the results for guidance in the future. And yet, unless its disastrous effects are officially recognised and acknowledged, when the next Indian famine occurs, the one pound of grain per diem is almost sure to be again taken as the basis of the relief dietary for the sufferers.

THE WEEK.

TOPICS OF THE DAY.

At the Society of Arts, last week, Miss Octavia Hill delivered a lecture on behalf of the National Health Society on "Open Spaces." The Duke of Westminster presided, and her Royal Highness the Princess Louise of Lorne was amongst the audience assembled on the occasion. Miss Hill's address was chiefly directed to the importance and desirability of securing small open spaces near the homes of the poor, which should be carefully preserved and made inviting by the introduction of a few plants and flowers. She argued that the very old and the very young cannot get so far as the parks and the embankments; and in reference to the little garden recently opened and suddenly closed in Drury-lane, Miss Hill said that no wilful destruction had been done there. The fact was, the people availed themselves in such crowds of the unwonted privilege, that the beds were unfortunately trampled on, but she denied that the shrubs had been wilfully injured. Considering how very small the ground was, and how dense the surrounding population, Miss Hill had originally suggested that admission should be by tickets, to be distributed by the workers in the district. As we stated last week, if the Vestry fear the possibility of keeping order, Miss Hill will herself cheerfully undertake to maintain the garden for a year at her own expense. The Duke of Westminster, in proposing a vote of thanks to Miss Hill, spoke of a small London square which he is arranging to throw open to the public; and Mr. Shaw-Lefevre, M.P., in some concluding remarks, said that an Act of Parliament is required to enable a certain majority of the occupiers in squares to agree with the freeholder of the garden to throw it open.

At the beginning of last week, four members of the Municipal Council of Paris—Drs. Bourneville and Loiseau, and Messrs. Lacroix and Combes—spent the day at Earlswood Asylum, and made a minute inspection of every department. The House Committee received the deputation, who, on leaving, expressed their gratification with all they had seen. The architect of the city of Paris last year paid two lengthened visits to Earlswood, and was furnished with a copy of the plans, and a similar asylum is now being erected at Vaucluse and Ville-Evrard.

The twenty-fifth annual meeting of the governors of the Great Ormond-street Children's Hospital was recently held in the Board-room of the Hospital, the Hon. A. Kinnaird, M.P., in the chair. The annual report shows that the new Hospital contains beds for 104 patients in the five general wards, and there are smaller wards for special cases or reserve use, which will receive sixteen children when required. The number of in-patients admitted during the past year was 869, the out-patients' attendance being 9150. The convalescent children are sent to the country hospital at Cromwell House, Highgate, which received 406 patients during the year, and is an invaluable adjunct to the town hospital. The expenditure was £7920 at Great Ormond-street, and £2070 at Cromwell House,

Highgate, and the ordinary income had barely sufficed to meet the expenses, a small deficiency having to be made up from other sources. The progress of the north wing has involved an outlay of £5651, partly provided for by the legacy of £5000 bequeathed to the building fund by the late Mr. Wynne Ellis. The report further referred to the acquisition of a plot of ground to be held under lease from the Foundling Hospital for the purpose of a recreation-ground and garden. It was mentioned incidentally that the governors and subscribers will shortly be invited to inspect the new wing, which is rapidly approaching completion.

It is announced that Mr. Samuel Morley, M.P., has accepted the presidency of the Hospital Saturday Fund, and that the Duke of Northumberland, the Earl of Glasgow, Lord Aberdare, Mr. Gordon, M.P., Mr. Leopold de Rothschild, and Mr. Hodgson Pratt have consented to become vice-presidents. The arrangements for the present year's collection are in course of completion, and the Council anticipate a very favourable result. The names of the noblemen and gentlemen who have thus allied themselves with the undertaking should be a guarantee for improved organisation, and it is to be hoped, as the movement is to be continued, that the proceeds will for the future exceed the very limited amount hitherto realised by the original promoters of the Fund, and that the expenses may be reduced to a much lower percentage.

On the 8th inst., Mr. Payne, the City Coroner, formally opened a new coroner's court for the City. The building is situate within the precincts of St. Bartholomew's Hospital, and has been erected by the governors of that institution, through the instrumentality of Sir Sydney Waterlow, the treasurer. This is the first court of the kind in the City (though another has already been projected), and it will help to do away with the inconvenient and unseemly practice of holding inquests in rooms attached to public-houses. The Coroner publicly thanked Sir Sydney Waterlow and the governors of the Hospital for their kind consideration in the matter, and observed that, high as the coroner's court stood in the estimation of the public, it would stand still higher by what had now been done by the Hospital authorities.

The *Sanitary Record* observes that it cannot be too generally known that, the statements of anti-vaccinators notwithstanding, the average mortality from small-pox in England and Wales since 1853, when vaccination became compulsory, is less than half what it was during the whole period of civil registration which preceded the passing of the Compulsory Vaccination Act.

The monthly report of Dr. John Whitmore on the health of the parish of St. Marylebone for April last shows that diseases of the zymotic class were never less prevalent in the parish—small-pox excepted—than at the present time. From measles and scarlet fever only four deaths occurred, and not one from either typhus or typhoid fever. Whooping-cough, however, shows a tendency to increase. Only one death from small-pox was registered, but the number of small-pox cases sent to the Hospital from the parish during the month was thirty-eight; and the number of deaths that occurred there in the same period amongst patients sent from the parish was eight. Dr. Whitmore states that he has reason to believe that the number of small-pox cases occurring in private practice is steadily decreasing; and if the disease follows the course it took in 1871 we may hope for its rapid decline during the next two months, and in all probability for its entire subsidence as an epidemic by the end of July. Dr. Whitmore further states that it is satisfactory to be able to record that only on two occasions during the present epidemic has he been asked to seek for hospital accommodation for small-pox patients other than that provided at the Asylum Hospitals, and this, on both occasions, he obtained without any trouble at the Small-pox Hospital at Highgate. He is of opinion that the great difficulty yet to be overcome is to get a patient removed to hospital before the contagion of the malady is fully developed. In some instances that have come to his knowledge, all the marked and well-known symptoms of small-pox were present for two or three days before the medical officer of the district was called upon to visit the case, and also before it came to the knowledge of the relieving officer. During that interval many other persons were, in all probability, exposed to the infection, some of whom, no doubt, contracted the disease; and how far the danger resulting from this delay may be avoided by rendering it compulsory on the part of parents, guardians, or medical attendants to notify the existence of every case of infectious disease to the sanitary authority is a question, Dr. Whitmore thinks, very difficult to determine.

The Coventry Sewage Works have recently been handed over to the Rivers' Purification Association, a company which has lately been formed for the purpose of carrying out the requirements of the Rivers' Pollution Act by the best known means for treating town sewage and manufacturing refuse. It being clear that the disposal of the sewage of Coventry by land or irrigation would be too costly to justify its adoption, and that the Coventry system has not only afforded satisfaction, but is cheaper than other known systems, the Corporation decided to continue it, and accordingly passed the following resolution:—"That the system for treating the sewage of this city by precipitation having been in use since April 30, 1874, this Council is well satisfied with its success, and that the same be certified under the common seal and given to the Rivers' Purification Association, with a statement appended thereto that this Council have entered into a contract with them to carry on the said system of purifying the sewage of this city, in consideration of an adequate annual subsidy to the said Association." One of the conditions of the agreement between the Association and the Corporation is that each is to receive half of the receipts of the sale of the manure, which is stated to be much approved of by the farmers in the neighbourhood.

An alteration in the internal management of the Brompton Hospital is proposed by the Committee, who contemplate placing the Matron's Department under the charge of a lady superintendent, appointed specially to supervise the nursing arrangements, and assisted by a housekeeper, who will attend to the domestic details of the establishment.

The case of Glossop *v.* the Heston and Isleworth Local Board, for polluting the River Crane, which flows through the plaintiff's grounds, was again brought before Vice-Chancellor Sir R. Malins. A former application on the same subject was ordered to stand over, to give the defendants time to adopt any means they could for remedying the alleged nuisance, but it was now alleged that no steps had been taken. It further appeared that the Board had had a notice served upon them by the Thames Conservancy, requiring them to remedy the nuisance now complained of, and if they did not comply with that order at once they would be liable to a fine of £50 for every day that the nuisance remained. Considering the effect of this notice, and also looking to the desire which the Board had expressed of doing all in their power to prevent further complaints, the Vice-Chancellor did not think that there was any necessity for granting an immediate injunction; he therefore ordered the case to stand over for a further period of nine months, and in the meantime the pressure brought to bear by the Thames Conservancy would no doubt be sufficient to prevent any further delay in carrying out such works as would be finally decided on.

A Bill has been prepared by Dr. Cameron, Mr. Clare Read, Mr. Ashley, Sir Henry Jackson, Mr. E. Jenkins, and Mr. R. Smith, to facilitate the control and care of habitual drunkards.

It gives the local authorities power to grant licences for the establishment of retreats into which habitual drunkards may be admitted on their own application, or where they may be sent by order of the justices. Power is given to a justice, upon the application of a parent, husband, wife, relative, or guardian of any habitual drunkard, to summon such person; and upon proof that the person summoned is an habitual drunkard, the justices in petty sessions assembled may authorise his apprehension and restraint in a retreat for any term not less than one month, and not exceeding twelve months.

DEATH UNDER ETHER AT THE LONDON HOSPITAL.

An old man, sixty-nine years of age, was admitted into the London Hospital on May 12, suffering with obstruction of the bowels. He appeared old, even for his age. He was in considerable pain, which was referred chiefly to the right iliac region, and there was some tenderness also in the same place, as well as over the rest of the abdomen, which was distended and tense. It appeared from the history that the symptoms dated from two days previously; he was the subject of hernia, which came down from time to time, although he wore a truss. Two days before, his hernia being down, he reduced it, the reduction causing pain. He had been sick previous to the reduction, and the vomiting and pain prevailed afterwards. The surgeon to the case diagnosed a reduction *en masse*, both from the history and also the appearance of a depression in the integument over the external ring; and it was thought that some portion of an old sac, which was adherent to this integument, had been reduced, and was dragging upon the integument, and so giving rise to the depression or dimpling of the soft parts. With a view to get the hernia down, and to obviate the struggling which the pain of this process gave rise to, ether was administered. Clover's inhaler was used. For about thirty seconds he inspired only his expired air; he then had, for about a minute, one-quarter to a half ether. There was some struggling at the commencement, and he did not breathe in the ether well. The mouthpiece was therefore frequently removed from his face. The amount of ether was then diminished, and as his lips looked blue it was entirely stopped; his breathing improved a little, but was not quite satisfactory. His pulse gradually became weaker, and finally stopped; respiration, however, continuing for thirty seconds or more. Sylvester's method of artificial respiration and galvanism were resorted to without success. The post-mortem examination showed that a large coil of small intestine had got caught in a figure-of-eight-shaped loop of mesentery adherent by both ends to peritoneum under the above-mentioned pouch. The intestine was very much inflamed and of a deep purple colour. Left ventricle uncontracted and flaccid. Lungs: Extreme emphysema, and containing little blood. Slight bronchitis. It would seem as though the man died more of shock than of ether. The jury also held this view, and returned—"Death from natural causes."

INVESTIGATION ON PYÆMIA BY THE PATHOLOGICAL SOCIETY.

At the last meeting of the Pathological Society for the session, on Tuesday evening, the President made the very gratifying announcement that a sum of £350 has been granted to the Society by the Local Government Board for the investigation of the nature of pyæmia and allied diseases. In a memorial addressed to Mr. Sclater-Booth, along with an application for a grant of money, the attention of the Local Government Board was invited to several considerations as showing the importance of an inquiry into the nature, causes, and prevention of the infective diseases known as pyæmia, septicæmia, purulent infection, and puerperal fever. It was pointed out that the lives that are daily sacrificed to these affections are not only very numerous, but in many instances the lives of persons whose existence is of the greatest value to the community; that although the causes are unquestionably of such a nature as to admit of investigation, the actually existing knowledge of those causes is extremely imperfect; that the field of research afforded by the hospitals of London is of unrivalled extent; that this field could only be rendered available with the co-operation of the surgeons and physicians of those institutions, all of whom had already declared their willingness to give their most cordial support and assistance to the proposed scheme; and, finally, that such an investigation is calculated to throw light upon the intimate nature of the whole class of infective diseases. The grant having been obtained, the investigation will accordingly be undertaken at once, and the matter has been entrusted to a committee of the Society. Four of the members are to constitute the working committee, and to carry on the investigations—namely, Mr. Marcus Beck, Dr. Greenfield, Mr. McCarthy, and Dr. Ralfe. The other members consist of representatives of the metropolitan hospitals, and will co-operate with the working members in organising and carrying out the research; they are Dr. Broadbent, Mr. Callender, Dr. Green, Mr. Prescott Hewett, Mr. Hilton, Mr. Holthouse, Mr. Hulke, Mr. Hutchinson, Dr. Murchison, Dr. Burdon-Sanderson, and Mr. Wood.

THE COOMBE LYING-IN HOSPITAL, DUBLIN.

This ancient and valuable institution, which has been partially closed for the past five years during the process of rebuilding, was reopened on Saturday afternoon, May 12, by his Grace the Lord Lieutenant of Ireland, K.G.; her Grace the Duchess of Marlborough was also present. The spacious and admirably constructed buildings have been erected and furnished almost wholly at the cost of the late Sir B. Lee Guinness, Bart., and his son, Sir Arthur E. Guinness, Bart., M.P. The accommodation afforded by the new Hospital, with the "Guinness Dispensary" wing, will be some sixty beds. On the first floor are the board-room, the offices of the master and his assistants, the residences of the extern and intern pupils, etc. The second and third floors contain between them six wards—large, airy, well-ventilated, lightsome apartments, with lofty ceilings and every sanitary convenience adapted to secure the health and comfort of the inmates. The ceremonial of opening the Hospital took place in the Lady Olive Guinness ward. The chair was occupied by the Right Hon. the Lord Mayor. An address to the Lord Lieutenant was read, to which his Grace made a suitable reply. The Master (Dr. G. H. Kidd) then read a sketch of the history and working of the Hospital from its foundation in 1826 to the present time. In it he stated that the Hospital was founded by some humane citizens of Dublin, because in the severe winter of 1826 two poor women, in a vain attempt to reach the Rotunda Lying-in Hospital on the north side of the city, had perished with their offspring in the snow. After the passing of a series of resolutions, his Grace the Lord Lieutenant declared the Hospital open, and expressed a hope that in the future it might prove an increased and ever-increasing blessing to the poverty-stricken liberties of Dublin, and to the city at large. The proceedings then terminated.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The eighth and last meeting of the twenty-first session was held on Friday, May 4, at the Royal Kent Dispensary, Greenwich-road; W. Johnson Smith, F.R.C.S., senior Vice-President, in the chair. The following cases were brought forward for discussion:—Dr. F. Moon, Uterine Fibroids; Dr. R. Gooding, case of Prostatic Disease; Dr. H. K. Hitchcock, case of Acute Orchitis; Dr. H. Wilcox, Treatment of Chronic Leg-Ulcers; Dr. J. Anderson, Simaruba Bark in Dysentery; Mr. H. G. Cable, case of Aortic Aneurism, with pathological specimen. The annual dinner will take place on Thurday, June 28, at the "Ship," Greenwich, at 6 for 6.30 p.m. precisely.

THE LATEST CONJOINT EXAMINATION SCHEME FOR IRELAND.

The Committee appointed by the Colleges of Physicians and Surgeons in Ireland to consider and report on the subject of a combined examination for the two diplomas, and which was constituted by six delegates from each corporation, met at the College of Surgeons on March 22 and 27 and on April 10. The President of the College of Surgeons, being in the chair, opened the proceedings by explaining that the delegates had no powers further than to consider the subjects brought under their notice, and to report to their several colleges; and in this the President of the College of Physicians concurred. After mature deliberation and discussion, the following resolutions were unanimously adopted:—"1. That it is desirable that a combined examination should be held by the Colleges of Physicians and Surgeons for the granting of their licences. 2. That any arrangement which may be come to for combined examination shall not preclude either College from granting its licence independently to such candidates as may present themselves to either College. 3. That the fee for the combined diploma shall be £31 10s., which sum shall be divided between the Colleges of Physicians and Surgeons in the proportion of three-eighths to the College of Physicians and five-eighths to the College of Surgeons. 4. That every candidate seeking admission to the combined examination shall complete such curriculum as each College requires. 5. That the Colleges be recommended (in case the combined examination scheme be approved by them) to appoint a committee of four (two elected by each College) to report to the Colleges on the details of the combined examination."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Society of Medical Officers of Health has had under its consideration the resolutions adopted by the Managers of the Metropolitan Asylum District Board respecting the provisions for the isolation and treatment of epidemic infectious disease in London, a copy of which has been forwarded to each of the sanitary authorities and medical officers of health of the metropolis, inviting an expression of opinion thereon. The Society agrees with the opinion of the Managers, "that adequate provision for the isolation and treatment of epidemic infectious disease in the metropolis does not exist"; and under existing circumstances the Society endorses the conclusion (*a*) contained in the above-mentioned resolutions—"That such provision could be best made in a comprehensive and systematic manner by one Central Authority acting for the whole metropolis." As regards the constitution of the Authority and the administration of the infectious disease hospitals, the Society is of opinion that such hospitals, regarded in the light of a sanitary provision for the advantage of the general population, should be completely dissevered from any relation with pauperism.

UNIVERSITY COLLEGE HOSPITAL DINNER.

Under the presidency of Sir Henry Thompson, a large party sat down to dinner on the evening of Wednesday, the 10th, at Willis's Rooms, on the occasion of the annual festival in aid of the funds of University College Hospital. Many friends mustered to support the artist-surgeon, and a very pleasant evening was spent. It is always a matter for regret that on these occasions the response from a monetary point of view is never equal to the demands of such an important charity and educational institution as University College Hospital.

MEDICAL ACTS AMENDMENT.

The first and most important clause of the above Amendment Act, which was read a first time in the House of Commons on May 2, runs as follows:—"1. Section 40 of the said recited Act shall be repealed, and in lieu thereof it is enacted: Any person who for the purpose of any Act of Parliament, or for the purpose of gain, shall take or use any medical or surgical name, title, or description, unless such person's qualification or qualifications entitle such person to take or use such name, title, or description, and such qualification or qualifications be also registered, shall, upon summary conviction for either or any such offence, pay a sum of £20. And it is further enacted: That any person not already registered, or not qualified at the time of the passing of this Act to be registered under the said recited Act, who shall practise medicine or surgery for gain, unless such person holds a duly registered qualification or qualifications in both medicine and surgery, shall, likewise, upon summary conviction for either or any such offence, pay a sum of £20."

THE GENERAL MEDICAL COUNCIL.

Her Majesty the Queen has been graciously pleased, on the nomination of the Lord President of the Privy Council, to appoint Dr. Alfred Hudson, ex-President of the King and Queen's College of Physicians, and lately Physician to the Meath Hospital and County Dublin Infirmary, as a member of the Council in the room of Dr. Stokes, resigned. There is every reason to believe that this appointment will give the liveliest satisfaction in Ireland.

MEDICAL PARLIAMENTARY AFFAIRS.

Cattle Plague.—Lord Sandon said that special powers of making rules for infected places in the metropolis were given under the Contagious Diseases Act. By it local authorities may prohibit the movement of cattle within infected areas. He further stated that it is not contemplated to make any alteration in the mode of disinfecting pens, trucks, vans, etc. The whole question of disinfection is now under consideration. Alluding to the alleged reappearance of cattle plague in Hull, Lord Sandon said that there had been no cases reported in that district since March 22. The local authorities are making a fresh survey of all the dairies in the vicinity where the cattle plague has been reported.

Canal Boats.—Mr. Sclater-Booth said that the Government proposed to make an inquiry with a view to legislating for the better supervision and management of the traffic upon canals, to prevent the overcrowding of the boats with women and children.

Vaccination.—Earl Percy will, on June 1, move in the House of Commons that it is expedient that an inquiry should be instituted into the practice of vaccination, for the purpose of ascertaining whether it cannot be conducted in a more satisfactory manner than at present. So far as the compulsory powers for vaccination are concerned, there is doubtless much room for improvement. The crafty counsels of the Anti-Vaccination League, in sowing broadcast the seeds of rebellion into the already prepared soil of ignorance and superstition, has done much to hinder the universal application of the Act. So many people know how to dodge the vaccination officer. In fact, all that is necessary is to abstain from registering the birth, or, having done so, to change their residence—a luxury which the poor and middle classes are rather fond of indulging in; and they need have no fear that their sin will be found out. Compulsory registration of all births by the person responsible for the delivery of the child is the only remedy which appears to us calculated to check this growing evil.

Anatomical and Physiological Examination.—The following were the questions submitted to the candidates at the primary examination for the diploma of Membership of the Royal College of Surgeons on the 11th inst., viz:—1. Describe the minute structure of the female breast, and the composition of milk. 2. What is rigor mortis? and what changes take place in the muscular fibre? State the circumstances which influence the period of its advent, its duration, and degree. 3. Describe the upper third of the femur. 4. Give the origin, insertion, and nerve-supply of the two pterygoid muscles. What parts pass over, under, and through the external pterygoid? 5. Enumerate the meningeal arteries of the brain. State the vessels from which they are derived, and the foramina by which they enter the skull. Give the course of the middle meningeal artery within the cranium, and name its branches. 6. Describe the relations of the urinary bladder in both sexes, and the arteries by which it is supplied.

FROM ABROAD.

Prizes and Prize Questions of the Académie des Sciences. At the annual meeting of the Académie, among the numerous prizes for 1876 distributed, the following are interesting to the medical profession:—1. The Statistical Prize: A highly honourable mention is accorded to M. Bertillon for his Atlas, entitled "Demography of France; Mortality according to Sex, Age, and Occupation for each Department, and France in General. Folio, 1876." 2. The Barbier Prize is adjudged to Prof. Planchon for his recent work on Materia Medica, in ten volumes. The sum of 1000 fr. is also accorded to MM. Gallois and Hardy for their researches on the Bark of *Erytrophlœum;* and one of 500 fr. to M. Lamarre for his work on the Treatment of Pertussis. 3. The Montyon Prize is accorded to MM. Feltz and Ritter for their Clinical and Experimental Investigation on the Action of Bile and its Principles when introduced into the Economy; to M. Paquelin for the invention of his Thermo-Cautery; and to M. Perrin for his Practical Treatise on Ophthalmoscopy and Optometry. Honourable mentions are also adjudged to MM. Mayencon and Bergeret for their Researches in the tissues and humours of the body for metals, preparations of which have been swallowed either experimentally or as medicines or as poisons; to M. Mayet for his Statistics of the Medical Services of the Hospitals of Lyons; and to Prof. Sanson for his Experimental Researches on Respiration in the Large Domestic Mammalia. The following publications are also deemed worthy of notice:—M. Farabeuf on the Dislocation of the Thumb Backwards; M. François Franck on the Variations in the Peripheric Circulation; M. Gayon on Spontaneous Alterations in Eggs; M. Badal on International Metric Optometry; M. Barćty on Tracheo-Bronchial Adenopathy; M. Brochard, The Truth concerning New-born Infants; M. Jolly on Tobacco and Absinthe; MM. Labbé and Coyne on Benign Tumours of the Breast: M. Laveran on the Diseases and Epidemics of Armies; M. Leclerc on the History of Arabic Medicine; M. Poincaré on the Peripheric Nervous System; and M. Poncet on a Case of Purulent Choroiditis and on the Termination of the Nerves of the Conjunctiva. 4. The Montyon Prize on Experimental Physiology is accorded to MM. Morat and Toussaint for their work on the Variation of the Electrical Condition of the Muscles in the different forms of Contraction. A medal of 500 fr. is also accorded to M. Mialhe for his Researches on the Digestion and Assimilation of Amyloid, Saccharine, and Albuminoid Substances. 5. The Montyon Prize on Unhealthy Occupations is accorded to M. Melsens for his Researches on the Employment of Iodide of Potassium in the Treatment of Mercurial and Saturnine Diseases.

Among the prize questions for 1877-80 the following are of medical interest:—1. The Lacaze Prize. Three prizes of 10,000 fr. each will be awarded at the annual meeting of 1877 for the three works or memoirs which have most contributed to the progress of Physiology, Physics, and Chemistry. 2. The Jecker Prize of 10,000 fr. will from the year 1877 be decreed annually for the work which has most contributed to the progress of Organic Chemistry. 3. The Barbier Prize of 2000 fr. will be annually decreed to whoever has made a valuable discovery in Surgical, Medical, or Pharmaceutical Science, or in Botany having relation to the art of healing. 4. The Montyon Prizes in Medicine and Surgery will be annually given to the authors of works or discoveries which shall be deemed of the greatest utility in the art of healing, and to those who have found out the means of rendering an art or an occupation less insalubrious. 5. The Bréant Prize of 100,000 fr. for the discovery of the Cure of Cholera not being likely to be awarded at present, the interest of that sum will be adjudged annually to whoever advances our knowledge concerning cholera or other epidemic disease. 6. The Godard Prize of 1000 fr. is given annually for works on the Physiology and Pathology of the Genito-Urinary Organs. 7. The Serres Prize will be adjudged in 1878 for works on General Embryology applied as far as possible to Physiology and Medicine. 8. The Chaussier Prize of 10,000 fr. will be given in 1879 for the best work which has appeared during the preceding four years on Medicine, whether it be on practical medicine or legal medicine. 9. The Desgate Prize of 2500 fr. will be decreed in 1880 for the best work on the Diagnostic Signs of Death and the Prevention of Premature Interments. 10. The Montyon Prize of 764 fr. in Experimental Physiology will be given annually for the work, whether printed or MS., which is deemed to have contributed most to the progress of experimental physiology. Competing works and essays to be forwarded to the Academy by June 1 of each year.

GENERAL CORRESPONDENCE.

THE DENTAL REFORM COMMITTEE.

Letter from Mr. J. Smith.

11, Wemyss-place, Edinburgh, May 10.

Sir,—I feel it to be inconsistent with my opinions, and the official position held by me in the Royal College of Surgeons of Edinburgh, that my name should longer continue on the Dental Reform Committee. I beg therefore that it be at once withdrawn.

I trust that the Royal College of Surgeons of England will not be induced to attempt violating the rights and powers of the other licensing bodies throughout the kingdom, nor the General Medical Council be found prepared to stultify its own Act of 1858, in the manner those favoured by the College with its certificate of fitness to practise dentistry desire and seem to expect.

I also regret to find a policy adopted by the Dental Reform Committee endorsing that moral "picketing" of every fully qualified medical man found in the ranks of dentistry which has of late been so prevalent, and which ought to have been left to those aspiring, first to reach by a side-wind the designation of "surgeons," and next to usurp their position and privileges.

Meanwhile it is to be hoped that the interests of the various distinguished licensing boards throughout Great Britain will be protected by the Medical Council strengthening those clauses in that Act by which its terms, as already existing, may be more simply and more effectually enforced.

J. Smith Turner, Esq. I am, &c., J. Smith.

[We publish the above at Mr. Smith's request, and as a sample of many letters received on the same subject. We trust that the very respectable body alluded to will see the slough into which Mr. Turner—with, we are sure, the best intentions in the world—has been leading them, and will think more seriously before severing their connexion with the medical profession.—Ed. *Med. Times and Gaz.*]

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, April 27.

Thomas Bryant, F.R.C.S., Vice-President, in the Chair.

(*Concluded from page* 518.)

Case of Idiopathic Tetanus, successfully treated by Large Doses of Bromide of Potassium.

Dr. Southey read notes of this case of idiopathic—or, as he preferred to call it, rheumatoid—tetanus, which occurred in a boy ten years of age. The first symptoms of trismus were observed two days after a severe fright and drenching, due to the upset of a water-butt. They steadily exacerbated up to the date of his admission into St. Bartholomew's Hospital, upon the eighth day of his illness, when the paroxysms of general opisthotonos seized him at intervals of nearly every three minutes. Usually, when the spasms began, he uttered a short gasping cry. Each attack lasted from fifteen to thirty seconds, and although between the seizures the muscles of the trunk became less rigid, those of the neck and jaw were maintained in constant tonic cramp. The patient was treated at first with chloral, ten grains, and bromide of potassium, twenty grains, every two hours; and afterwards with the bromide alone in sixty-grain doses every hour and a half. When about two ounces of the bromide were taken in the twenty-four hours, the attacks became less frequent; but at first each separate seizure was rather more

severe; and upon the evening of the eleventh day he was able to open his mouth better. On the thirteenth day the bromide was decreased to twenty grains every three hours, and on the fourteenth day was discontinued altogether. When the bromide had been omitted for twenty-four hours, the attacks returned at intervals of an hour, and the permanent rigidity of the muscles of the neck was re-established. His condition now steadily became worse, so that, upon the eighteenth day of illness, it became necessary to revert to the previous large doses (a drachm and a half) every hour and a half. After three such doses the expression became more natural, and he was able to open his mouth again; but it was not till the twenty-fifth day of the disease that it was possible to discontinue the remedy. The patient remained in a state of remarkable prostration and drowsiness, sleeping the twenty-four hours round, and only waking up to take nourishment, for eight days, and passed all his evacuations under him. He subsequently steadily and rapidly convalesced. The bromide produced no acne or other objectionable symptom, and certainly appeared to exert marked inhibitory influence upon the tetanus. The quantity of urea passed by this patient during the continuance of the tetanus was observed by Mr. Pye, and was appended to the case. The largest quantity per diem amounted to 16 grammes; the smallest was 10·4, the mean average 12·72 grammes. During convalescence the largest amount observed was ·18 grammes, the smallest 10·66, the mean average of four days 13·54. In answer to Dr. Yeo, Dr. Southey stated that the boy had been seen three months afterwards; he was then in good health, and fairly well nourished.

Case of Parenchymatous Nephritis, in which the Dropsy was combated by Drainage-Tubes.

Dr. Southey brought this case, in which there was extreme general anasarca, before the Society; but, in consequence of the lateness of the hour, it was taken as read. The capillary drainage-tubes, however, and small silver canulæ employed by him in the treatment of the general dropsy, were exhibited by him. The canulæ were scarcely larger than the ordinary subcutaneous injecting-needles, and were introduced by a fine trocar. They terminated with a little bulbous extremity, over which the capillary indiarubber tube was drawn after its introduction into the dropsical limbs. A tiny thread and small piece of adhesive plaster sufficed to maintain the canula in the skin, and the connected drainage-tube was conducted below the patient and into a pan beneath his bed. The large amount of serous fluid which might thus be withdrawn in dropsical subjects from a single prick in each leg was quite surprising. The fluid continued to drip away for as many hours as the tube was retained *in situ*, and this without any discomfort to the patient. No escape of fluid took place beside the canula. The whole was conducted outside the bed, and several pints usually thus drained away from highly dropsical subjects each twenty-four hours. The advantages were manifold of this exceedingly simple and cleanly method of relieving anasarca when this was extreme. 1. Instead of several needle-pricks, all of which were painful and quite likely to form troublesome sores and centres for erysipelas to depart from, one, or at most two—only one for each limb—were needed. 2. The skin round about the puncture was not macerated by the oozing serum, nor irritated by it. 3. The patient was kept dry and warm and clean in bed. 4. The relief obtained was more speedy as well as more thorough. 5. Should the escape of fluid prove too rapid and become attended by circulatory disturbance in the dropsical limbs, or by uræmic symptoms, the quantity drawn off could be easily regulated, controlled, or temporarily arrested, by a tiny clamp placed upon the tube. 6. The serous fluid, which in cases of renal anasarca contained very large amounts of urea, could be tested for this, and the quantity thus escaping be exactly ascertained. Thus, in the particular case brought forward by Dr. Southey, the average amount of urea which was thus excreted amounted to 4·7 grammes, or 72·56 grains, for twenty-four hours. In point of fact, Dr. Southey had drawn off as much as fourteen pints of serous dropsical fluid in twenty hours from a patient by two such tubes; and, in answer to questions put to him, he was able to state that he had seen no inconvenience arise from the maintenance of the canula in the skin in the same situation for forty-eight hours; the prick-hole closed at once and without ulcerating when it was withdrawn; and it was his belief that this mode of treating extreme and unyielding anasarca, from whatever cause arising, would come to be very widely adopted. The whole apparatus was as simple as it was easy of application, and entirely efficacious. In answer to Mr. Howse, Dr. Southey remarked that the puncture was most conveniently made in the calf of the leg or dorsum of the foot. The canula was introduced into the cellular tissue.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, May 8, 9, and 10, the following candidates obtained the Licence to practise Medicine:—

Andrew, Albert.
Atkins, Louisa.
Cox, Michael Francis.
Davies, William Rees.
Grant, Charles Scovell.
Jex-Blake, Sophia.
Knox, Charles.
Peacocke, James Chas. Harding.
Pechey, Mary Edith.
Philip, Alexander.
White, Thomas Edward.

The Licence to practise Midwifery was granted to—

Andrew, Albert.
Atkins, Louisa.
Connolly, William Rogers.
Cox, Michael Francis.
Grant, Charles Scovell.
Jex-Blake, Sophia.
Knox, Charles.
McIvor, Robert.
Peacocke, James Chas. Harding.
Pechey, Mary Edith.
Philip, Alexander.
White, Thomas Edward.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 14th inst., and, when eligible, will be admitted to the pass examination, viz.:—

Allnutt, John, student of the Manchester School.
Broadbent, G. H., of the Manchester School.
Collins, E. T., of the Birmingham School.
Elliot, Henry, of the Newcastle School.
Fielding, Edward, of Guy's Hospital.
Jones, V. A., of the Birmingham School.
McClelland, Joseph, of the Belfast School.
Murray, C. H., of St. Thomas's Hospital.
Parkes, L. C., of University College Hospital.
Read, Mabyn, B.A. Cantab., of the Cambridge School.
Sturge, H. H., of Guy's Hospital.
Tuchmann, Mars, of the Berlin School.
Twynam, G. E., of University College Hospital.
Woods, A. A., of the Belfast School.

Twenty-six candidates were rejected. The following gentlemen passed on the 15th inst., viz.:—

Barns, J. G., student of Guy's Hospital.
Cross, T. B., of Guy's Hospital.
Davies, J. D., of St. George's Hospital.
Flower, G. J., of Guy's Hospital.
Gosse, H. W., of Guy's Hospital.
Harper, C. J., of Guy's Hospital.
Higson, James, of St. Bartholomew's Hospital.
Hoskyn, D. F., of the London Hospital.
Knipe, F. A. P., of Guy's Hospital.
Morse, R. E. R., of Guy's Hospital.
Payne, A. B., of St. Bartholomew's Hospital.
Rudd, C. F., of St. Bartholomew's Hospital.
Slate, Alfred, of St. Bartholomew's Hospital.
Walter, W. H., of St. Bartholomew's Hospital.
Wilde, Frederick, of University College Hospital.

Eight candidates were rejected. The following gentlemen passed on the 16th inst., viz.:—

Back, A. H., M.A. Cantab., student of St. Bartholomew's Hospital.
Bayes, Frederick T., of Guy's Hospital.
Cockell, E. Seaton, of Guy's Hospital.
Combe, F. Orloff, of Guy's Hospital.
Downes, C. Hagger, of Guy's Hospital.
Edwards, James, of St. Bartholomew's Hospital.
Elliott, Nicholas, of St. Bartholomew's Hospital.
Gotch, Francis, of University College Hospital.
Howell, T. A. Ives, of Guy's Hospital.
Mathews, S. R. Harvey, of Guy's Hospital.
Nall, Samuel, B.A. Cantab., of St. Bartholomew's Hospital.
Pope, H. F. Montague, of St. Bartholomew's Hospital.
Reynolds, J. Jones, of Guy's Hospital.
Scott, Alfred, of Guy's Hospital.
Wilkins, H. G. Gastrill, of St. Bartholomew's Hospital.
Wilson, Henry Clark, of the London Hospital.

Eight candidates were rejected. The following gentlemen passed on the 17th inst., viz.:—

Bayer, Frederic B., student of Guy's Hospital.
Bothamley, W. Parkinson, of Guy's Hospital.
Chillingworth, Andrew, of St. Bartholomew's Hospital.
Cock, John, of Guy's Hospital.
Crossley, Charles, of Guy's Hospital.
Davies, E. Naunton, of Guy's Hospital.
Elliot, Frederick J., of Guy's Hospital.
English, Edgar, of the London Hospital.
Lungley, Alexander P., of Guy's Hospital.

Morse, T. Herbert, student of Guy's Hospital.
Sercombe, William H., of Guy's Hospital.
Smith, James S., of Guy's Hospital.
Steele, Richard, of Guy's Hospital.
Viney, Josiah E., of Guy's Hospital.

Eleven candidates were rejected.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday May 10:—

Beard, Spencer Francis, Norwich.
Hodge, Arthur, Liskeard, Cornwall.
Jervis, Henry Prince, Bombay.
Miller, Richard Shalders, Wisbeach, Cambs.

The following gentleman also on the same day passed his primary professional examination;—

Leftwich, Charles Hareourt, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DAVY, RICHARD, F.R.C.S.—Joint-Lecturer on Surgery at the Westminster Hospital, with George Cowell, F.R.C.S.

FONMARTIN, HENRY DE, L.S.A.—Physician to the Out-patients at the Lying-in Hospital, York-road, Lambeth.

HAYES, THOMAS CRAWFORD, M.D.—Physician to the General Lying-in Hospital, York-road, Lambeth.

HODGES, FRANK H., M.R.C.S. Eng., L.S.A.—Honorary Ophthalmic Surgeon to the Leicester Infirmary.

HUTTON, CHARLES, M.R.C.P. Lond., M.D. St. And.—Consulting-Physician to the General Lying-in Hospital, York-road, Lambeth, *vice* Dr. Cape, deceased.

WARDEN, CHARLES, M.D., Senior Honorary Medical Officer to the Birmingham Ear and Throat Infirmary—Honorary Surgeon to the Birmingham Institution for Deaf and Dumb Children, *vice* Alfred Baker, F.R.C.S., resigned.

BIRTHS.

CLARKE.—On May 8, at Southborough, Tunbridge Wells, the wife of Wm. Fairlie Clarke, M.D., of a son.

CURGENVEN.—On May 9, at 41, Friar-gate, Derby, the wife of Wm. Grafton Curgenven, M.D., of a daughter.

FAUGHT.—On May 7, at Gravesend, the wife of Surgeon-Major J. G. Faught, M.R.C.S. Eng., of a daughter, born dead.

LACEY.—On May 11, at Plumstead, Woolwich, the wife of T. Warner Lacey, L.R.C.P., of a son.

SCULTHORPE.—On May 9, at Tamworth, the wife of A. M. Sculthorpe, L.R.C.P., of a daughter.

STOCKER.—On May 10, at 2, Montague-square, the wife of J. Sherwood Stocker, M.D., of a son.

MARRIAGES.

REID—BEATSON.—On May 8, at Christ Church, Clifton, John Maitland Reid, M.A., Exeter College, Oxford, to Isabel, eldest daughter of W. B. Beatson, M.D., Civil Surgeon, of Nagpur.

STANGER—GREEN.—On May 15, at the parish church of March, Cambs, William Stanger, F.R.C.S., of Wakefield, eldest son of George Eaton Stanger, M.R.C.S., of Nottingham, to Mary Margaret, eldest daughter of the Rev. J. Wastie Green, rector of March.

WELLS—CAMPBELL.—On May 5, at Edinburgh, Eugene Wells, of Chelmsford, to Gertrude, youngest daughter of Duncan Campbell, M.D., of Toronto.

DEATHS.

BISHOP, EDWIN, M.D., of Culworth Hall, Northamptonshire, on May 1, of general paralysis.

FRANCIS, ANNE CONSTANCE, fourth daughter of Thomas Francis, L.R.C.P. Edin., at Acton, Middlesex, on May 12, aged 16 years.

MANLEY, JOHN, M.D., late of Westbury House, Barking, Essex, at Teddington, on May 16, aged 80.

PEACOCK, THOMAS, M.D., at Stenhouse, Liberton, Edinburgh, on May 12, aged 76.

TURNER, JAMES WILLIAM, F.R.C.S., at 31, Lower Phillimore-place, Kensington, on May 10, aged 59.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BECKETT HOSPITAL AND DISPENSARY, BARNSLEY.—House-Surgeon. Candidates must hold a diploma from one of the recognised Universities of the United Kingdom, or from one of the Royal Colleges of Surgeons, and must also be a Licentiate of the Apothecaries' Company of London. Applications, with testimonials, to the Secretary at the Hospital.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Candidates must be registered, and possess both a medical and surgical qualification. Applications, together with original testimonials and certificates of registration, to Alex. Forrest, Secretary, on or before May 23.

CARNARVONSHIRE AND ANGLESEA INFIRMARY, BANGOR.—House-Surgeon. Candidates must be registered to practise in medicine and surgery, and acquainted with the Welsh language. Applications, with testimonials, to the Secretary, on or before June 14.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Candidates must have a double qualification, medical and surgical, and be duly registered. Testimonials to the Chairman of the Board of Management, on or before May 21. Candidates must state their age.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. Eng. or M.C. of some British University, and L.A.C. Applications, with testimonials, to Mr. C. Rolandson, Hon. Sec., The College, Durham, on or before May 30.

ST. PETER'S HOSPITAL, 54, BERNERS-STREET, W.—House-Surgeon. Duly qualified. Board and lodging given; no salary. Applications, with testimonials, to the Secretary, on or before May 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Beverley Union.—Mr. John Hartley has resigned the No. 1 District; area 13,293; population 7424; salary £34 per annum.

Knaresborough Union.—Mr. J. F. Hartley has resigned the Harrogate District; area 13,069; population 9146; salary £55 per annum.

APPOINTMENTS.

Andover Union.—John H. Gilmour, M.R.C.S. Eng., L.S.A., to the Sixth District.

East Grinstead Union.—Timothy Henry Martin, M.R.C.S. Eng., L.S.A., to the No. 4 District.

Leek Union.—Albert Octavius Haslewood, M.R.C.S. Eng., L.S.A., to the Longnor District.

Machynlleth Union.—Thomas Davies, M.R.C.S. Eng., to the Llanwrin District.

Monmouth Union.—George Dale, M.B. and C.M. Glasg., to the Skenfrith District.

St. Luke, Chelsea, Parish.—Wm. D. Stamp, M.R.C.S. Eng., L.R.C.P. Edin., as Assistant Medical Officer to the Workhouse and Infirmary.

Westbury and Whorwellsdown Union.—Philip Charles Hayman, M.R.C.S. Eng., L.S.A., to the Third District.

West Hampnett Union.—Charles Sturges Jones, M.R.C.S. Eng., L.S.A., to the Singleton District.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The next meeting, being the last of the session, will be held this evening (Friday, May 18), at half-past seven. 1. Presentation of testimonial to Dr. Vinen. 2. Dr. Corfield will call attention to the decision of the Court of Exchequer in the case of Wilson *v.* Hatton. 3. Dr. Thomas Stevenson will read a short paper "On an Epidemic of Typhoid Fever connected with Milk Supply." 4. Wm. Whitaker, Esq., B.A., F.G.S., will read a paper entitled "Some Questions relating to the Water-Supply of London."

THE BENEVOLENT FUND OF THE PHARMACEUTICAL SOCIETY.—The decennial dinner in aid of the Benevolent Fund of the Pharmaceutical Society of Great Britain took place at the Freemasons' Tavern on Tuesday last under the presidency of Mr. John Williams, President of the Society. More than two hundred of the leading chemists and druggists of London and the provinces were present, together with several representatives of the medical profession. After the usual loyal and patriotic toasts had been drunk, "The Medical Profession" was proposed in very happy terms by the Treasurer of the Society, and replied to by Dr. Risdon Bennett, President of the Royal College of Physicians. In proposing the toast of the evening, "Success to the Benevolent Fund," the President stated that in addition to making a number of grants varying from £5 to £20 to chemists, or the families of chemists, in needy circumstances, the Council had voted twenty-one annuities of £30 each to deserving cases. The Council were anxious to do a larger amount of good, but this was not possible without an increased annual income. He therefore called upon members of the Society to support the Fund more liberally. He pointed out that there are no less than 11,000 of the 14,000 chemists now on the Register who do not subscribe to the Fund.

THE HEALTH OF LIVERPOOL.—The Report of the Health of Liverpool for 1876, compiled by Dr. J. Stopford Taylor, Deputy Medical Officer of Health for the borough, presents no feature which calls for special comment at our hands. The births during the year were 20,426, and the deaths 14,347, being respectively at the rates of 39·2 and 27·5 per 1000 of the population. The deaths of infants below five years of age were 6827, and comprised 47·6 per cent. of the whole deaths. The increase is attributable to the prevalence of measles and whooping-cough during the first two quarters of the year. Diarrhœa, which is one index of the insanitary condition of a town, shows a marked decline, the deaths from this cause being 694, against 842 in the previous year. The ventilation of the sewers is progressing rapidly, and the completion of the work will be attended by great benefit to the town. Following the example of the metropolis, it appears that the inhabitants of the town are gradually removing for

residence to the out-townships; thus, the borough engineer's table shows that whilst 143 houses in the parish and fifty-seven in the out-townships were demolished during the year under notice, during the same period twelve houses were built in the parish, and 2331 in the out-townships. The tables which illustrate this Report are very fully and carefully compiled.

FROM the *Leisure Hour* we extract the following "Plea for Printers":—It is intended that the Caxton Celebration shall be rendered subsidiary to the benevolent action of the Printers' Pension institution. That is just as it should be, and is probably the very thing the brave old Westminster printer would have wished if he could have been consulted in the matter. We trust the fruits of the celebration will be solid and substantial, and we are justified in expecting they will be so when we consider the attractions of the exhibition. It is true, as has been well said by Sir Charles Reed, that "there is no other class in the country who do so much for the public, and, at the same time, so little for themselves. . . . Printers, to use a phrase well understood among themselves, at the best have 'hard lines' of it. Theirs is a work which brings into play, not the skilled labour of the hand alone, but the highest faculties of the mind; their work is not a work of the day only, but they are found toiling at the midnight hour, and often into the small hours of the morning, to gratify the public taste and to elevate the intellectual and moral standard of the entire community. In doing this they expend the bone, the muscle, and the fibre of the physical frame, and they draw so largely upon their mental powers that they almost necessarily reduce the amount of vital energy, and render themselves more assailable by distemper and disease, falling victims often at an early period of life to the labour they have undergone." This picture is far from overdrawn; indeed, as the writer knows full well, it comes far short of the actual fact, the fact being that in cases of urgency there is no limit to the labours of the journeyman printer other than his physical powers of endurance—so long as he can stand on his feet, or keep his eyes open, he works on. In truth, he is compelled to do so, owing to the conditions under which his labours have to be pursued. As a consequence, men often succumb to disease or infirmity before they have had sufficient opportunity to make any provision for the future of those dependent upon them. It is for workers thus situated that the institution for which we would plead was established, and during the last half-century it has been helpful to numbers of the afflicted and bereaved. Unhappily, however, these numbers are continually increasing in a ratio considerably beyond the increase of the funds applicable to their relief. Let us hope that the year 1877 may be made memorable to working printers and their well-wishers, not only as the year of the Caxton Celebration, but also as the year in which the Printers' Pension Corporation was enabled largely to extend its benevolent action.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Hater of Falsehood and Misrepresentation.—The letter is libellous, and cannot be published.

R. M. G.—Try Dr. H. B. Wood; Royle, by Dr. J. Harley; or Ringer.

Medicus, Hull.—The International Sanitary Conference at Vienna in 1874 decided unanimously that "cholera may be transmitted by clothing and other articles (*les effets à usage*) brought from an infected locality, and especially if they have been used by persons with cholera; also it results from certain facts that the disease may be carried to a distance by these articles if excluded from free exposure to the air."

A Nurse, London.—We cannot better answer our correspondent's inquiry, "Do they manage better in the United States?" than by quoting the opinion of Dr. Gross, of Philadelphia, "On Nursing and Nurses in the United States." After referring to the lack of knowledge and to the unfitness of those called on to nurse in private life, he remarks:—"In public institutions the same ignorance prevails, superadded, not unfrequently, to the basest moral delinquencies, as intemperance, indifference to duty, and positive disregard of the orders of the medical attendant. Male nurses are everywhere notoriously bad and incompetent. Few even in our large towns and cities are qualified for their business. Drunkenness and male nursing are almost synonymous terms in the experience of the American physician."

Mortality Tables.—The ancients do not appear to have kept any exact mortality registers; at least, no record of any registers of that kind, with the ages of the deceased, have come down to us. The keeping of parish registers commenced in England in the year 1538.

M. E. B.—François Magendie, a French physician and physiologist. Although his father practised as a physician in Paris, he was born at Bordeaux on October 15, 1783. He was soon after brought to Paris. Through his father he was introduced to the celebrated Soyer, and became his pupil, and afterwards his demonstrator of anatomy. Subsequently he was induced by Dupuytren to give up the study of surgery and devote himself to the practice of medicine. He was afterwards appointed Physician to the Hôtel-Dieu. He became a member of the Academy of Sciences and of the Academy of Medicine, and in 1831 succeeded Professor Récamier, who had resigned on the accession of Louis Philippe to the throne of France, in the Chair of Anatomy in the College of France. Professor Magendie was a great writer, and also a physiological experimentalist and discoverer.

THE DENTAL DIPLOMA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I hope that out of justice to a class of students who, if I may judge of others by myself, have had their feelings wounded by a leading article in your journal of last week, you will find a little space for the following remarks.

You say that "in the case of the Membership the examinations are much more extensive and more strict than they are as regards the dental diploma. Hence it is that too often dental students lounge through the classes at their medical school utterly indifferent to what is going on, idle themselves, and a source of idleness in others." This is indeed a grave accusation, and one which we, as dental students, must feel to give us a by no means enviable position in the midst of those general students with whom we mix, and to whom, it is said, we are a "source of idleness."

That our examination is not so extensive as is that for the Membership I can scarcely admit, when all the subjects we have to study are considered; but, be this as it may, our idleness or otherwise mainly depends on our own ideas of the strictness of the examination through which we have to pass. The general opinion of the students at this medical school is, as far as I have ascertained, that on subjects common to the dental and to the membership examinations the dental students are put to a more minute and stringent test than are the general. I may say that I have frequently heard our able Demonstrator of Anatomy, who has had large experience of examinational requirements, state the same opinion. Our examiners on anatomy and physiology are some of the same gentlemen who preside over the Membership examinations, and I do not think it is very complimentary to them to suppose that they would pass any man who was not thoroughly qualified to receive their diploma, which is a certificate of qualification.

The natural result of such opinions of the strictness of the examination, as the students hold, would be that they would work hard and continuously to pass; and that such is the case at this hospital school I am pretty safe in affirming. I can say that in the classes the dental students are just as attentive as the others, and that if any disturbance takes place at a lecture or elsewhere there is no presumption that it is occasioned by one of us.

A due proportion of the class prizes and certificates of honour falls to the dental students; special classes and demonstrations are open to them and eagerly taken advantage of; and I am sure that you, sir, if you were to pay a visit to this school, which has more dental students than any other in this country, would not be able to single out any man, by judging of his diligence or general conduct, and say, "This is a dental," or "That is a general student."

Perhaps it will be thought that I—myself one of the class referred to—am not in a position to speak as I have done, but I would ask, Who can know about students better than a student himself? When our good name is at stake, false notions of delicacy must not be entertained.

Middlesex Hospital, May 8. I am, &c., J. C. MORISON.

CHILDREN'S "SPECIAL" COTS FOR HOSPITALS.

It is gratifying to observe that the idea of promoting sympathy on the part of children with those of their like who are sick in hospitals and other kindred institutions—of which we have already had several instances—is an example which is being commendably imitated. We have now to record that two special cots have been established by means of children's pence at the Convalescent Home at Margate, a branch of the Victoria Hospital for Children at Chelsea—one by the children of Kensington, at the suggestion of Mrs. Darling, to be called the "Kensington Cot"; the other by the boys of the Duke of York's School, suggested by the Rev. Hugh Huleatt, Chaplain of that School, and Honorary Chaplain to the Hospital, to be called "The Royal Military Asylum Cot."

EVADING THE DOCTOR.

Strange devices are resorted to to cheat the law. In the instance before us the deceit was effected by evading the doctor. At Warrington, last week, several employers and parents of children were summoned under the Factory Act for working them under age. It appeared from the statement of the Inspector of Factories that the Act was systematically eluded by parents sending children to work at a factory immediately after the doctor's inspection of the place. This inspection was made every fortnight, and previously to the next visit the children were removed to another factory. By this alternate working at these different factories, the children escaped the notice of the doctor, and were employed throughout the year.

IS A CONDEMNED DWELLING A NUISANCE?

The Earl of Shrewsbury, it appears, is the owner of an old farmhouse at Little Budworth, in Cheshire. A year or two ago his agent condemned the house; but, nevertheless, the widow of the last tenant was allowed to occupy it. Subsequently the sanitary inspector went and examined the house, and gave notice to the noble owner of its dilapidated condition, and suggested some repairs, but thought the house was not habitable. The repairs suggested, however, were not made, and another notice was forwarded, requiring the immediate attention of his lordship. This met with a similar fate to the previous notice. An application was then made to the quarter sessions at Knutsford. The case, however, did not proceed far, the chairman intervening, who argued that a house might be so built as to be injurious to the health of its inmates, but that it would not on that account be a public nuisance. Counsel for the prosecution contended that the house was unfit for human occupation, and therefore a nuisance. The chairman stuck to his own view of the Act, and quashed the appeal, granting, however, a case. We hardly need say that we doubt if this interpretation of the Act will hold good.

Dan, Essex.—"Croup" was first used as a medical term by a Scotch physician when writing to Dr. Mead, of London, in 1713; but as the title of a specific disease by Francis Home in 1765.

COMMUNICATIONS have been received from—

Dr. Bruce, London; Mr. J. Chatto, London; Dr. Barlow, London; Mr. T. M. Stone, London; Mr. B. R. Wheatley, London; Dr. Druitt, London; The Registrar of the Apothecaries' Hall, London; Dr. H. Tibbits, London; Dr. Jas. Barr, Liverpool; Dr. Hitchcock, Lewisham; Messrs. Richardson and Co., Leicester; Mr. Douglas Hemming, London; Dr. John Williams, London; Mr. Wemyss, Gloucester; Mr. J. Smith, London; Mr. Jno. Ingpen, London; Dr. Alex. Williams, Colchester; Dr. Balthazar Foster, Birmingham; The Secretary of the Clinical Society: The Secretary of the Charity Voting Reform Association, London; Mr. J. Foster, London.

BOOKS AND PAMPHLETS RECEIVED—

Felix Weiss, L.D.S.R.C.S., M.O.S., etc., Notes from a Dentist's Case-Book—John Kent Spender, M.D., The Bath Thermal Waters, Historical, Social and Medical—Robert Farquharson, M.D., A Guide to Therapeutics—William W. Ireland, M.D. Edin., On Idiocy and Imbecility—George Thin, M.D., An Introduction to Practical Histology—C. E. Armand Semple, B.A., M.B. Cantab., M.R.C.P. Lond., Aids to Chemistry: Part I., Inorganic—James George Beaney, F.R.C.S.E., Surgical Diagnosis—The Sanitary Duties of Private Individuals—James Vose Solomon, F.R.C.S., The Progress of Ophthalmology in the Last Quarter of Century—Dr. Henry Picard, Traité des Maladies de la Prostate—Sir James Paget, Bart., The Hunterian Oration, delivered at the Royal College of Surgeons of England on February 13, 1877—Frederick T. Roberts, M.D., B.Sc., F.R.C.P., A Handbook of the Theory and Practice of Medicine—Professor Barff, M.A., The Treatment of Iron for the Prevention of Corrosion.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Dublin Journal of Medical Science—Home Chronicler—New Preparations—Australasian—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Chemist and Druggist—Students' Journal and Hospital Gazette—New York Medical Journal.

APPOINTMENTS FOR THE WEEK.

May 19. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Royal Institution, 3 p.m. Mr. W. H. Pollock, "On Modern French Poetry."

21. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. James Dewar, "On the Chemical Philosophy of Sir Humphry Davy."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Pearson Irvine, "On the Clinical Conditions of the Heart and Vessels in Chlorosis." Mr. Wm. Adams, "Contraction of the Fingers, and its Treatment by Subcutaneous Division of the Palmar Fascia and Immediate Extension." Dr. D. Finlay and Mr. R. W. Parker, "Primary Cylindrical Epithelioma of the Lung, with Secondary Deposits in the Pleura, Bronchial Glands, and Liver."

23. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Heat."

25. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Farquharson, "A Case of Small-pox originating from the Contagion of Chicken-pox." Dr. Murchison, "A Case of Enteric Fever treated by Salicylate of Soda." Dr. Thin, "Microscopic Specimens of the Skin of a Case communicated to the Society in 1874 by Mr. Morrant Baker." Mr. Owen, "A Case of Misplaced Testis" (a living subject).

Quekett Microscopical Club, 8 p.m. Mr. W. H. Gilbert, "On the Staining of Vegetable Tissues."

Royal Institution (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. G. J. Romanes, "Evolution of Nerves and Nervo-Systems."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 12, 1877.

BIRTHS.

Births of Boys, 1202; Girls, 1176; Total, 2378.
Average of 10 corresponding years 1867-76, 2212·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	829	784	1613
Average of the ten years 1867-76	700·8	639·0	1339·8
Average corrected to increased population ...	...	...	1434
Deaths of people aged 80 and upwards ...	...	...	50

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	1	5	...	9	...	2	...	2
North	751729	39	15	2	...	7	...	2	1	4
Central ...	334369	1	7	...	2	4	...	2	...	4
East	639111	6	13	10	...	17	...	3	...	4
South	967692	29	9	7	2	21	2	3	1	6
Total	3254260	78	45	24	4	58	2	12	2	20

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·472 in.
Mean temperature	49·2°
Highest point of thermometer	66·6°
Lowest point of thermometer	30·8°
Mean dew-point temperature	39·6°
General direction of wind	Variable.
Whole amount of rain in the week	0·24 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 12, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending May 12.	Deaths Registered during the week ending May 12.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2378	1613	66·6	30·8	48·7	9·28	0·24	0·61
Brighton	102264	43·4	50	38	60·9	33·8	48·9	9·39	0·31	0·79
Portsmouth ...	127144	28·3	77	45	74·8	33·8	53·6	12·01	0·37	0·94
Norwich	84023	11·2	45	38	62·5	30·0	47·8	8·78	0·23	0·58
Plymouth	72911	52·3	46	31	60·0	36·5	47·4	8·55	0·46	1·17
Bristol	202950	45·6	142	102	66·5	28·6	48·3	9·06	0·59	1·50
Wolverhampton ...	73389	21·6	56	29	63·0	28·9	46·2	7·89	0·15	0·38
Birmingham ...	377436	44·9	294	201	...	...	...	...	...	...
Leicester	117461	36·7	82	66	67·5	28·8	48·5	9·17	0·64	1·63
Nottingham ...	95025	47·6	64	47	61·2	28·0	45·4	7·44	0·82	2·08
Liverpool	527083	101·2	342	288	60·3	39·6	46·9	8·28	0·45	1·14
Manchester ...	359213	83·7	243	246	65·9	30·0	47·6	8·67	0·63	1·60
Salford	141184	27·3	137	111	64·0	27·1	44·6	7·01	0·85	2·16
Oldham	89796	19·2	60	58	...	...	...	...	...	...
Bradford	179315	24·8	138	79	60·0	35·2	44·0	6·67	0·05	0·13
Leeds	298189	13·8	224	131	59·0	28·0	44·2	6·78	0·15	0·38
Sheffield	282130	14·4	204	138	61·0	26·0	44·2	6·78	1·42	3·61
Hull	140002	38·5	115	60	59·0	27·0	42·8	6·00	0·10	0·25
Sunderland ...	110382	33·4	90	53	56·0	35·0	44·2	6·78	1·01	2·57
Newcastle-on-Tyne	142231	26·5	129	65	...	...	...	...	...	...
Edinburgh	218729	52·2	155	108	54·0	31·5	43·3	6·28	0·70	1·78
Glasgow	555933	92·1	417	242	57·0	32·0	44·9	7·17	...	...
Dublin	314666	31·3	183	188	59·6	31·2	48·9	9·39	0·65	1·65
Total of 23 Towns in United Kingdm	8144940	38·3	5671	4077	74·8	26·0	46·5	8·06	0·52	1·32

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·47 in. The lowest reading was 29·32 in. on Wednesday, and the highest 29·68 in. at the beginning of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

MEETING OF THE GENERAL MEDICAL COUNCIL,

HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIFTH DAY—TUESDAY, MAY 15.

BEFORE the cases of restoration to the Register were taken, a memorial from the Royal College of Surgeons, Edinburgh, in regard to Dental Surgeons, was read as follows :—

The Royal College of Surgeons, Edinburgh, May 9, 1877.

To the President and Members of the General Council of Medical Education and Registration of the United Kingdom.

The Memorial of the President's Council of the Royal College of Surgeons of Edinburgh.

Sheweth,—That your memoralists have had their attention drawn to certain proposals at present before the Royal College of Surgeons of England, to the effect that those persons only who possess the qualification of Licentiate in Dental Surgery of the Royal College of Surgeons of England "shall be entitled to use the designation of dental surgeon, surgeon-dentist," etc.; also "that a special schedule be added to the Medical Act for the registration of dental surgeons as such"; as well as to certain other suggestions that those only who possess the said qualification of Licentiate in Dental Surgery shall be entitled to hold dental appointments in hospitals, or to sign schedules, or grant certificates of attendance to dental students.

That your memorialists are of opinion that the suggestions and requirements of the Royal College of Surgeons of England regarding registration of dental surgeons and otherwise, could only receive effect under the authority of an Act of Parliament, and that such legislation, as creating a monopoly of teaching and registration of dental surgeons, would be injurious to the interests of the other surgical corporations recognised by the Medical Act, and an interference with the rights and privileges of the members or licentiates of these bodies.

That your memorialists are further of opinion that if the separate registration of dental surgeons in the Medical Register should be found to be either necessary or expedient, the right to such registration should not exclusively be confined to the members or licentiates of one corporation, but be extended to all the institutions who at present grant diplomas in surgery.

Your memorialists therefore pray that the sanction of the General Medical Council shall not be given to any application for power to register the qualifications of dental surgeons, without obtaining the approval or the views of all the licensing bodies, under the Medical Act, possessing an interest in the matter referred to. In name of the Council,

(Signed) HENRY D. LITTLEJOHN, M.D., President.

and on the motion of Dr. ANDREW WOOD, seconded by Dr. AQUILLA SMITH, was referred to the Medical Acts Committee.

The PRESIDENT said that two of the gentlemen who sought to have their names restored to the Register—namely, Mr. Michael M. Sheedy and Mr. James Meehan—desired to appear by counsel, and not by solicitor. This was a new step in the annals of the Council, and therefore he wished to take their opinion upon it. Mr. Butt, Q.C., had been retained in those cases, and would, with the permission of the Council, appear before them at three o'clock.

The consent of the Council to this course was given.

On the motion of Dr. ANDREW WOOD, seconded by Dr. AQUILLA SMITH, and carried unanimously, the name of John Joseph Mullen, which had been erased from the Register under Clause 14 of the Medical Act, was restored.

THE CASE OF THOMAS RICHARDSON.

Mr. OUVRY, the Solicitor to the Council, in stating the circumstances of this case, said that Mr. Richardson now appeared by his solicitor. He was an M.D. of a college known as the Metropolitan Medical College of New York, which seemed to be founded about the year 1852, without any special authority, but with regard to which it had been suggested that there was some general Act under which such institutions had authority to grant degrees in the State of New York. In the year 1857, however, this body received a charter "from the people of the State of New York" which was to this effect—"The people of the State of New York, on March 28, 1857, enact as follows :—John Law and others" (naming them) "are hereby constituted a body corporate by the name of the Metropolitan Medical College of New York, for the purpose of promoting medical science and instruction, and imparting learning connected therewith." By Section 5 the trustees had power to grant and confer the degree of Doctor of Medicine, on the recommendation of the Board of Professors of the said College, on condition that certain studies had been pursued and lectures attended. It was important to observe that none of the gentlemen mentioned were described as possessing the title of Doctor of Medicine, whereas in their own announcement of the College to the public they use the title M.D. On the cover of a pamphlet which they published was a picture of the College, in the front of which is written "Metropolitan Medical College—Botany Hall"; and then over the door were "Law and Lincoln, Botanic Medicines"—being the gentlemen referred to in the Charter. According to the American almanacs for the year 1859, in which the names of all the medical schools of the United States are given, with the number of their graduates, and the time when their lectures commence, this New York Medical College was not included. In 1859, when Dr. Richardson applied to be registered, he wrote to the then Registrar, Dr. Hawkins, in these terms :—"I am desirous of registering under the new Medical Bill; am a member of the Medical College of New York, the sessions of which are held and its honours bestowed under the authority and by virtue of what is called the General Act. I received my certificate of practice after a personal examination in 1851. In 1857 the College received a special charter from the Legislature of the State of New York, and therefore all students who had previously graduated by paying the extra fees received a new diploma to practise both medicine and surgery." From that statement the Council would collect that Mr. Richardson, as he said, having in 1851 obtained some kind of recognition from this unchartered body, it was clear that his examination did not take place under the charter. He did not attend in America in 1858, which is the date of his diploma. That diploma, which was now produced by Mr. Richardson's solicitor, stated these facts :—"Be it known that Thomas Richardson has attended lectures in the Metropolitan Medical College of New York for the full time required by law, and that he has been most assiduous and diligent in his studies; that he has sustained with credit an examination before the Faculty," and so on: "for all and singular of which he merits their highest recommendation." It was undisputed that at the time that diploma was granted he had not been to America, and therefore the statements contained therein were absolutely untrue, and must have been untrue to his knowledge when he applied for registration. These diplomas unfortunately were numerous. In 1861, two graduates of the same College were brought before the Council, and their names erased, and at that time he (Mr. Ouvry) had had photographs taken of the diplomas, which proved that they were evidently from the same plate as the diploma which Dr. Richardson held. From what he had been able to gather, the case presented by Mr. Richardson now was that he had received some instruction from two medical men in 1853, who established a sort of branch of this Metropolitan Medical College in Birmingham. He would like to hear more of that branch College, because he believed the persons connected with it were graduates of the same New York College, and among them there was one Dr. Kirk. He found in a letter of Mr. Richardson's to the Registrar of the Medical Council he spoke "On behalf of myself and friend Dr. Kirk." Dr. Kirk was unfortunately not before the Council to-day, because he could not be found, but it appeared in the proceedings against Messrs. Payne and Bransome that there was an agency in the Isle of Man for the granting of these degrees, and an advertisement had been there issued, the purport of which was that persons desiring to have a degree of this College might apply at an office in Douglas, and that advertisement purported to be issued by Mr. Richardson. But Mr. Richardson now denies that he issued that advertisement, and intimates that it was done by Kirk, and his name unjustifiably used in that way. But in the case of Payne and Bransome it was clearly proved that they had obtained these diplomas without going to New York at all, through this agency in the Isle of Man. It must further be borne in mind that the title for registration of those foreign diplomas is only good in the case of those persons who were practising as physicians in England prior to the date of the Medical Act; but, judging from Dr. Richardson's present statement (which appeared to be a candid one), there was no evidence whatever that he was practising as a physician before that date. He understood a physician to be, not the keeper of an apothecary's shop, but a man who was a dignified member of the profession, and received guinea fees. With these observations he would, without detaining the Council further, leave Mr. Myers Meeking to speak on behalf of his client.

Mr. MYERS MEEKING was then heard to address the Council on behalf of Mr. Richardson, of whom he spoke in the highest terms from personal knowledge for a number of years. Next he pointed out the difference between the wording of the section which dealt with entries in the Register and that which dealt with erasures: the one was mandatory, while the other appeared to leave more discretion to the Council—the distinc-

tion between those two sections being that while the slightest incorrectness of description should be sufficient to prevent a man, however otherwise well qualified, from being admitted on the Register, yet, having once been on the Register, it should be at the discretion of the Council whether they caused his name to be erased or not: and it was upon this ground that he most strongly appealed in the present case. If he were coming before the Council to apply for his client's name to be registered in the first instance, he would feel that he had not a very strong case; but he appealed to them to say whether they were prepared in the present case, under the circumstances, to exercise, in a manner hostile to his aged client, a very arbitrary discretionary power, from which he had no chance of appeal, and which would at once reduce him, and those depending upon him, to a state of the most abject poverty. Dr. Richardson from his earliest infancy had been one of those who seemed to feel in themselves an innate desire to benefit their fellow-creatures. He followed the study of medicine (at first, perhaps, as a pastime) from his earliest youth; but afterwards his great desire was to become a medical man. The natural inquiry on the part of the Council would be, Why did he then not submit himself to the proper curriculum, and become a member of one of those admirable institutions in the United Kingdom by which a man's name can be properly entitled to registration? His reply was this: That you might as well ask the son of a very poor clergyman why he was not educated at Eton and at Oxford. His client's position in early life was one of very great poverty, and he was unable to find the usual means of medical instruction; he therefore availed himself of those within his reach; and he found a valuable friend in a gentleman legally qualified to practise at Cheadle, in Cheshire. This was not the case of an illiterate man thrusting himself into the profession (in some cases he had heard of shoemakers and people of that class taking upon themselves to practise), but Dr. Richardson was a gentleman who had been engaged in scholastic duties up to this time. At this crisis of his career he appeared to have fallen in with two or three gentlemen connected with an American medical college. Mr. Ouvry had cast a great stigma upon this institution, and he (Mr. Meeking) was not prepared to say that it was such an institution as would be qualified to grant medical degrees in England; but the question for the Council to consider was, Was it an institution which, according to the laws of the United States, was in any way qualified to grant degrees? Mr. Ouvry was not prepared with negative evidence upon this question, and the fact must, therefore, be accepted that at the time this diploma was conferred on Mr. Richardson the Metropolitan Medical College of New York was a recognised body within the dominions of the United States for the conferring of medical degrees. Mr. Richardson's reason for taking this diploma was that he removed to Birmingham in or about the year 1873, and there he made the acquaintance of a Mr. Lister Beach, who held an American diploma. He joined Mr. Beach, who, after an intimate personal acquaintance with him, certified that he was entitled to the diploma of his College, which he obtained soon afterwards through Mr. Beach's agency. This College became afterwards affiliated to, and one with, the Metropolitan College of New York; and in or about the year 1857 Mr. Richardson obtained from that institution, then regularly chartered under a special Act, the diploma which he now produced. At the time of his making his application for registration, he made no further representations to Dr. Hawkins than those contained in the letter which had been read. He left it to him to make such inquiries as he thought fit, and Dr. Hawkins had taken no less than twelve months for that purpose; and, after communicating with America, and making full inquiries of the constitution of the College and the circumstances of the case, he was satisfied, and Mr. Richardson's name was entered on the Register. At that time he was living at the Isle of Man, and a most questionable and very undesirable advertisement emanated from some person in the island to which the name of Richardson was unfortunately affixed; but he was instructed most emphatically to deny that he had anything to do with the issuing of that advertisement. He states that he should have considered it a most wrong act to do; that he was not living at the address appended to that advertisement; that as a matter of fact that advertisement emanated from Dr. Kirk; and that any replies to it would be received by Dr. Kirk, and not by him. The learned gentleman further stated that, from his knowledge of Dr. Richardson, he was prepared to say that he believed he would not state that which he did not believe to be true. Having thus obtained his medical knowledge and diploma, he had for seventeen years practised as a doctor of medicine in the United Kingdom; and he was prepared with a voluntary testimonial from a number of the most respectable inhabitants of the town of Dundee, where he had practised previous to his removal to Mellom, where he was now stationed. After reading this memorial, which purported to be signed by merchants and others, Mr. Meeking proceeded to state that from that period he could speak from intimate personal knowledge of Dr. Richardson. Having held the office of coroner in the jurisdiction of Mellom, he had ample opportunities of judging, and he could testify to the fact that, whether by accident or otherwise, since Dr. Richardson's connexion with the place not a single case of death to which the suspicion of incompetent medical treatment could be attached had occurred; whereas, in the time of Dr. Richardson's predecessor there had been three or four cases occurring close together, in which he felt bound to institute very searching inquiries. His client now occupied a most satisfactory position in that important district, and was indefatigable in the discharge of his duties, especially amongst the poor. His age was sixty-seven; and he would ask the Council whether they were prepared to exercise an arbitrary discretionary power by striking off the Register a man who obtained registration seventeen years ago, and against whom down to the present time not a word of accusation had been breathed.

Dr. Andrew Wood inquired what was the reason that seventeen or eighteen years had elapsed before this accusation was brought, and also what was the exact nature of the charge now brought against Mr. Richardson?

Mr. Ouvry said that latterly a great stir had been made about these diplomas, and he had been urged that they ought not to be allowed to remain on the Register, and had been instructed by the Branch Council for England to summons this gentleman. Unfortunately it was very difficult to find out the cases, because these men withheld their diplomas. The result was that the only man amongst them who had any shadow of respectability about him had been the first since 1861 (when Payne and Bransome were struck off the Register) to be summoned. With regard to the charge made against him, it was this: that he procured himself to be registered by a diploma which stated that which was not true, viz., that he had been examined and passed at this College in New York, when he had never been there; and by a statement that he had been practising in England as a physician prior to the passing of the Act—both of which statements were, within his own knowledge, false.

Dr. Quain said that Mr. Ouvry was prepared to produce a pamphlet by a certain quack practising in the West-end, who distinctly stated that he holds such and such diplomas recognised by the Medical Council. That was the reason why this matter was brought forward.

Dr. Aquilla Smith said he could answer Dr. Andrew Wood's question. It appeared from the *Medical Press and Circular* that, at the trial of a quack named Hamilton, it was set up as a defence that three men (Richardson, Yemans, and Kirk) were on the Medical Register in respect of precisely similar diplomas to that which he held. That drew attention to the matter, and he (Dr. A. Smith) communicated with the soliciter, and suggested that he ought to move in the matter.

Dr. Humphry had some difficulty in seeing the exact fraud that had been committed by the applicant. The brand, if any, was on the part of those who issued the diploma.

Mr. Ouvry pointed out that Dr. Richardson, not having been in America, by payment of fees obtained this diploma, which states on its face that he had been studying at that College in New York; had been examined there, and that his examination was satisfactory. Having by payment obtained that document, which he knew contained untrue statements, he presented it to the Registrar. It procured his registration, and he thereby accepted and became a party to those false representations. If he had said that he had obtained this diploma, but not by examination, he would never have obtained registration; and, moreover, he had no pretence for obtaining the diploma, because the charter of the College requires that these diplomas shall not be given unless the candidates have gone through a certain curriculum of studies.

Strangers were then desired to withdraw, and the Council deliberated.

Upon being readmitted, it was understood that the decision of the Council was adverse to the applicant.

THE CASES OF MR. MICHAEL M. SHEEDY AND MR. JAMES MEEHAN, M.D.

Mr. Butt, Q.C., said that in accordance with the resolution by which the Council had acceded to the application of Mr. Sheedy to be heard by counsel, he had the honour to appear on his behalf. His name had been removed from the Register by an order dated in the year 1875, and he now applied to be restored, as unquestionably they had the power to restore him, under the following circumstances. There could be no doubt that Mr. Sheedy had been guilty of a very improper act. In two cases he had certified to an insurance office that he had examined a life which he had not examined. The question was whether the Council would not consider him to have been sufficiently punished by two years' exclusion from the Register. He was tried at the Limerick Assizes, in the year 1874, for a conspiracy, along with the agent of the insurance company and another gentleman of the name of Meehan, who had also been punished in the same way, and they were all three found guilty of conspiracy to defraud the company. Now, although the law of conspiracy was a very harsh law, the Council could scarcely inquire now whether that verdict was right or wrong; but he (Mr. Butt) confessed that he had been unable to see any evidence of fraud on looking over the papers. Since the conviction Mr. Sheedy had brought an action against his attorney for negligence, and he then for the first time had an opportunity of stating his case on oath. The real and undisputed state of facts then came out, and they were such as he hoped would influence the Council to exercise their prerogative of mercy in this case. There were two cases, and two cases only, in which he was induced to do this act of certifying without examining the life. The first was the case of a Mr. Bowcher, a very respectable gentleman in the county of Limerick, whose life had been already insured in the same office a very short time before. Mr. Bowcher was unquestionably a healthy man, and a perfectly eligible life for any insurance office at the present time. Mr. Sheedy was acquainted with him, and Mr. Fitzgerald, who was the agent of the company, was very anxious to do business, and he got persons interested in the lives of others to effect insurances upon those lives. Whenever they did not care to ask the life for an examination he did not scruple to get medical men to certify without examination. Mr. Sheedy was at this time a young, inexperienced man, only two years in the profession, who had hitherto borne a perfectly irreproachable character, and Fitzgerald, the agent, pressed him very much to certify in this case. The person insuring Mr. Bowcher's life was a tenant, who held a lease in which Mr. Bowcher's was one of the lives; and of course, therefore, he had a perfectly good insurable interest in that life. But Mr. Bowcher would not appear or facilitate the insurance in any way. Mr. Sheedy refused at first to certify; but finally Fitzgerald brought him answers that had been taken down by the medical referee of the company on the former insurance, and also gave him a written authority, stating that he had the power of the company to dispense with personal examinations in cases in which he thought fit. And then Mr. Sheedy was induced to do what certainly deserved the severest reprehension—he signed the paper as if he had personally examined him. That was his first act, and it was indefensible; but he was very, very severely punished for it. He was prepared to state that, directly or indirectly, he had no interest in the matter beyond the mere guinea that he got for certifying. It was clear there was no desire to defraud the company, because undoubtedly this was a perfectly good insurable life. He was frequently in the habit of seeing the life, and it was to be feared that the certificate of the former medical referee had caused him to blind his conscience to what he was doing. The next case was one in which his own brother-in-law had an interest in a man's life. Again Fitzgerald came to him, and said, "You ought to get your brother-in-law to insure this man's life"; and on that occasion again he certified that he examined the man. However, that man he had previously examined for another company, and certified that he was a good life; and, moreover, he had been in the habit of attending him. The man refused to facilitate the insurance in any way, and at length Mr. Sheedy was induced to sign the papers. Immediately after he had done it he began to think there was something wrong in a relative of his own having a personal interest in the life, and he went to the agent and said, "You must tell the company everything." Fitzgerald came to him with the policy, and he then asked him, "Have you disclosed everything to the company?" Whereupon Fitzgerald said, "I have not"; and certainly it was a point in Mr. Sheedy's favour that he instantly wrote to the company, telling them all the facts, and asking them to cancel the policy, which they did. That did not entirely atone for the great crime he committed, but it was some extenuation. In that case there was not the slightest pretence of there being a fraud on the company. He had previously passed the life for another insurance company, and he knew the man was a healthy man. He suffered imprisonment, and all that he (Mr. Butt) could now do for him was to throw his case upon the mercy of the Council, and ask them to consider whether the exile from the profession which he had suffered for the last two years might not be considered a sufficient penalty.

Mr. Ouvry inquired what authority Mr. Butt could point to, enabling the Council to restore a name.

Mr. Butt, who at first said that it was Clause 14, afterwards found that that clause related to cases of an entirely different nature, and stated that the ground upon which he based the application was this: that the Council had power to treat it as a fresh application for registration. There must be an inherent power in the Council to restore a man, because he might have been convicted wrongly. At this moment there was the case of Lord Cochrane before the House of Commons, whose conviction stands unreversed, but notwithstanding that he was restored to his position, and his banner as Knight of the Bath was restored to its place.

Mr. Ouvry said that with regard to the absence of an intention to defraud, the verdict of the jury found that there was an intention to defraud, and the conviction established the fact of the intention. The Council could not get behind that conviction.

Mr. Butt: But the Council will look at the facts as the King did in Cochrane's case, and as the country did in Barber's case. There was no way of getting rid of a conviction—no matter how unjust it might be—except by the King's pardon; but it was open to the Council to consider the matter upon this application to restore him to the Register.

The learned gentleman then called Dr. O'Leary as a witness for Mr. Meehan, who spoke of him as a highly honourable and truthful man, of whose character he had had every opportunity of judging, and with regard to whom the whole circle of his acquaintance was convinced that, although he had had the misfortune to be associated with a man who really did intend to defraud this company, there was no dishonourable intent in his own mind.

Strangers were again directed to withdraw, and the Council considered these cases. Upon being readmitted,

The Chairman announced that the names of Mr. Sheedy and Mr. Meehan had been directed by the Council to be restored to the Medical Register.

Both gentlemen briefly expressed their gratitude to the Council.

The Secretary, in reference to the application of Samuel Levenston, read a letter which had been received from his solicitors in Glasgow, complaining of the pecuniary loss he was sustaining from the non-registration of his name, and asking whether they intended to restore it. Mr. Levenston's name, it was explained, had been struck off the Register in consequence of a letter which had been addressed to him by direction of the Council remaining six months unanswered. That letter had been sent as the Council had reason to believe his practice was of a highly unsatisfactory character. As the letter his solicitors had forwarded seemed to hint at law proceedings it had been considered right to take the opinion of counsel whether the power of the Council to strike practitioners off the Register under Clause 14 was absolute or not. Mr. Bowen, the counsel consulted, had given an opinion "That the General Council had absolute discretion to make the order of erasure, and were not bound to assign any reason for their refusal to cancel it."

Strangers were again directed to withdraw during the discussion of the application by the Council, and on their readmittance,

The Chairman said that Mr. Levenston's application had been refused.

Mr. Henry Pearson's case was next discussed in the same manner; and it was announced by the Chairman that the Council did not see fit to make any order for the restoration of the name of Henry Pearson to the Medical Register.

The Council then adjourned.

Sixth Day—Wednesday, May 16.

Dr. Andrew Wood said he had been requested by the Chairman of the Medical Acts Amendment Committee to ask that the Council might rise at five o'clock, so that that Committee might meet between five and six o'clock, as the deputation would have to wait on the Lord President of the Council early on Friday.

The official notification of the appointment of Dr. Alfred Hudson as Crown nominee to the Council for five years in the place of Dr. Stokes was then read, and Dr. Hudson was introduced by Dr. Rolleston.

The Council was then resolved into Committee to continue the adjourned consideration of the Report on Professional Education.

Dr. Rolleston moved as an amendment to Dr. Humphry's motion—"That these examinations be passed in a certain order approved by the Council, a student being allowed to present himself for either of the two later examinations on a certificate of having passed the preceding examination or examinations." The object of the amendment, he said, was to offer an incentive to idle men to work. It would also encourage diligent students by enabling them as soon as possible to pass the preliminary professional examinations and enter upon their clinical studies. The groundwork must be laid before those things were superadded which were simply the application of all the fundamental studies, but he would not space the examinations. He would allow a student to pass the second examination immediately after the first examination if he was able to do so. The one thing which he regretted more than any other in his own medical career was that he had not had more time for clinical study. He had given notice of a motion that "No time which may elapse after the first year of professional study shall count until the first professional examination shall have been passed," and if that were coupled with his amendment idle men would see that it was to their interest to pass the examinations as soon as possible. Dr. Humphry was aiming at the same object, but the words of the motion suggested a certain evenness in spacing the examinations, and that he was opposed to. He would allow a student to present himself for the first examination as soon as ever he was enrolled, but he would make the third examination clinical. He would be glad if the Council permitted the final examination to take place six months before giving the licence, so that the last six months of the student's career might be passed in clinical work.

On the suggestion of Dr. Humphry,

Dr. Rolleston said his amendment would rather take the form of a rider to the motion.

Mr. Lister regarded the amendment as in some respects unnecessary. The Council had already decided that there should be three examinations, and had alluded to them as first, second, third, and therefore there was no necessity to say that they should be passed in a certain order. He could agree with Dr. Humphry's motion if the words "be passed" were altered to "take place," as it would then be open for subsequent discussion whether the proposed limitation should be introduced or not.

Dr. Thomson doubted the propriety of legislating on minute details. The Council appeared to approve of the principle that it was of the utmost importance that the study and examination on the preparatory subjects should be separate from those which were more practical. If the Council could secure that separation without going into details, they would confer a great benefit upon the student, and do much to improve the system of study and examination. There was just as much reason for having four examinations as for having three, and he therefore did not see why there should be necessarily only one examination in the second division. There was a danger lest the Council should lay down minute regulations which would interfere with the liberty of teachers to arrange their subjects in the way they might consider most expedient; but they were all agreed that it was a bad thing to overlap studies and examinations. The Council could scarcely decide what would be the best order in which the examinations should take place until they had settled what subjects should be included in the different examinations.

Mr. Lister was of opinion that an interval of two years should always take place between the preliminary examinations and the final examination. It would be a monstrous hardship to insist that students should pass in a certain number of preliminary subjects before the completion of the first year. Suppose a student failed in elementary anatomy, and in the second year worked up that subject until he became a good anatomist, on what principle of justice could the Council refuse to allow that second year of study to count? He was prepared to move as an amendment—"That the first examination take place before the commencement of the second year of professional study, the second before the commencement of the third year, and the third after the fourth year of professional study." The Council had not considered the question in the proper order. The subjects on which the students were to be examined ought to have been first considered, and then the order in which the examinations should take place.

Sir William Gull also disapproved of the Council's dealing with the matter too much in detail.

On the suggestion of Dr. Rolleston, Dr. Humphry agreed that the motion and the amendment should be combined, so as to read—"That the first examination be passed before the commencement of the second year of professional study; it being hereby intended that no time which may elapse after the first year of professional study shall count until the first professional examination shall have been passed."

Mr. Lister said, if that were agreed to, he should move as an amendment—"That the first examination take place at or before the end of the first year of medical study."

The amendment was seconded by Mr. Teale.

Dr. Andrew Wood said hitherto the different licensing bodies had almost unanimously adopted the recommendations of the Council, because the Council very wisely had not interfered too much with the autonomy of the bodies, or attempted to dictate in what way the different branches of study and examination should be carried out. Before he could agree to the motion he wanted to know what the subjects of the first examination were to be. The Committee on Recommendations had followed the plan which he now suggested, and had laid down what should be the subjects of examination without entering much into detail. Their proposal was—"That the professional examination for any licence be divided into two parts: the first, embracing the primary or fundamental subjects, shall not be completed until after the close of the winter session of the second year of professional study; and the second part, or final examination, embracing the practical branches, not till after the close of the prescribed period of professional study." In some universities there were two examinations, in others three, and in others four. If a general regulation was passed the bodies would, no doubt, act up to it; but if the Council attempted to lay down specific rules the bodies might not find it possible to carry them out, even although they wished to do so.

Mr. Lister said he was prepared to withdraw his amendment if Dr. Andrew Wood would move one in accordance with the recommendations of the Committee on Recommendations.

Mr. Macnamara said the representatives of the various schools in Ireland had seriously considered the subject four or five years ago, and they were unanimously of opinion that the students in general were not so idle in the first year of professional study as in the second and third years. They felt that if something could be done to stimulate study in the second and third years, it would be of immense service to the cause of education. He could not conceive of a plan better devised to encourage grinding than that which was now proposed. When the student had passed in the preliminary subjects there would be nothing for him to attend to but hospital or clinical studies. That was equivalent to telling him that he need not attend hospital during the first two years. It had sometimes been supposed that a student could not attend hospital while he was prosecuting his school studies; but in Dublin the hospitals were visited early in the morning, and the school work did not begin until eleven o'clock, so that the student could devote himself to the theoretical studies and also attend hospital during the whole of his studentship. He objected to the proposal that the student should be left to attend or not attend hospital as he chose during the first two years, for the result would be that he would not attend. He could not conceive anything more undesirable than that an idea should prevail that the fundamental studies, such as anatomy, might be dropped at the end of the second year. The College of Surgeons in Ireland felt that anatomy was the basis of the whole of professional study, and that the student should pay attention to it during the whole of the curriculum. After he left college he might continue to study every other branch of the profession, but he

would find it very difficult to obtain facilities for studying anatomy at any place but the College. Nothing tended more to lower the estimation in which the Council was held than attempts at over-legislation, and the Council could not expect their recommendations to be carried out if they were diametrically opposed to the views entertained by the teaching and examining bodies. He also was of opinion that the subjects on which the examinations were to take place should have been considered by the Council before the present recommendation.

Dr. Thomson said he was prepared to propose an amendment to the following effect:—"The professional examination shall be in two divisions, the first division to be passed at least two years before the second division, which shall not be held sooner than at the end of the fourth year of study."

Sir James Paget said that a good scheme of education should provide that the student might not be expected to learn what it would not be necessary to retain. The study of anatomy should, in his opinion, never be discontinued from the beginning to the end of a student's career. It had been very commonly found at the College of Surgeons that those who passed in anatomy at the end of the second year at once ceased to study the subject any more, and many of those who came up for the practical examination were discovered to be entirely ignorant of some of the most necessary parts of anatomy. He hoped that the Council would do nothing to countenance the distinction between preliminary and practical studies.

Mr. Simon agreed with Sir James Paget that students should always have the opportunity of studying anatomy, and that they should understand that at the termination of their studies they would be expected to be well acquainted at least with the applications of anatomy to surgery and medicine. Those who supported the resolution did not in any way desire to prevent the student studying anatomy during the last two years; they simply wished to prevent his entering upon his practical studies until he had proved that he had a knowledge of the elementary subjects.

Sir James Paget was of opinion that less than four years' attendance upon medical studies was not sufficient for any student, and the Council would commit a grievous error if they did anything to discourage the attendance at the hospital during the earlier years of a student's studies.

Dr. Andrew Wood said the amendment which he would propose was—"That the professional examination be arranged in two divisions, the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first, or before the completion of the fourth year of study."

The amendment was seconded by Dr. Thomson.

On the suggestion of Dr. Humphry, who said the amendment was quite compatible with the motion, it was agreed that the amendment should be put as a substantive motion, and the original motion be postpoued. A desultory conversation ensued, and ultimately Dr. Andrew Wood's proposal was carried by a large majority.

Sir William Gull proposed as a rider—"That the examinations, and the subjects included in each, be such and in such order as may insure as far as possible a due sequence of study."

Dr. Storrar seconded the motion, which was carried.

The original motion by Dr. Humphry as amended so as to include Dr. Rollestou's proposal was then considered.

Sir James Paget suggested that it would be well to consider whether the first examination might not be held at the different schools, instead of at a central place to which all the students had to be brought. First-year students might be examined in each school by their own teachers under the supervision of visitors or inspectors. No doubt it was a most salutary regulation that at the final examination no student should be examined by his own teacher; but the object of the first examination was not so much to ascertain what the student knew as to see how he had done the work which had been set before him. He was convinced that the licensing bodies would willingly receive any suggestion or recommendation by the Council to the effect that the first year's examination might be conducted by the teachers.

Mr. Lister expressed his great gratification at the suggestion, and reminded the Council that last year he had spoken of the advantages which might be attained by having the students examined by their own teachers. Of course, unless the plan were properly carried out the consequences would not be beneficial; but it was of immense importance that when a student commenced to receive instruction he should feel that he was on firm ground, and that he would be examined on what he was being taught. All fear should be removed that the examiner might treat the subjects in a different way from that to which he had been accustomed. At the examinations in Edinburgh the professors had associated with them examiners who were wholly unconnected with the University, and who saw that the students were properly examined. If Sir James Paget's suggestion were adopted, the laboratories at the schools would be available, and the expense would not be great, while a most powerful stimulus would be given to the teacher, who would feel that at the close of his labours he would have to show before independent examiners what work he had done during the session.

On being put to the vote, Dr. Humphry's motion was negatived.

Dr. Humphry then proposed that Recommendations 5 and 6 should be referred to the Committee on Recommendations, and for that purpose he moved the re-appointment of the Committee.

Mr. Teale seconded the motion.

Dr. Storrar expressed his fear less the tendency of their proceedings should be to take work out of the hands of the licensing bodies who were represented at the Council. It would be utterly impossible to draw up a syllabus which would meet the views of all the corporations and universities.

Mr. Turner considered that already the Council had before it such a body of evidence that it was wholly unnecessary to refer the question again to the Committee on Recommendations.

Dr. Andrew Wood hoped that the Council would not separate this year without fully considering the Report of the Committee on Recommendations, which dealt with this very subject.

The motion was agreed to, and at Dr. Humphry's suggestion proposals 11 and 6 were also remitted to the Committee on Recommendations.

Dr. Humphry, Dr. Fleming, Dr. Smith, Dr. Apjohn, Mr. Teale, Dr. Hudson, and Dr. Audrew Wood were appointed as the committee.

The Medical Acts Amendment Committee then left the Council, and the remaining members proceeded to deal with the matters on the programme, which were not likely to cause any discussion. The returns from the Army Medical Department were then read:—

Statement of the Degrees, Diplomas, and Licences of the Candidates for Commissions in the Medical Department of the Army, who, on August 14, 1876, *presented themselves for Examination, showing the number that passed, and did not pass, distinguishing the Qualifications, both Medical and Surgical, under the several Licensing Bodies.*

Names of Licensing Bodies.	Qualifications.					
	Number of qualifications.			Deficient in		
	Total.	Number passed.	Number failed.	Anatomy.	Surgery.	Medicine.
Royal Coll. of Physicians, Edinburgh ...	10	6	1	...	...	1
Ditto Surgeons, Edinburgh	8	5	1	1	1	...
Royal Coll. of Surgeons, London	8	7	...	...	...	...
K. and Q. Coll. of Physicians, Ireland ...	8	7	...	...	...	...
Society of Apothecaries, London	10	9	...	...	...	...
Trinity College, Dublin	1	1	...	...	...	...
Royal Coll. of Surgeons, Ireland	12	10	...	...	...	...
Faculty of Physicians and Surgeons, Glasgow	1	...	...	...	...	...
University of Edinburgh... ... ...M.B.	2	1	...	...	...	...
Ditto ditto ... ...M.Ch.	2	1	...	...	...	...
University of Dublin ... ...M.B.	4	4	...	...	...	...
Ditto ditto ... ...M.Ch.	3	3	...	...	...	...
Ditto ditto ... ...M.D.	2	2	...	...	...	...
Queen's University of Ireland ... ...M.D.	5	4	...	...	...	...
Ditto ditto ... ...M.Ch.	5	4	...	...	...	...
University of Aberdeen ... ...M.D.	1	1	...	...	...	...
Ditto ditto ... ...M.B.	2	2	...	...	...	...
Ditto ditto ... ...M.Ch.	2	2	...	...	...	...
University of Glasgow ... ...M.B.	2	2	...	...	...	...
Ditto ditto ... ...M.D.	7	1	...	...	..	...
Ditto ditto ... ...M.Ch.	1	1	...	..	...	...
Total	90	73	2	1	1	1

Remarks.—Total number of candidates, 41; found physically unfit, 5; disqualified, not having attended the whole of the examination, 1; failed to appear at the examination, 1; unsuccessful, 1; successful, 33.

Statement of the Degrees, Diplomas, and Licences of the Candidates for Commissions in the Medical Department of the Army, who, on February 12, 1877, *presented themselves for Examination, showing the number that passed, and did not pass, distinguishing the Qualifications, both Medical and Surgical, under the several Licensing Bodies.*

Names of Licensing Bodies.	Qualifications.					
	Number of qualifications.			Deficient in		
	Total.	Number passed.	Number failed.	Anatomy.	Surgery.	Medicine.
Royal Coll. of Physicians, Edinburgh ...	6	3	3	3	1	...
Ditto Surgeons, Edinburgh	7	4	3	3	1	...
Royal Coll. of Physicians, London	1	1	...	...	...	...
Ditto Surgeons, London	2	2	...	...	...	...
K. and Q. Coll. of Physicians, Ireland ..	4	4	...	...	...	...
Society of Apothecaries, London	1	1	...	...	...	...
Society of Apothecaries, Dublin	1	...	1	...	1	...
Royal Coll. of Surgeons, Ireland	5	5	...	...	...	...
University of Edinburgh... ... ...M.B.	...	...	...	...	...	...
Ditto ditto ... ...M.Ch.	...	...	...	...	...	...
University of Dublin ... ...M.B.	2	1	1	1	...	...
Ditto ditto ... ...M.Ch.	1	...	1	1	...	...
Queen's University of Ireland... ...M.D.	9	7	2	...	2	...
Ditto ditto ditto ... ...M.Ch.	8	6	2	...	2	...
Total	47	34	13	8	7	...

Remarks.—Total number of candidates, 25; found physically unfit, 1; failed to appear at the examination, 1; unsuccessful, 6; successful 17. Two of the candidates failed in both anatomy and surgery.

Dr. Rolleston moved, and Dr. Pyle seconded—"That the returns from the Army Medical Department be inserted in the Minutes, and that the best thanks of the Council be given to the Director-General of the Army for the Medical Department for his courtesy in sending the returns."

This was agreed to.

The Registrar then read the following letters, which had been received from the College of Surgeons of England, on the subject of certificates of proficiency in vaccination :—

Royal College of Surgeons of England,
Lincoln's-inn-fields, W.C.
December 12, 1876.

Sir,—In reference to your letter of June 21 last, forwarding a copy of a resolution adopted by the General Medical Council on June 5 last, on the subject of certificates of proficiency in vaccination, I am desired to acquaint you that the Council of this College determined, on the 9th ult., that in future all certificates of proficiency in vaccination should be such as would qualify the holders to contract as public vaccinators under the regulations at the time in force of the Local Government Board, and in accordance with such determination resolved that all candidates presenting themselves for the final examination for the diploma of the College be required, on or after May 1, 1877, to produce certificates of proficiency in vaccination as above described. (Signed) Edward Trimmer.

The Registrar of the Medical Council.

A letter had also been received from the University of Edinburgh, stating that the notice in regard to vaccination had been duly received, and had been attended to by the Medical Faculty.

On the motion of Dr. Humphry it was agreed—"That as it appears that there is at present sitting a select Committee of the House of Commons on the Lunacy Laws, the President be requested to draw the attention of the Chairman of that Committee to the subject of the report of the Executive Committee." The report, which referred to a resolution of the Branch Council for England in regard to the Lunacy Acts, recommended that on any occasion when either the Medical or Lunacy Acts were under the consideration of Parliament, the requisite clauses should be introduced.

Some correspondence between the President and the Registrar-General on the Forgery of Death Certificates was next read. In his concluding letter the Registrar-General said, if a clear case was reported to him of an unqualified medical man forging for his own purpose the name of a registered practitioner, he would take the opinion of the legal authorities of the Treasury whether legal proceedings should not be instituted, but he considered that a prosecution by Government without a conviction was much to be avoided.

The Council then adjourned.

Seventh Day—Thursday, May 17.

The Council resolved itself into committee to consider the Report of the Medical Acts Amendment Committee.

The first part of the Report was as follows:—

(*A.*)—*Territorial Range of Titles to Practise.*

1. The first subject on which the Committee has to report is that of various questions which have arisen as to the proper territorial range of certain licences and honorary titles, British and foreign, relating to rights or rank in the medical profession.

2. Remonstrances have come from the Dominion of Canada against the exclusion of legally qualified Canadian practitioners from recognition under the medical law of the mother-country, and particularly as to the grievance and detriment which they suffer in their relation to the Merchant Shipping Acts of the home Legislature. And, in respect of British India, an application is made by Sir Joseph Fayrer, on behalf of the licentiates and graduates of the universities of Calcutta, Madras, and Bombay, that they may be admitted to the privilege of registration under the Medical Act of the mother-country. The points thus raised are two particular cases of a large general question; and the principles on which they must be dealt with are, in the opinion of the Committee, not exclusively applicable to India and Canada. The grievance (stated in general terms) is that medical degrees or licences which have been conferred under due authority in British possessions outside the United Kingdom, and which respectively entitle to practise in the particular imperial province in which they are granted, give at present no professional status in other parts of the British empire; and the question of principle which the Council has to determine is that of admitting such degrees or licences to be registered as qualifications under the Medical Act. The Committee regards this question as one which urgently needs to be decided by the Council.

3. Again, an important issue has been raised in France as to the privilege under which the medical practitioners of other countries (including our own) have hitherto been allowed to settle there for professional purposes; and the Committee, while considering this question in its relation to British interests, has found itself confronted with the fact that British law affords no recognition to the medical licences of foreign countries. The Committee is of opinion that, under the circumstances, the Council would do well to deliberate and decide, in its present session, whether or not it will move the Legislature to relax, and if so, to what extent, the present non-recognition of foreign licences and degrees.

4. The Committee, in preparing to submit its opinions to the Council on the two above-mentioned questions, would remind the Council of previous occasions on which those questions have been more or less under discussion. In 1870, on occasion of Lord Ripon's Bill of that year, the Council appears to have assented to the principle that "colonial" and foreign diplomas, respectively valid as titles to practise in the British possessions or the foreign countries in which they are granted, should under conditions entitle their holders to rank as legally qualified medical practitioners in the United Kingdom. Two years ago, however, on occasion of Mr. Cowper-Temple's Bill (which aimed at procuring registration under the Medical Act for women holding foreign diplomas), the Council appears to have taken, at least in regard of the foreign diplomas, a position somewhat different from that of 1870, the position of 1875 being that the Medical Act "very properly" refuses to foreign degrees the privilege of registration in this country, because "the Council has no means of exercising that supervision and control over the education and examinations required for foreign degrees to which the licensing bodies of this country, whether universities or corporations, are, by the Act of 1858, subjected." And on two occasions in 1876 the Council expressed itself to the same effect as in 1875—first, with regard to a renewed proposal of Mr. Cowper-Temple's Bill; and secondly, in answering the memorial in which a large number of registered practitioners, being also graduates in medicine of foreign universities, had prayed the Council to obtain power to insert in the Medical Register, as additional qualifications, foreign degrees conferred after examination on duly qualified registered practitioners.

5. As regards those previous conclusions of the Council, the Committee is of opinion that, so far as the conclusions expressed in 1875 and 1876 differ from the conclusion expressed in 1870, the conclusion of 1870 is that which ought to prevail, provided always that the "conditions" under which the extrinsic licences would be admitted to register in this country shall be such as fairly to represent the essential intention of the Medical Act—"that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners."

6. In regard of such "conditions" as are here in question, the Committee would distinguish between qualifications granted in the outlying possessions (Indian and colonial) of the British empire, and, on the other hand, qualifications granted under foreign governments.

7. As regards the former, the Committee is of opinion that qualifications granted under legal authority in any part of her Majesty's dominions ought to be regarded by the Council as presumptively entitled to legal recognition in the mother-country. It is true that the Council would be unable in general to judge the value of these qualifications as accurately as it can judge those for which the Medical Act holds it directly responsible. But the Committee is of opinion that sufficient allowance for this consideration would be made by providing that in the Register there should be a distinct alphabetical section for "practitioners registered in the United Kingdom in respect of qualifications conferred in the other parts of her Majesty's empire." And, in the opinion of the Committee, it would of course also be desirable that the right of Indian and colonial qualifications to be registered as above under the Medical Act should, in case of abuse, admit of being suspended by some such process as that which applies under Clauses 20-22 of the Medical Act to qualifications which are granted within the United Kingdom. It is the opinion of the Committee that the Council should recommend to her Majesty's Government to promote at the earliest opportunity legislation to the above effect. But if it should seem that such legislation, as perhaps opening some large questions under the Medical Act, could not at once be provided, the Committee would recommend that meanwhile at least the urgent grievance of the Canadian practitioners should be removed by the required small amendment of the Merchant Shipping Acts.

8. As regards qualifications granted under foreign governments, the Committee is of opinion that there are many which, in international courtesy, ought to be admitted as conferring on the foreigners who seek to practise under them in British territory a claim to be recognised at law as properly qualified medical practitioners: cases, namely where the degrees or licences are known not to be conferred except after all due education and examination. It is of course evident in regard of foreign qualifications that the Medical Council cannot ever pretend to judge their value as accurately as it judges the value of qualifications conferred in the United Kingdom under its own superintendence and visitation; and no doubt there may be particular foreign qualifications regarding which the Council,

after inquiry, would not approve that they should have any legal recognition in this country. But cases of the latter description ought, in the Committee's opinion, to be dealt with as exceptional. And, considering that foreigners who desire to practise here under legal sanction would be practising chiefly, if not exclusively, on their own countrymen (who could here, just as when at home, judge for themselves as to the value of the diplomas of their own countries), the Committee would recommend to the Council, as principles for legislation:—(*a*) that the General Medical Council should have authority to establish, under conditions in the Medical Register, a distinct alphabetical section for "Foreigners practising in the United Kingdom with qualifications granted in foreign countries and entitling to practise in those countries respectively"; and (*b*) that the Council should have authority to cause to be registered in this section of the Register such qualifications as it may in its discretion (having regard to the conditions under which they are granted) judge to be reasonable guarantees of professional skill.

9. The Committee does not propose that British subjects holding foreign qualifications should be dealt with under the above general rule. Freedom of choice as to places of *study* ought of course to be open to all; but the Committee would think it inadmissible that British students, intending to practise in the United Kingdom, should have the option of undergoing in any other country than their own the *examinations* which are to test their fitness for practice. Individual cases may no doubt occur in which a British subject, having received his education and diploma in a foreign country with *bonâ fide* intention to practise in that country, and having perhaps spent many years in practice abroad, may eventually wish to take professional status at home, and to do so without submitting himself to the ordinary home-examination: but cases of this sort would in all be very few; and still fewer would be those in which the claim to be exempted from examination could be deemed legitimate. Such almost solitary cases can hardly be thought to require a special notice in the law; but cases (if any) of extreme hardship might probably be best dealt with under some general exempting power with which the Council might be entrusted (as was proposed in Lord Ripon's Bill) in favour of persons unpossessed of registrable qualifications, but long established in practice, and of indisputable character and attainments.

10. The Committee does not propose that any foreign qualification should be registrable as an "additional qualification" under the Medical Act by persons primarily registered under British qualifications. It is one thing to approve that, in regard of foreigners, the foreign degrees and licences should (under conditions) be admitted as reasonable evidence of qualification to practise, but it would be quite another thing to approve that such degrees and licences should take rank in the Register as special qualifications (which in effect would be titles of honour) for the already qualified practitioners of the United Kingdom; and the Committee is of opinion that to accord this privilege to the foreign diplomas would tend to perpetuate, and would very greatly and most seriously increase, the difficulty which general readers of the Register must at present experience in any endeavour to understand what, if any, of the qualifications there recorded are to be deemed higher qualifications.

11. As regards the proposal which has been made by M. Roger-Marvaise in the French Chamber of Deputies, to alter the present French law relating to foreign practitioners in France, and by the alteration to discontinue the usage under which many of our countrymen have from time to time been authorised to practise in that country, we are glad to believe that the proposed law is not likely to be accepted; and we therefore do not at present think it requisite to recommend that the Council should take steps, in addition to those which the President on its behalf has already taken, with reference to M. Roger-Marvaise's Bill. Lest, however, this sort of endeavour should at any future time be renewed, we would submit to the Council that the right with which this country could protest against it, as injurious to the reasonable interests of British sojourners in France, will materially depend on the legislation which may meanwhile have been made in this country in respect of the privileges which can be claimed among us by persons practising under foreign qualifications. It is true that the consequences which attach to not having a recognised professional status are more severe in France than in this kingdom; since in France no one without such status is allowed to settle in practice, whereas in the United Kingdom he may, if he chooses, settle in practice, though he cannot by process of law recover payment for any services which he claims to have rendered, nor can enjoy any other of the advantages which attach to registration under the Medical Act. But, on the other hand, the professional status is conceded exceptionally in France to foreigners who (as having the proper credentials of their own countries) can show reason for the exceptional privilege, whereas no such exceptional grace can be obtained by foreigners who are practising in England on their foreign diplomas; and in this respect M. Roger-Marvaise's Bill would only assimilate in principle the French to the present British law. That this state of British law is one which ought to be amended is, however, an opinion already expressed by the Committee; and the Committee is not prepared to believe that, if the British law were relaxed into the more liberal form which has been suggested, treatment of a less liberal kind would be accorded to British practitioners who may desire to exercise their profession in other civilised countries.

In conclusion, the Committee would propose that, if the Council approve of the suggestions of the above Report, representations to that effect be at once addressed by the Council to H.M. Government, and that, before the end of the present session of Council, the Executive Committee be authorised to take such steps as in the absence of the Council may be necessary to promote the legislation which has been suggested.

Mr. Simon proposed, and Dr. Storrar seconded — "That the Council would approve of amendments of the Medical Act to the following effect, viz.:—That medical qualifications granted under legal authority in any part of her Majesty's dominions outside the United Kingdom, and entitling to practise in such part, should be registrable within the United Kingdom on the same terms as qualifications which are granted within the United Kingdom, but in a separate alphabetically arranged section of the Register."

Dr. Andrew Wood asked if the Committee knew that persons registered under the Medical Act in this country were not allowed to practise in Canada until they had undergone an examination.

Mr. Simon said he had heard it so stated, but if any such absurd local regulation was in force, no doubt the Imperial Government would feel that it ought to be swept away. The Committee had not, however, thought it worth while to take into consideration any question of reciprocity between England and the dependencies.

Dr. Pitman could not understand how a person registered under the Medical Act could be prohibited from practising in Canada, as the Act entitled him to practise in any part of her Majesty's dominions.

Dr. Andrew Wood said he did not insist on reciprocity, for he believed if England acted justly the colonies would follow the example. He had long been of opinion that it was wrong to treat the colonies as foreign countries, when their schools and universities were little, if at all, inferior to those of the United Kingdom. The Committee's proposal was a proper and liberal one, and he had no doubt that the Government would give effect to it.

Sir Dominic Corrigan saw no reason for making a separate section in the Register for holders of colonial qualifications. It was a petty distinction which ought not to be made.

Mr. Simon said the object of the Committee was to make the Register as truthful as possible in its relation to the public, and they had no feeling of jealousy in the matter. In the United Kingdom the Council was responsible for the efficiency of examinations, while they had no direct knowledge of the colonial examinations; and it was therefore considered reasonable that a distinction should be drawn between those qualifications which they could guarantee of their own knowledge and those which they could not. No doubt some of the colonial qualifications were quite as good as British, but others might not be so, and it was right that the public should be made acquainted with the distinction.

Sir William Gull thought it was hardly fair to put the names of men whose examinations the Council had more or less superintended on the same list with the names of those over whom the Council had had no control.

Sir Dominic Corrigan said that the separation of the lists would appear invidious as implying a suspicion that the colonial qualifications were inferior to British qualifications.

Mr. Turner supported the motion, and founded his arguments in favour of the separate list for colonial qualifications on the fact that the Council satisfied itself by visitation and inspection that the examinations in the United Kingdom reached the proper standard, while no such test could be applied to colonial degrees.

Dr. Thomson said the Committee had felt considerable difficulty in deciding what distinction should be made between those whose education had been inspected by the Council, and those over whose examination the Council had had no control. It was only after very full deliberation that they decided that a separate section of the Register should be kept. It was quite open to the Council to consider whether there was any better distinction that could be drawn.

Mr. Lister sympathised with the view expressed by Sir D. Corrigan that there was something invidious in the proposed distinction. If the Council registered a person, that was equivalent to saying that the person was entitled to the confidence of the public. It would be the Council's duty to inquire what colonial bodies could be trusted, so that the public might know that their qualifications were satisfactory.

Dr. Storrar did not approve of mixing up colonial and foreign with British qualifications, because the Council could not guarantee the former as they could the latter. He desired to give every reasonable facility to colonial graduates to practise in England, but he thought there was good ground for keeping a separate list.

Dr. Quain said there was no feeling of jealousy or exclusiveness on the part of the Council, but they could not guarantee the qualifications of strangers as they could thos of the men whose education had been thoroughly superintended.

Mr. Simon said the Committee did not for one moment wish to cast the slightest slur on colonial qualifications, many of which were of an admirable character, but it was impossible to deny that there were many about which little was known. The Medical Act made the bodies in Schedule (A.) amenable to the Privy Council and the nation through the Medical Council, but there was no such provision with regard to the colonial licensing bodies.

Dr. Rolleston thought it was quite possible that students who had been rejected in Great Britain might go to the colonies, where they would be required to pass a less strict

examination. They might then return to England from Australia or Fiji, and claim to have their qualifications registered. He considered that an educational solidarity between England and the colonies would bind them together more closely than fleets or armies or Acts of Parliament, but whatever was done should be absolutely truthful, and it would not be so if British qualifications were inserted in the same section as colonial qualifications.

Dr. Aquilla Smith said it was not necessary for a rejected student to go so far as the colonies in order to be registered, for there were places even in the United Kingdom to which he could go and obtain a qualification entitling him to be placed on the Register.

Dr. Andrew Wood said in Canada and Australia there were Medical Councils and Medical Acts which afforded a guarantee that the qualifications were sufficient. If the proposed boon was to be granted at all it should be done in a graceful way without making any distinction which might be regarded as implying an inferiority in the case of colonial qualifications.

Dr. Fleming thought that the arguments which had been used in favour of including colonial qualifications in the same list with the qualifications of the United Kingdom would also apply to foreign qualifications.

Sir Dominic Corrigan's amendment was negatived, seven voting in its favour, and thirteen against it.

The original motion was then carried.

Mr. Simon moved—"That the General Medical Council should have authority to establish, *under conditions*, in the Medical Register, a distinct alphabetical section for 'foreigners practising in the United Kingdom, with qualifications granted in foreign countries, and entitling to practise in those countries respectively.'" "That the Council should have authority to cause to be registered in this section of the Register such qualifications as it may in its discretion (having regard to the conditions under which they are granted) judge to be sufficient guarantees of 'the possession of the requisite knowledge and skill for the efficient practice of their profession.'"

The motion was seconded by Dr. Storrar, and, after a short discussion, was carried.

Mr. Simon then moved—"That the Council would not approve, as a general rule, that British subjects should be allowed registration in the United Kingdom on the basis of foreign qualifications; but the Council would approve the granting of a limited authority to the Council to permit, in particular exceptional cases, and by way of special grace, the registration of persons long established in practice in foreign parts, and of proved character and attainments, but not possessed of registrable qualifications." He said this section was intended to refer to British subjects who might have attained to great eminence in their profession in foreign parts, and who wished to practise in England. Such men could not be expected to undergo examination here. The Committee, however, did not wish that the Council should in any way establish a precedent which might be strained into universal admission of foreign degrees held by British subjects. Of course they did not desire to prevent students from studying abroad if they thought they could thereby improve their education, but the general principle upon which they were to act was that students who intended to practise in this country should be examined here.

Dr. Thomson said he gave his general assent to the recommendation, but he could not see why a British subject who had lived in a foreign country, and to all intents and purposes had been for some time an inhabitant of that country and practised there, should not be entitled to the same privileges as a foreigner.

Mr. Simon said the Council would have power to make such modified regulations as would meet those cases without endangering the general principle.

Sir William Gull said it was a great advantage to students to be able to go to foreign schools, but he regarded it as undesirable that British subjects should be registered simply because they had foreign qualifications.

The resolution was agreed to.

Mr. Simon moved—"That the Council would not approve that foreign qualifications should be registrable as 'additional qualifications' under the Medical Act of persons primarily registered under British qualifications." He said many British practitioners who held foreign qualifications wished to have those qualifications registered, but the result would be that the general public would imagine that a foreign degree was equal to a British qualification, though it was well known among the profession that in some Continental countries, such as France, Germany, Holland, and Belgium, the title "M.D." was simply equivalent to the word "Doctor" as applied to every follower of Æsculapius.

Dr. Storrar seconded the motion, which was agreed to.

Mr. Simon said it was scarcely necessary for the Council to pass any vote with reference to Section 11 unless it were to thank the President for the trouble he had taken in relation to M. Roger-Marvaise's Bill.

The President said that he had been informed by the Foreign Office that no settlement had yet been come to, and it would therefore still be necessary to pay attention to the subject.

LEGAL DIFFICULTIES UNDER RUSSELL GURNEY'S ACT AND UNDER THE MEDICAL (ROYAL COLLEGE OF SURGEONS) ACT OF 1875.

1. On the question which was referred to this Committee for consideration and report, as regards the second proviso in Russell Gurney's Act, the Committee has to report as follows:—

The Recommendation of the General Medical Council in 1876 (see Minutes, p. 239) was—"That the qualifications conferred should not, except at the further discretion of the bodies, carry with them any right to take part in the government of the universities or corporations, or any right or privilege beyond that of registration, with a view to the practice of the medical profession."

The Act 39 and 40 Vict., cap. xli., clause 1, contains the following proviso:—"Provided always that nothing herein contained shall render compulsory the exercise of such powers; and that no person who, *but for this Act, would not have been entitled* to be registered, shall *by reason of such registration* be entitled to take any part in the government, management, or proceedings of the universities or corporations mentioned in the said Medical Act."

This proviso appears to be open to serious objection in respect of the two groups of words which are put in italics—in respect of the first group, because much needless contention might arise under them as to what "*but for this Act*" would be the entitlements to registration; and the second group, because of the assumption that it is "*registration*" which gives power to take part in the government, etc., whereas the right to take such part arises, not from the registration, but from the *degree or qualification* which the university or corporation confers. And thus the proviso appears to the Committee to be such that only a court of competent jurisdiction can determine what construction is to be put upon it.

It appears quite certain to the Committee that the intention of the Legislature was to carry out the recommendation of the General Medical Council; and the Committee is of opinion that a representation should be made to her Majesty's Government with a view to the amendment of the Act in this respect.

It would be desirable that the new proviso, which should be substituted for that which is at fault, should be as completely as can be unambiguous; and the Committee would suggest that in its amended form the proviso should be to the following effect:—"That if any university or medical corporation, which has not before the passing of the Act examined women for qualifications as aforesaid, shall at any time after the passing of the Act see fit so to examine women, no woman obtaining such qualification shall, in respect of it, except at the further discretion of the university or medical corporation granting the same, be entitled to take any part in the government, management, or proceedings of the university or corporation."

2. As regards the legal difficulty which the Royal College of Surgeons of England has brought under the notice of the Council, as preventing the College from arrangements which it would wish to make with other authorities for a joint examination of women desirous to obtain the midwifery licence of the College, the Committee, having, as desired by the Council, considered this difficulty, has to report that, in view of its parity of matter with the previously mentioned difficulties under Russell Gurney's Act, it would, in the opinion of the Committee, be desirable that, whenever legislation shall be proposed for removing the difficulties under Russell Gurney's Act, such legislation should (if the College of Surgeons approve) extend to the College of Surgeons Act, in order to relieve the College from the difficulty which now stands in its way.

In the summer of 1875, when the Bill for the College of Surgeons Act was under consideration, no question had yet arisen as to the College's granting its midwifery licence to women; and the possibility of its perhaps desiring to take this course, and to take it by means of joint action with other authorities, was not in view of the framers of the Bill. The effects of this oversight are represented in the first section of the Act, where not only no special provision is made for the granting of the midwifery licence by way of joint action, but where also the difficulty is created that, if the College, under the general (but very inadequate) enablement of Clause 19 of the Medical Act, took joint action distinctively in regard of women-candidates in midwifery, the question might arise whether the women passing this joint examination could be excepted from the general effect of Section 1 of the College of Surgeons Act, under which all persons who pass such joint examinations as are therein described become of right Members of the College.

In order to define more exactly the amendment of law which seems requisite, the Committee, subjoining copy of the first section of the College of Surgeons Act, inserts (within square brackets) certain additional words which, if they had been in the section, would apparently have obviated the difficulty which is described; and the Committee would suggest that the present law should, by suitable amendments, be brought to express the meaning which the subjoined section, with the inserted words, would convey.

On this section of the Report it was agreed, on the motion of Mr. Simon, seconded by Dr. Storrar—"That, with regard to the legal difficulties under Act 39 and 40 Vict., cap. xli., clause 1 (Russell Gurney's Act), the Council would recommend that the proviso in Clause 1, beginning 'Provided always' should be amended as follows, viz.:—'That if any university or medical corporation, which has not before the passing of the Act examined women for qualifications as aforesaid, shall at any time after the passing of the Act see fit so to examine

women, no woman obtaining such qualification shall, in respect of it, except at the further discretion of the university or medical corporation granting the same, be entitled to take any part in the government, management, or proceedings of the University or Corporation.'"

SECTION FIRST OF THE COLLEGE OF SURGEONS ACT.

The Committee's Report on this subject was as follows:—

1. "If in pursuance of the principal Act the Royal College of Surgeons of England unites or co-operates with any of the colleges or bodies in that behalf mentioned in the Medical Acts, in conducting the examinations required for qualifications to be registered under the principal Act, then, notwithstanding anything in any statute or charter contained, it shall be lawful for the Council for the time being of the said College to prescribe by a by-law under the common seal of the said College, that no person shall become a Fellow, or Member, or Licentiate in Midwifery of the said College, unless (in addition to passing such examination (if any), and complying with such other conditions (if any) as may be prescribed by any by-laws in force for the time being, made in pursuance of any charter of the said College) he shall have passed such examinations, hereinafter called the joint examinations, for qualification to be registered under the Medical Act, and complied with such conditions relating thereto as may be agreed upon between the said College and the college or body, colleges or bodies, with whom the said College may be united or co-operating as aforesaid; and every person who shall have passed such joint-examinations and complied with such conditions as aforesaid, shall be entitled to receive letters testimonial of his qualification to practise the art and science of surgery [or, as the case may be, a certificate of fitness to practise midwifery] under the common seal of the said College, on obtaining which [letters testimonial or certificate] he shall become and be constituted a Member [or, as the case may be, a Licentiate in Midwifery] of the said College, subject to all the regulations, provisions, and by-laws in force for the time being of the said College: provided—etc."

With regard to this section, after a brief conversation the two following resolutions were passed:—"That the Council concurs with the Royal College of Surgeons of England in the opinion that the Royal College of Surgeons Act of 1875 requires amendment; and that the Council, if so desired by the College, would be ready to concur with the College in recommending to her Majesty's Government that the amendment of this Act should be undertaken by Government in connexion with the amendment of Russell Gurney's Act." "That so much of the Report as relates to the legal difficulties of the Royal College of Surgeons of England be referred to the President and Vice-Presidents of that College, and the representative of the College on this Council, for their consideration; and that their opinion be requested upon the proposals made, before this Council continues the further discussion of the Report."

The last section of the Committee's Report was—

(C.)—Appropriation of Penalties accruing under the "Medical Act."

The Committee has given its attention to representations which have been made to the Council relating to the recovery of penalties from persons convicted of illegal practice. By Clause 42 of the Medical Act it is provided, and in the opinion of the Committee reasonably so, that all penalties shall be paid to the Treasurer of the General Medical Council; and so far as this payment of penalties is made, the Council is enabled to meet the applications, which persons who have undertaken the charge of prosecutions often make, for contribution of the whole or a part of the penalties towards the expenses of such prosecutions. But Clause 42 is so far imperfect that it does not repeal, in regard of its subject-matter, the provisions of the Police-courts (Metropolitan) Act and other local Acts; and under these provisions another destination is given to such penalties. It is, therefore, very desirable, in order to give effect to the evident intention of the Legislature, that a remedy should be applied to Clause 42; and the Committee suggests that the Council should move her Majesty's Government to procure the required change in the law.

The addition to Schedule 42 of such words as follow would, in the opinion of the Committee, meet the case—viz., "anything to the contrary contained in any Act passed before the passing of this Act notwithstanding."

On this section it was resolved—"That the Council approve the recommendations of Section (C) of the Report, and that the Council should promote such an amendment of the law as would enable the Council to receive all penalties accruing under the Medical Act, nothing to the contrary contained in any other Act, local or general, notwithstanding."

The Council then resumed, and the whole Report was adopted.

A deputation, consisting of the President, Mr. Simon, Dr. Andrew Wood, and Dr. Hudson, was appointed to lay the Report and resolutions before the Lord President, and the Council then adjourned.

EIGHTH DAY—FRIDAY, MAY 18.

MEDICAL LEGISLATION.

The following communication was made by the President as to the result of the deputation of the Council to the Lord President of the Privy Council:—

The PRESIDENT: Before we proceed to the business of the day, it is my duty to lay before the Council the result of a deputation to the Duke of Richmond, which has just taken place. In conjunction with Mr. Simon (the chairman of the Medical Acts Committee) and Dr. Andrew Wood, I waited upon the Duke of Richmond. I am sorry that, from circumstances which were unavoidable, Dr. Hudson was unable to be present. I stated to the Duke and to Lord Sandon that the Council had had under their consideration during the present session the various matters relative to the amendment of the Medical Acts, which had been referred to us by the Lord President. I stated that these were the subjects of Colonial and Foreign Degrees, the action of the French Government in respect of British Practitioners, and the Education of Midwives. But it seemed right to add, for the information of the Lord President, that, besides these which had been referred to us by the Government, the following topics had been, or were about to be, under our consideration:—(1) Dr. Lush's Bill to amend the Medical Acts; (2) an amendment of Mr. Russell Gurney's Act of last year; (3) a Bill by Mr. Errington to amend the Medical Act of 1858, which was introduced into the House of Commons the night before last, and which will be laid before the House as soon as it is printed, orders having been given for its printing; (4) a proposal to amend the College of Surgeons Act of 1875; and (5) an amendment of the Lunacy Acts, which, although not immediately connected with our own Act, is intimately connected with some of the duties that we have to discharge in relation to that Act; and it seemed right to draw attention to the fact that the President had already put himself in communication with the chairman of the Committee of the House of Commons on the subject. It was pointed out to the Lord President that there were thus under the consideration of the Medical Council eight distinct subjects requiring legislation, or, at all events, requiring consideration for the purpose of legislation. Having made that general statement simply in the way of enumeration of the business in this direction that was before us, we laid before the Lord President the conclusions to which the Council had come thus far while in session; and the Report that has been just read and confirmed was officially handed to his Grace for the consideration of the Government. I also added that the Council would no doubt send to his Grace the conclusions at which we should arrive either to-day or on subsequent days of the session. I then—according, I believe, to the wish of the Council—requested the President to inform us whether the Government would be able to assist the Medical Council in procuring what they judged to be necessary amendments in the law; and if so, whether the Government would undertake this during the present session of Parliament, or at what time they would do it. It is easy enough to recite what it was my endeavour to state under your instructions. If I have stated anything incorrectly, the chairman of the Medical Acts Committee or the chairman of the Business Committee will be able to correct me. It is not so easy to represent on behalf of another, without authority, his answer; but I think—speaking under the reserve with which one must speak for another person—that the following is substantially the information which we received: With regard to the private Bills already before the House, such as Dr. Lush's and Mr. Errington's, the Lord President, speaking with the ordinary reserve of a Minister said, there was very little chance, in the present state of public business in the Houses of Parliament, of a private Bill on any subject not of first-class importance passing during the remainder of this session. Then, setting aside those two Bills, the President said that all those points which we had mentioned to his Grace were certainly, severally and collectively, of very great importance, but that their importance could not be put exactly on the same level, some being more and some less urgent. He was not, of course, able to give any answer even with regard to those which are most urgent. On a subject of this kind, with regard to the introduction of a Government Bill, he could not speak without conference with his colleagues; therefore, practically, no definite answer could be given. The Lord President added that he should be very anxious to receive from the Medical Council, at the close of their session, the fullest expression of their opinion on the points referred to them by the Government, and also their suggestions and advice as to any other matters which they think require legislation; and that, if such a memorandum were transmitted to his Grace, he would undertake to lay the matter before the Cabinet at the most convenient period, and then to consider not only whether the Government would take the subject up, but also whether they would take up the most urgent points at one time, and the less urgent at another. I think I have stated pretty exactly what the Lord President

said upon that point. Perhaps it is not improper that I should add that the Duke pointed out that the Government has now Bills which claim precedence. There is the Universities Bill, which was in Committee last night in the House of Commons; and the House, as we know, has broken up for the Whitsuntide recess: there are pages of amendments upon that Bill; it has not yet passed the House of Commons, and therefore is not yet in the House of Lords. Then there is the Prisons Bill, brought in by the Home Secretary at the early part of the session, which still blocks the way, and has afterwards to go to the House of Lords. These Bills, his Grace stated, must necessarily have precedence, as Bills of the first order, and being already before Parliament. I think that is the substance of what took place; and I will only add, what the Lord President added, to sum up the whole matter, that he desires that we should furnish to the Government a statement of all the conclusions at which we have arrived, distinguishing between those matters which we considered to be urgent and those which we regarded as of more general consideration. There was one suggestion which was not made by the Lord President himself, but which was made at the time—and which is, perhaps, the most urgent matter of the whole—that which affects the colonial practitioners. It might very probably be possible to remedy the particular evil which is complained of in Canada, and made a matter of representation to this country, by the alteration of a clause or two in the Merchant Shipping Act and Passengers Act, without raising the question of any alteration or amendment of the Medical Acts. I perhaps should not conclude without saying that a very full statement was made in illustration of the various points by the chairman of the Medical Acts Committee, and by the chairman of the Business Committee, on the various points in answer to questions from his Grace. The chairman of the Business Committee desires me to add what I have much pleasure in adding—which, however, I did not state, because it did not bear directly upon the short historical statement which I gave—that incidentally the Lord President observed—what the Council I am sure will be happy to hear—that he himself and the Government generally feel that a body constituted like the Medical Council is in full possession of the knowledge of what is necessary in relation to medical questions, whether viewed professionally or in a more complete and national sense; and I think I do not overstate the case when I say that it was his Grace's conviction that it was essential, as well as desirable, to confer on all subjects of this kind with the Medical Council before undertaking legislation.

Mr. Simon said that he desired to add some information on the subject of the interview. He observed with very great regret that when the Government received from this Council a deputation charged with a pointedly technical matter, they did not have in attendance any functionary connected with the medical profession. From his (Mr. Simon's) long experience of public offices, he could state that there was practically no chance of getting matters of detail attended to unless some officer of the Government took them in hand. When the deputation were dealing with matters of this sort there ought to be a skilled person present on the part of the Government to take notice of what passed. Otherwise, the words which were uttered were mere air and were lost. Although the absence of a skilled officer now and then might be compensated either, on the one hand, by such indefatigable zeal as that of their President, or, on the other hand, by the interest of a particular member of the Government in the matter; yet, in the long run, there was no continuity of attention on the part of Governments—speaking of them in the plural number—in matters of this sort, unless they were taken up by the permanent officers of the Civil Service, who could inform successive politicians of the state of the different departments of legislation.

THE MEDICAL ACTS.

On the motion of Mr. Simon, seconded by Dr. Wood, the Council resolved itself into a committee to resume the consideration of the Report of the Medical Acts Committee.

The Council then proceeded to deal with Section (D), which was read by the Registrar, and was as follows:—

(D.)—Memorial of the Royal College of Surgeons of Edinburgh in regard to Dental Surgeons.

As regards the annexed memorial of the Royal College of Surgeons of Edinburgh, referred to this Committee, the Committee has to report as follows:—

"The matter of the memorial does not, in the opinion of the Committee, require the Council at present to express any judgment in regard to it; but the Committee suggests to the Council that a copy of the memorial should be sent by the Council to the Royal College of Surgeons of England for the information of that College."

Mr. Simon moved—"That a copy of the memorial received from the Royal College of Surgeons of Edinburgh on the subject of Dental Surgery be sent by the Council to the Royal College of Surgeons of England for the information of that College."

Dr. Storrar seconded the resolution.

Dr. Wood thought that this was a matter as to some parts of which the Council might fairly be called upon to express an opinion. There was a great agitation going on at the present time in the dental profession. Dentists were divided into two camps. One camp was anxious to carry out two things—in the first place, that no man, whether previously to the passing of the new Act or after it, should be entitled to practise as, or call himself, a surgeon-dentist, unless he should have received a certificate of the Royal College of Surgeons of England, and of that alone. He (Dr. Wood) thought that it would be fair enough to send that part of the proposal to the Royal College of Surgeons. But the second proposal of the dentists, and that with which the Medical Council had most to do, was that a special schedule should be added to the Medical Act for the registration of dental surgeons as such. He held that it was the duty of the Council to express an opinion upon that matter. It might put an end to the agitation of which he had spoken, and save trouble, if they intimated that it was their opinion that to have special schedules for dentists, or aurists, or oculists, or any other class as such, would be neither expedient nor fair. Every man who passed took his licence as a surgeon, and there was nothing so extraordinary in drawing a tooth that they needed to have a special schedule for dentists. He believed that they ought to set their face against anything like special registration. To say that no man should call himself a dentist unless he received a certificate from the Royal College of Surgeons of England would be quite incompatible with the general scope of the Medical Acts. He would move, as an amendment—"That, having considered the memorial of the Royal College of Surgeons of Edinburgh as to the question of dental surgeons, in the opinion of the Council it is inexpedient that a special schedule should be added to the Medical Act for the registration of dental surgeons as such. Secondly, that a copy of the memorial shall be sent to the Council of the Royal College of Surgeons of England for the information of that College." The motion, as it stood, gave no opinion on the matter. He believed that the Council were in a position to give an opinion, and that it would be a very grievous thing for them to give the least encouragement to the idea that anything like a special schedule for dentists should be added to the Register.

Mr. Simon said that, as the chairman of the Medical Acts Committee, he could state that perhaps the members of that Committee had quite as strong a feeling on this subject as Dr. Wood had; but he (Mr. Simon) believed that to express any opinion on the present occasion would be to discuss an abstract question. The subject was not brought before the Council as a proposal. The College of Surgeons had not dealt with it, and surely the Council would be troubling themselves unnecessarily if every request that was made to other bodies in the medical profession was to be considered as a reason for passing abstract resolutions. He would not undervalue the arguments which had been urged by Dr. Wood, but hitherto it had not been the practice of the Council to pass resolutions on questions as far off as this. To do so would be to jump a very long while before they reached the stile.

Sir James Paget said that the subject of the memorial had not been raised as a question by the College of Surgeons at all, and that body was very far from having expressed an opinion upon it, or even so much as considered it. He believed that there had been a misstatement of the fact, and that misstatement mischievously implied that the College of Surgeons was at the present time contemplating a scheme for the registration of dental surgeons. There was absolutely nothing of the sort before the College. It might be unseemly to send the memorial to the Royal College of Surgeons as representing anything like the real state of the matter. He thought, however, that the memorial might safely be received and entered on the Minutes.

Dr. Wood said that he was very glad to hear the explanation which had been made by Sir James Paget, but he thought that it would be far better for the Council to express an opinion at once that a special schedule would be inconsistent with the general spirit of the Medical Acts.

Dr. Storrar could not help sharing Mr. Simon's opinion that it would be a very long leap if the Council passed any

resolution on the subject of this memorial. There was at the present moment something like a free fight going on in the profession of dentists, but from information which he had gathered from a trustworthy source he was able to say that it was never intended that the Royal College of Surgeons of England should take up any position in relation to surgeon-dentists which was not equally shared in by the College of Surgeons of Edinburgh and the College of Surgeons of Ireland. The Council had better wait until they really had something like an application from the dentists as a body.

The amendment was lost, the numbers being five for it and six against it.

The original motion was then carried.

Section (E) of the report was then read by the Registrar as follows:—

(*E.*)—*Dr. Lush's Medical Acts Amendment Bill.*

On this Bill, first brought under notice of the Council by the East London Defence Association, and subsequently introduced in the House of Commons by Dr. Lush, the Committee has to report as follows:—

1. As regards Clause 1, the Committee need hardly observe that, in common with the whole body of the medical profession, it regards with extreme regret the injury occasioned to the general community by the unskilled practice of unqualified persons. But the Committee cannot recommend to the Council to give approval to Dr. Lush's Clause 1 as it stands. The Committee does not believe that a clause of such stringency, even if it could be recommended by the Council, would have any chance of being accepted by the Legislature. And supposing even that this clause were modified into the comparative mildness of Section 23 of Lord Ripon's Bill, the Committee would suggest that endeavours to strengthen the Medical Acts in their penal relations to medical imposture may probably best be postponed till such time as those Acts shall have received all essential amendments in the provisions relating to the profession itself, and shall then be in readiness for consolidation.

Section 23 of Lord Ripon's Bill (as sent down in 1870 from Lords to Commons) was as follows:—

"23. If any person who for gain either practises medicine or surgery, or any branch of medicine or surgery, or is engaged in the cure or treatment of diseases or injuries, and is not registered under the principal Act, takes or uses any of the designations enumerated in Schedule (A) to the principal Act as amended by this Act, or by any of the Acts in the first schedule mentioned, or the designation of licentiate in medicine and surgery or licentiate in medicine or in surgery or in any branch of medicine or surgery, professor of medicine, professor of surgery, physician, surgeon, doctor, or any designation used to distinguish duly qualified practitioners of medicine or surgery, or any branch of medicine or surgery, he shall for every such offence be liable, on summary conviction, to a penalty not exceeding twenty pounds.

"Provided that a person shall not be liable to such penalty if he shows that he is not a British subject and not ordinarily resident in the United Kingdom, and holds a medical diploma, degree, or title from some university, college, or body in any British possession or foreign country entitled to grant the same.

"If any person who for gain either practises medicine or surgery, or is engaged in the cure or treatment of diseases or injuries, wilfully takes or uses any of the above-mentioned designations to which he is not entitled, he shall for every such offence be liable, on summary conviction, to a penalty not exceeding twenty pounds.

"If any person not registered under the principal Act gives any certificate which under the principal Act is not valid unless signed by a person registered under the principal Act, he shall be liable on summary conviction to a penalty not exceeding twenty pounds.

"The General Medical Council and also any branch medical council may take proceedings against any person for the contravention of this section, and no prosecution for the contravention of this section shall be instituted by any private person, except with the consent of the General Medical Council or some branch medical council.

"Nothing in this section shall prevent any person who lawfully holds a certificate of fitness to practise as a dentist granted by the Royal College of Surgeons of England from taking or using the title of certified dentist, or if he has obtained a certificate before the passing of this Act the title of licentiate in dentistry, or impose any penalty on such person for taking or using such title.

"Nothing in this section shall impose any penalty on any person engaged solely in the cure or treatment of the diseases or injuries of animals, and not of human beings."

2. As regards Clause 2 of Dr. Lush's Bill, the Committee has already submitted to the Council a recommendation that her Majesty's Government should be moved to promote the amendment of law for which this clause would provide.

3. As regards Clause 3, the Committee has already reported to the Council the course which it would recommend to be taken by the Council in regard of the various university degrees to which this clause refers.

Mr. Simon moved—"That, in the opinion of the Council, the consideration of the question of introducing more stringent penal clauses into the Medical Acts shall be postponed till such time as those Acts shall have received all essential amendments in the provisions relating to the profession itself, and shall then be in readiness for consolidation."

Dr. Storrar seconded the motion.

On the suggestion of Dr. Wood, Dr. Lush's Bill was read to the Council.

Mr. Macnamara thought that this question was one which ought not to be hastily passed over. It was one of the questions which were very much agitating the minds of the whole mass of practitioners.

Dr. Wood thought that the adoption of the motion would be equivalent to deferring *ad Græcas Kalendas* the consideration of a very important subject. It would be a very long time before all the Acts were ready for consideration, and, indeed, that time might never arrive.

Mr. Simon said that they could not conveniently consider the question of trespass upon their province till they knew what their province was. They must know, in the first instance, what were the limits of their profession as fixed by law.

Dr. Wood: Where are we to ascertain that?

Mr. Simon said that they were at present dealing with the view of the law as regarded colonial trespassers and foreign trespassers. When they got those things right it would be the time for dealing with persons who were merely pretenders or impostors.

Dr. Wood said that according to that view of the matter they would let trespassers go on *ad infinitum*. They were very much twitted the other day for saying that the examination in general education should be "eventually" left with the Education Department. The proposition of Mr. Simon was worse than "eventually."

At the suggestion of Dr. Quain, the word "legislative" was inserted in the resolution before the word "amendments."

The motion was then carried.

The Council then resumed.

On the motion of Mr. Simon, it was resolved that Sections (D) and (E) of the Report of the Medical Acts Amendment Committee be now received and adopted.

Mr. Simon said that he hoped that in the course of to-morrow and Monday the Medical Acts Committee would agree upon a report on Section (F), relating to the question of midwives. If he was in order, he should like to ask a question of the chairman of the Business Committee. He observed from the Minutes that more than four years ago a certain committee which then existed on the question of the medical education and qualification of women was reappointed, and was empowered to do certain things. That committee, of which Dr. Acland was president, consisted of seven other members, of whom four were no longer members of the Council. The committee was reappointed on April 2, 1873, previously to which it had given a report which was received and entered on the Minutes, though not adopted. He wished to know whether that committee was still in existence.

The President: I think I am in a position to say that since that report was presented to the Council, and since the resolution was passed reappointing the committee, as far as I know, nothing substantial has been done. There did not seem to be much desire on the part of the Council at that time to prosecute the subject, and, as far as I am aware, no active steps have been taken, and the question has not been revived. The Council might desire me, as chairman of that committee, to make a very short statement concerning it. A number of copies of that committee's report were printed, containing a special communication on midwifery, and they were circulated together with the names of the committee. There was a note at the commencement of the report inviting communications on the subject, which were to be addressed to the chairman. Three years ago there was a good deal of discussion going on with regard to the complete education and registration of women. The view generally adopted by the committee in question was that the matter was not ripe for settlement; and, as a matter of fact, I may venture to state to the Council that so few communications on the subject came to the chairman, and there seemed to be so little desire, either in the Council or outside of it, to prosecute the question of the special education of women that it seemed worse than useless to prosecute it just now. Since 1873 legislation has taken place by which women have complete entrance into the profession as fully qualified surgeons in the same way as men; and now the question which seems to be forced upon us for consideration is whether we will or will not do anything with regard to the registration in midwifery. The question has lain dormant; but, no doubt, the time has come when the subject must come before the Council.

Dr. Humphry's Report.

The Council then went into committee on the adjourned consideration of Dr. Humphry's report.

Dr. Humphry moved—"The Council being of opinion that it is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study, suggests to the licensing bodies to consider whether this object might not be obtained, or partly obtained, by examinations held at the several medical schools by the teachers in those schools, or by other examiners, under

such supervision as may from time to time be determined." He said that the Council would not have forgotten that on May 14 it resolved—"That it be a recommendation to the licensing bodies that there be in future three professional examinations." It was subsequently resolved that the professional examinations be arranged in two divisions: the first division embracing elementary subjects, and being completed before the close of the second year; the second division taking place after the expiration of the second year of study. The effect of what was carried was that there should be three examinations. As a means of carrying out this proposition he brought forward a motion, which was seconded by Dr. Rolleston, that the first examination should be passed before the commencement of the second year of professional study. That motion was not, however, approved of, and was negatived. He believed that the Council dissented from that motion, in the first place, from a feeling that it was too stringent, and required absolutely that the examination should be passed in the first year, and that the second year should not count unless the first year's examination had been passed. Another reason which weighed with the Council in rejecting the motion was that they felt some difficulty as to the manner in which the examinations should be conducted by the several licensing bodies. On this account he had brought forward the resolution which was upon the programme, and which he had just moved. This resolution did not contain that stringent clause to which the Council objected, but it merely expressed an opinion that "it was desirable that an examination should take place in the first year." He gathered it to be, on the whole, the sentiment of the Council that some examination should take place in the first year as a means of giving an impetus to the work of the students in that very important year of study. If this was not the view of the Council, of course the resolution would fall to the ground. With regard to the other objection, which was the difficulty which might be experienced by the licensing bodies in instituting such an examination, partly on the ground of expense to themselves, and partly on the ground of the expense to the students, he had inserted in the present resolution the suggestion that the licensing bodies should consider whether such examinations might not be held at the several medical schools. This course was followed at Cambridge, at Edinburgh, at Glasgow, at Aberdeen, and at the Queen's University of Ireland. The teachers at the medical schools might be utilised as examiners. He was quite aware that there was an objection to confining the examinations to the teachers, but this resolution did not necessarily propose that the examinations of the first year should be conducted entirely by the teachers. The proposal therefore was that, if any of the licensing bodies chose to recognise an examination at the several schools by the teachers or other examiners, it should be suggested to them that that would be one means of overcoming the difficulty. Several advantages would result from this course. There could be no doubt that it was in many instances desirable that teachers should take part in the examination of their own students. This was felt strongly by the universities in Scotland. If the teachers in the elementary subjects were made examiners under the supervision of the licensing bodies the practice would no doubt act very strongly as a stimulus to the teachers, not only in conducting the examinations, but also in the preparation of the students for them.

Mr. Teale seconded the motion, having been, he said, the seconder of the proposition that there should be three examinations. The object of instituting three examinations was not to make the work of the students more difficult, but to enable them to go through their work, on the whole, with greater certainty and with greater freedom from obstacles and difficulties. But he felt, in committing himself to a third examination, that unless it was carried out very carefully they would do the very opposite of that which he and, he believed, the Council generally intended. They desired to secure that the students should spend their time in the best way. He thought that by following the method proposed by Professor Humphry they would be likely to avoid many of the evils which might otherwise attend the examinations in the first year. Among those evils would be the expense of examining in the towns where the licensing bodies were situated; and also the enormous difficulty of the licensing bodies in examining such a great number of students as would present themselves.

Dr. Rolleston was sorry that he was for once unable to coincide altogether with Professor Humphry. He could agree with the first part of the resolution, but he objected to the examinations being conducted by the teachers at the medical schools. He wished that the Council would say that it was desirable that the student should have two chances of being examined in his first year by an examination taking place once in six months. There were many men whom it was desirable to set free from the subject of physics early, in order that they might commence their clinical studies at the earliest possible opportunity. That was the reason why he should propose that there should be two examinations during the first twelve months. As to the proposal that the teachers in the medical schools should take part in the examinations, he must say that there were many teachers who were more fit to examine than the ordinary examiners themselves; but to ask that the examinations should be conducted by these teachers was something like asking for the millennium or crying for the moon. In these days nine-tenths of our legislation was drawn up to prevent jobbery and evil practices. Legislation was not meant for the good but for the bad; and there was not one member of the House of Commons who would not offer opposition to the proposal that a teacher should be allowed to examine his own pupils. The proposal would not be listened to in any House of Commons. It would be looked upon as something like a man auditing his own accounts. Another objection was that teachers were apt to get into the same groove; and if they went on examining all their lifetime upon what they knew when they were five-and-thirty years of age, probably knowledge would not advance much. He was sorry to look at the matter in this Philistine way, but he wished to regard the matter from a practical point of view; and with that object he would suggest that they should leave out the latter part of the resolution.

Dr. Humphry said that he was willing to move his motion in two parts. He would first of all move the former part in the following slightly altered form:—"That it is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study."

Dr. Rolleston moved as an amendment—"That it is desirable that more than one opportunity for passing in the earlier subjects of examination should be afforded to students before the end of the first year of professional study."

Sir William Gull seconded the amendment.

Dr. Wood said that the Council had already passed a motion to the same effect as the present proposition of Dr. Humphry, and they had gone farther, and even stated what were the subjects which should be included in the first year's examination. ("No.")

Mr. Lister said that he had much pleasure in supporting the motion in its altered form. He objected on the former occasion to the examination in the first year, because the proposal then made was that the examination should necessarily be passed by the students. The present motion simply stated that it was desirable that such an examination should take place. It did not say that there should not be more than one examination in the first year.

Dr. Wood asked how the Council could pass the motion without knowing what the earlier subjects were to be.

Dr. Humphry said that he, and probably Dr. Rolleston also, would have preferred the motion that was brought forward the other day, namely, that it should be incumbent on the students to pass an examination in their first year, and that no further time should count until it had been passed; but he had brought forward the present proposition with a view of obtaining half a loaf, because it was impossible to get the entire loaf.

Sir Dominic Corrigan objected both to the resolution and to the amendment. In his opinion the proposition before the Council was an attempt at over-legislating, and would tend to force a young man into an examination before the end of the first year of professional study. The resolution, however, did not state how or where the examination was to be conducted. As to the amendment, it was utterly unintelligible. It proposed that there should be more than one opportunity afforded to the student for passing an examination in the first year. Did Dr. Rolleston mean 150 opportunities, or only two? If the amendment was carried out, he (Sir Dominic) did not see why a student should not go in for an examination every week in the year.

Dr. Aquilla Smith agreed with Sir Dominic Corrigan that the resolution legislated too much as to detail. He would ask

what record would be kept of these examinations in the first year. He should vote against the motion, for he believed that the whole thing was futile and impracticable.

The amendment, upon being submitted to the meeting, was negatived by nine votes against six.

Mr. Simon said that he was prevented by other business from taking part in the discussion on this subject the other day. Had he been present he should have been glad to give his vote in favour of the proposal that there should be an examination in the first year. He would move, as an amendment, that an alteration should be made in the words of the motion, and that, instead of the expression "an examination should take place," he would suggest the words "an examination should be passed." He would not ask the Council to reconsider the question by making it a condition that no time should count until such examination had been passed, but he wished it to be understood that the Council considered it desirable that the student should pass, and not only that he should be examined. The principle upon which the Council acted in reference to professional education was that a student should secure a knowledge of what was simply primary before he went on to the study of subjects which were essentially practical.

Dr. Storrar seconded Mr. Simon's amendment to alter the resolution.

Sir Dominic Corrigan asked who was to conduct the examination.

Mr. Simon said that the Council had already resolved that three examinations should be passed, and this resolution referred to one of those examinations. They were dealing generally with the examinations of the licensing bodies. He presumed that the examining bodies would conduct them.

After some further discussion, a show of hands was taken on Mr. Simon's amendment. The numbers were seven in favour of it, and eleven against it. The amendment was therefore lost.

Sir James Paget said that he felt that he could not express himself sufficiently strongly as to the propriety of having an examination at the end of the first year. He believed that they would all agree that there was something wanting in the regulation of the schools, not only to insure that the students would work with a will, but also to direct the method of work. It had been said by Mr. Macnamara, the other day, that his experience of students was that they would work well during the first year. His (Sir James Paget's) experience of them, however, was that they worked well during the first three months, and then fell off. The examination in the first year would be an incitement to them to persevere. He thought that it would be a great advantage for the Council to secure some means for inducing students to work diligently in their first year.

The motion was put to the meeting, and carried *nem. con.*

The business of the Council was then suspended for a short interval.

Upon the members reassembling,

Dr. Humphry said that he would withdraw the latter portion of the resolution of which he had given notice, and the first portion of which had just been carried. He then moved, according to notice—"That it is desirable that visitations of the several medical schools, the certificates of which are received by any of the licensing bodies, should from time to time be made by this Council." Hitherto the Council had confined its visitations to examinations, and he believed that in that respect it had done wisely. The effects which had been produced on examinations in consequence of the visitations had not resulted from any pressure being put upon the licensing bodies, but had resulted almost entirely from the silent and quiet working of those visitations, and from the conferences between the visitors and the examiners and other responsible persons connected with the licensing bodies. His desire was that some process should be carried on with regard to the schools, and that the Council should not content itself with the work of inquiry into and making suggestions with regard to examinations. It ought to go on to the consideration of the scarcely less important subject—the manner in which men were prepared for the examinations; and the suggestion of the resolution was that the plan of visitation, which had been adopted so successfully with regard to examinations, should now be applied with regard to schools. The visitors might ascertain the number of students in each school; the proportion of the teaching staff in the several subjects to the number of students; the condition of the apparatus for the purpose of instruction—such, for instance, as the museums, laboratories, and dissecting-rooms. The question of teaching was now becoming one of the most important sciences; and the progress of knowledge must depend very much upon the way in which the science of teaching was conducted. At the universities of Oxford and Cambridge there were at the present time under consideration proposals from the schoolmasters of England that those universities should extend their area from being merely teaching bodies to being directors of teaching, and that they should introduce a professoriate and a staff for the purpose of giving directions in that work. His desire was that the Council should enter upon the same area, and deal with the great science of teaching. There surely never was in the medical profession any body more competent to enter into this great question. Almost all the members of the Council were or had been teachers; and he was not saying too much when he stated that there were sitting around that table at the present time men who had been the most eminent of living teachers in the different divisions of the United Kingdom. He was certain that if he were to ask these teachers wherein their success had consisted they would say that it had depended upon the great fact of painstaking. He believed that success in the lecture-room as well as in the pulpit depended mainly and primarily upon the lecturer or the preacher taking great pains, and making due and careful preparation for the work which he had to do. He believed also that want of success was due, in a great measure, to an absence of due preparation. It might be said that the Council had no power to institute a visitation of medical schools. In answer to that argument he might say that if they had limited themselves to their strict legal powers they would have had to be content with simply issuing the Medical Register as a means of distinguishing qualified from unqualified practitioners, and with visiting the examinations and making representations to the Privy Council in case of their being insufficient. He apprehended that, strictly speaking, they had no legal power to issue any one of the recommendations with regard to examinations which they had issued to the licensing bodies. In sending forth those recommendations they had gone *ultra vires*. They had, however, accomplished a great work by means of their moral force, although they had gone beyond their strictly legal power. He conceived that by virtue of their moral force, if not of their legal powers, they might accomplish a good work by the visitation of the schools. They were continually passing beyond the letter of the Act, and he thought that there was no instance in which they could with more advantage exceed their actual legal powers than in the case of the visitation of the medical schools; and he believed that such a course would be felt to be so proper that no single school would resist the visitation. It might be said that the visitation of schools, if desirable, ought to be carried out by the licensing bodies. His answer to this objection was that it was too important a work to be relegated to the licensing bodies; and secondly, that those licensing bodies had no more power to undertake it than had the Medical Council. Besides, it would be a more invidious task for the individual licensing bodies than for this Council, which represented the whole profession. This question had been discussed in the Council of the College of Surgeons of England, having been brought forward by Mr. Quain, who had always felt extremely anxious that visitation should take place. A resolution in favour of such visitations was passed by the Council of the College of Surgeons, but it had never been acted upon, for it was felt to be a difficult thing for a licensing body to carry out. He believed that nothing would tend more to promote an improvement in the medical education of this empire than the conference which would result from the visitors of the Medical Council and the teachers of the several medical schools.

Sir James Paget seconded the resolution.

Mr. Simon said that the principle which was carried out in visitations was that the inspection should be made by the body which had the power of recognising the school. No doubt a visitation made by the Medical Council would be an excellent apostolic act, and be a good work in a missionary sense; but it would not carry the practical meaning which attached to visitations made by the recognising bodies. If schools were to be interfered with at all as regarded recognition, the recognition ought to be founded upon a thorough knowledge by the licensing bodies of what were the capacities of the schools. In the long run they must look for efficiency in medical schools to the same principles which made a shop answer. For instance, a grocer's shop would pay if its commodities were good; and,

in the same way, if a medical school was successful in its teaching and turned out well-prepared men, it would pay. He attached more importance, in the long run, to his commercial consideration than to inspection. It would be found to be a matter of commercial interest to a school to make itself efficient. As to the motion before the meeting, he doubted whether it was one which the Council ought to accept. He was inclined to think that it was founded upon a wrong principle. He did not wish to exclude the subject of the visitation of schools altogether from the functions of the Council; but he would rather that, in the first instance, the Council expressed an opinion that it was the duty of the licensing authorities to institute inspection.

Mr. Turner said that the question which was raised by the motion was a very important one, and, as far as he understood, it was now raised for the first time. He thought it right that in entering upon the discussion there should be some precise data submitted to the Council as to what was proposed to be done in the event of the motion being carried. It would be well to consider how many medical schools there were in the country, for in connexion with that question came the very important items of time and of expense as to the payment of visitors. The "Medical Directory" showed that there were eleven medical schools in London; eight schools in England, not in London; three university schools in Scotland; and nine in Ireland. In addition to these, there were in Edinburgh and Glasgow a number of what were called extra-mural teachers. These were teachers of various subjects, whose course of education was recognised by the universities and by the corporations, and whose methods and system of instruction would necessarily have to be inspected. There were, at least, twelve extra-mural teachers in Edinburgh. It seemed that in Glasgow the extra-mural teachers were organised into two schools.

Sir William Gull reminded the Council that they yesterday determined that students should not be discouraged from studying abroad. (Laughter.) Hence it would be utterly impossible to carry out visitation thoroughly.

Sir Dominic Corrigan said that there was one qualification in connexion with extra-mural teachers which Mr. Turner had overlooked. In Edinburgh and Glasgow these teachers were not recognised unless they agreed to charge the same sum for instruction as the medical schools. (Laughter.)

Dr. Haldane said that there were sixteen of these teachers recognised in Edinburgh.

Mr. Turner said that if the Council undertook the enormous duty of visiting medical schools, it would have to expend a large amount of time and money. They ought not to discuss the subject without considering the pecuniary element. The visitation of examinations had already cost a large sum.

Dr. Aquilla Smith: £2000, and £200 or £300 more for printing.

Mr. Turner added that it would be necessary to visit the schools twice a year, because the teaching in the winter session was different from that in the summer. He quite admitted that the visitation of schools would be a most desirable procedure; but he saw so many practical difficulties in the way, in connexion with the expense and the invidious nature of the duties, that he entertained very considerable doubt whether the Council ought to undertake the work.

Dr. Wood agreed that it would be extremely desirable to visit the schools, but that the practical difficulties of time and expense were so great that the duty could not be undertaken by the Council. The Council might collect statistics of several years with regard to "plucks" and "passes" at the several medical schools, and then if any particular school was found to send a large number of "plucks," perhaps a few visitations might be made. The work in this restricted form might be carried out cheaply. He would move, as an amendment—"That the Council recommend to the licensing body to take a note of the schools of medicine which have been attended by every candidate for their licence and degree; and that the return of rejections made annually to this Council be accompanied by a statement of the schools which have been attended by each rejected candidate respectively."

Sir William Gull was understood to say that the experience of Guy's Hospital showed that the publication of the "plucks" and "passes" had a demoralising effect upon the students, and led them to "cram."

Dr. Aquilla Smith said that it had been clearly shown that visitation of the medical schools was impracticable. He wished to call attention to the fact that this was the eighth day of the session of the Council, and that four days had been occupied in discussing motions grounded upon Dr. Humphry's report.

The amendment was seconded by Dr. Haldane; and, at the suggestion of Mr. Simon, Dr. Wood consented to add the words "distinguishing the first, second, and third examinations."

Sir Dominic Corrigan thought that the objection to Dr. Wood's amendment was very short. The plan which it proposed would be attended by no good result. His (Sir Dominic's) experience was that students did not attend the same school all through. Suppose the licensing bodies sent in a list of all the schools which had been attended by a young man who was rejected, how would the Council know which of the schools was defective? With regard to the original motion, one of the most extraordinary arguments which he had heard for a long time was that put forward by Dr. Humphry, which was that because the Council had acted *ultra vires* in issuing recommendations to the licensing bodies, they would be thereby justified in acting *ultra vires* by visiting the medical schools. The argument was, that having done what was illegal in one instance, they ought to persevere in that course.

Dr. Humphry said that, although the issuing of recommendations to licensing bodies was not a step which the Act empowered them to take, still the issuing of such recommendations was not an illegal act. The Act did not authorise the Council to have lunch upstairs, but still their lunching was not illegal.

Sir Dominic Corrigan said that he would not be a party to expending the money of the Council in making visitations which were not authorised by the Act. It had been urged that a good effect would be produced upon the medical schools by the moral influence of the visitors. Moral suasion with regard to the licensing bodies had been tried by the Council for nineteen years, and he did not think that it had effected much. He believed that the licensing bodies would have done as much if there had never been any visitations. ("No.") If the visitors made an inspection of the teaching at the medical schools, he believed that they would often have to deal with, and offer opinions upon, subjects about which they knew nothing. Suppose, for instance, that he (Sir Dominic) had to go to Professor Apjohn's laboratory at Trinity College School, and listen to one of his chemical lectures for the purpose of reporting whether Professor Apjohn understood chemistry or not. Would he (Sir Dominic) understand one word of what was going on? He did not know of anything which would arouse a greater feeling of indignation in his mind than to have any visitor from that Council to presume to set up to criticise the way in which he taught. Something of the kind once happened in his own case. One of the board of governors once came into his lecture-room to see how he was lecturing, and he (Sir Dominic) simply "shut up." How would Sir William Gull or Sir James Paget like visitors to come to criticise their teaching? Such inspection would be deeply offensive to the feelings of the teachers. Besides this, the visitations would be of no use unless they took place once a week or oftener. The visitation of medical schools would be an infringement on the rights of the licensing bodies. In Ireland those bodies did not recognise a medical school unless they were satisfied that it had proper facilities for teaching. For all these reasons he objected both to the resolution and to the amendment.

Mr. Macnamara corroborated what had been said by the last speaker as to the licensing bodies satisfying themselves that the medical schools were efficient. That course had been taken for many years by the Royal College of Surgeons of Ireland. The qualifications of the schools were ascertained before certificates were received from them. When he first commenced lecturing he was compelled to give what was called a probationary course of lectures, and his certificate could not be received by the College of Surgeons until he had done so. He only knew of one advantage which would accrue from the visitation of the medical schools, and that was that, if the visitor attended the teaching regularly, he would go away with more knowledge on the subject than he ever had before. (Laughter.)

Sir James Paget agreed with what Sir William Gull had said as to the publication of the "plucks" and "passes." He believed that such publication would tend to increase the harm which examinations did. He had looked very carefully at all the lists which had been printed for the use of the Council as to the failures and successes of the several schools, and nothing could be more absolutely uninstructive than those lists. There were schools which were notoriously good, and others which

were notoriously bad; and the numbers of rejections from each were almost, if not quite, equal. Such a test as the amendment proposed was altogether fallacious when carried out for only five years Whether it might be of any service if carried out for twenty years he did not know. In those schools in which the teaching of the student had been least effective, another party intervened between the school and the examiner, and that party was called the "grinder" or "coach." Of the profession of the "grinder" or "coach" he did not wish to speak with the least disrespect. His impression was that grinding was only bad when the examination was bad. But whatever might be said as to that point, this form of teaching intervened between the bad school and the examination much more often than it did between the good school and the examination. The result therefore was that the return of "plucks" and "passes" did not really show what was the quality of the teaching at the several schools, although it might show what had been the teaching of those several schools when some of them had been supplemented by the teaching of intermediate persons whose names did not appear. It would be impossible to get information as to the quality of the schools from such returns as the amendment indicated.

The amendment was submitted to the meeting, and only three hands were shown in its favour. It was then negatived by a large majority.

Sir James Paget, in support of the original motion, said that all the objections which had been made against the visitation of medical schools might be made against the visitation of examinations, and, in fact, those objections had been made with regard to the examinations, but had proved in practice to be unfounded. It was not required that the visitation of schools should issue in anything like a minute report. It would simply issue in a report that such a school was efficient, or that a certain other school was not provided with proper means of teaching. As to the lectures being reported upon, he supposed that Sir Dominic Corrigan was hardly serious when he suggested that such a thing was contemplated. No doubt the visitations would be attended with considerable trouble and expense, but he believed that they would result in very great advantage. He believed that all who had spoken, with the exception of Sir Dominic Corrigan, agreed that some form of visitation was necessary. The difficulties in the way of licensing bodies carrying out the visitations were not at all less than the difficulties in the way of the Council. Was any one licensing body to visit all the medical schools, or were all the licensing bodies to visit all the schools? It was true that the licensing bodies had power to refuse certificates from a particular school, but such a refusal amounted to a most severe punishment, and, practically, was never acted upon. The licensing bodies had not the power of publication like this Council had, neither had they the same amount of influence.

Dr. Quain said that there was no analogy whatever between the visitation of examinations and the visitation of schools. In the first place, the number of schools was more than double the number of the licensing bodies. Then it was possible to concentrate upon an examination an amount of attention which could not possibly be fixed upon a medical school. An examination took place at a fixed period, whereas the teaching of the schools was constantly going on. It seemed to him that the fact that the Council had no power under the Act to visit the schools was a very important point. They would have to go to the schools and ask to be allowed to do that which they had no legal authority to do; and, if the schools objected, they might send the visitors away from their doors.

Sir William Gull said that, if the investigation was not complete, schools might be blamed when they did not deserve it; and if the investigation was not properly made it would be dangerous to attempt it. It must be remembered that medical schools were property, and visitors might be open to all sorts of actions for libel. If a man possessed the necessary knowledge, he (Sir William) did not care where that knowledge was acquired. He thought that the duty which was pressing upon the Council was to see that the examinations were efficient, and to insure that they were proper tests. He knew that at present they were not proper tests. There was a very large proportion of what was utterly useless in the examinations as they were now carried on. He knew, from circumstances which he would not at present mention, that students were so alive to the requirements of certain institutions that they got from the "grinders" exactly what was wanted. The efforts of this Council and of the examining bodies ought to be almost entirely directed towards improving the character and thoroughness and fitness of the examinations. He believed that if that were done they would not enter upon a work which he regarded as perfectly useless. He did not believe that the visitation of medical schools could be properly carried out by this Council. The reports of the visitors would lead to animadversions on certain schools; and, again, other schools would be advertised as having been approved by the Medical Council.

Mr. Lister moved the adjournment of the debate.

The Council then resumed and adjourned.

Ninth Day—Saturday, May 19.

The Council reassembled at two o'clock.

THE LATE DEPUTATION TO THE PRIVY COUNCIL.

The Minutes of yesterday's proceedings having been read,

Mr. Simon said that he added a fact to the statement which was yesterday made by the President as to the interview of the deputation which conferred with the Lord President of the Privy Council on the subject of the Medical Acts. That statement was absent from the Minutes. He would therefore move—"That in Section 2 of the Minutes the following be added to the report which is there made of the President's statement:—'The chairman of the Medical Acts Committee (Mr. Simon) brought under the notice of the Council the circumstance that, in the important interview on which the President had reported, the Ministers who received the deputation from the Council were not attended by any medical functionary of the Government.'"

Dr. Pitman seconded the motion.

Dr. Wood said that they had never been in the habit—and he hoped that they never would be in the habit—of putting upon the Minutes any communications from the President. Without giving any opinion upon the merits of what Mr. Simon had stated, he believed that it would be very injurious indeed that this Council should put any such statement upon the Minutes as was now proposed.

Dr. Storrar suggested that the President should supplement his statement by including in it the fact which Mr. Simon had mentioned. He felt that Mr. Simon's contribution to what took place in the interview ought to be inserted.

Dr. Rolleston took the same view as Dr. Storrar. What Mr. Simon had added was part of the *acta* of the Council.

Mr. Simon said that he had a very strong opinion on this subject. He felt that he should not be doing justice to his profession or to his successors in office if he saw what he had seen at that interview and failed to draw attention to the fact. Having drawn attention to it he was satisfied, but he urged that he was entitled to have the statement upon the Minutes.

Dr. Aquilla Smith thought that Mr. Simon had done service to the Council in drawing attention to the fact, but he should be sorry to see the statement on the Minutes, because it would be interpreted as a censure on the Government.

The President said that this was a point upon which it was very difficult to rule. The keeping of the Minutes was a very precise proceeding, concerning which there were rules which might be right or which might be wrong, but the standing order was that the Minutes of each meeting should contain such motions or amendments as had been proposed and adopted or negatived, with the names of the proposers and seconders, but without any comment or observation thereto annexed. The insertion upon the Minutes of the statement of the President was, in fact, a departure from the letter of the law, but still it was in accordance with what had been the usage of the Council from the commencement. There was no standing order to require that the communications of the President should be printed, and that other speeches should not be printed; but there was a distinct rule that the observations of members should not be entered on the Minutes. When Mr. Simon had risen on the previous day, he (the President) understood that it was for the purpose of adding information on the subject of the interview, and upon that understanding he had allowed Mr. Simon to make the statement. If, however, he had known the nature of that statement before Mr. Simon spoke, he should have been forced to rule that the statement by Mr. Simon was not information in the proper sense.

Dr. Thomson suggested that the present difficulty might be met by the President adding to his statement the names of those persons who were present at the Privy Council Office on behalf of the Government.

Mr. Macnamara said that they might get over the difficulty by the fact of the present motion having been moved and seconded being recorded on the Minutes.

Sir William Gull thought that it would be an unfortunate thing that the Council should animadvert in the least upon such a fact as that which Mr. Simon had mentioned. The Government had its own way of acting, and it was not for the Medical Council to say who ought to be present at the interview.

The motion was eventually withdrawn, upon the understanding that there should be added to the President's report of the deputation the statement that the members of the deputation were received by the Duke of Richmond and Lord Sandon, who were attended by Mr. Peel, Clerk of the Council.

CONSIDERATION OF DR. HUMPHRY'S REPORT.

The Council again resolved itself into committee for the adjourned consideration of Dr. Humphry's Report. When the meeting broke up on Friday, the following resolution, which had been moved by Dr. Humphry, was under discussion:—"That it is desirable that visitations of the several medical schools, the certificates of which are received by any licensing bodies, should from time to time be made by this Council."

Mr. Lister said that it had been assumed by many who had taken part in the discussion that the visitation of the schools would involve the inspection of the teachers. The proposal, however, was simply that the Council should institute visitations with a view to ascertain the means of instruction which the schools possessed, such as hospital-room, laboratories, museums, etc. That, undoubtedly, was a thing which could be done at very little expense. For instance, a number of schools in London could be got over in a single day. Hence the objection on the score of expense fell to the ground. He did not agree with the argument that there would be any invidiousness in inspection of the schools. Such visitation could now be carried out by the licensing bodies without any invidiousness. Mr. Simon had urged that the licensing bodies had it within their power to make the visitations, but that to the Medical Council such visitations were *ultra vires*. In answer to this might be placed Sir James Paget's suggestion, that the work could be done more conveniently by this Council as one body than by all the licensing bodies individually.

Dr. Rolleston said that no doubt the visitation of schools would do a considerable amount of good, but that was not all that was to be considered in a matter of this kind. They must make sure that the good which they would do would not be counterbalanced by attendant evils. There was very little new legislation which was not attended with both good and evil results. The introduction of a new bit of legislation was very much like the introduction of a new animal into some part of the world where it had not previously existed. What a multitude of confusion and what ramified changes might be brought about by the introduction of some new form of life! There were many practical difficulties in the way of the proposed visitations. He could not separate *personnel* from *matériel*, and he was perfectly clear that to visit a school efficiently they must visit the teacher. It was perfectly right that a teacher should be inspected when he was doing something for the public, but they would lower the dignity of the teacher if they interfered with him while he was *en rapport* with his pupils. Merely to make an inspection of the *matériel* of a medical school would be, to use one of Mr. Simon's expressive phrases, one of the most futile ceremonies. What they required to know was whether the materials were made use of. The presence of the *matériel* anybody could certify to, but what would be the good of that? Teachers ought to be allowed to teach as they liked, and within certain practical limits persons ought to be allowed to get hold of their knowledge in whatever way they could. He was quite clear that that was the true line of policy for the Medical Council to pursue. Private teaching, in which the appliances would necessarily be of a somewhat rudimentary character, would be put an end to if simply the *matériel* of the school was to be taken into account. If the Council went in for postulating the *matériel*, they might rely upon it that they would destroy small schools everywhere, and give rise to great institutions and monopoly. Then there would have to be Parliamentary commissions from time to time to see whether those great institutions were doing their work. Small schools would inevitably be swallowed up, and there would be centralisation in teaching. Such centralisation was already greatly favoured by means of railways and the multitudinous temptations of this metropolis. The schools of London would be strengthened against all the other schools, not excepting those on the north of the Tweed. Looking at the subject on broad general principles, he was quite sure that visitation of schools was not a matter which the Council ought to take up. He believed that it might do some good, but, on the other hand, it would do some harm, and would check individual responsibility and individual enterprise. It was a good old Whig principle, that an ounce of individual exertion and individual enterprise was worth a ton of compulsion and legislation.

Dr. Humphry said that, whatever view might be taken as to the advisability of adopting the motion, almost everyone agreed in the main that the visitation of schools would, on the whole, be a good thing. Two objections had been made to the proposal. One was that the Council had no Parliamentary authority to carry out the visitation of schools. If, however, they had restricted their action to what was strictly within the powers conferred upon them by the Medical Acts, they would have done very little. No one had contemplated that the visitations should take place in opposition to the views and wishes of the schools. He had before said that the moral force of the Council was such that he was quite certain that no school in the empire would for a moment think of refusing admission to the visitors. Another objection which had been made was the expense which would be entailed. The Council had power to do what they liked with their money, and if they stored it up in the funds there would soon be an inquiry as to what they were going to do with it. There would, however, never be any objection to their expending money in the promotion of that which was their legitimate function. This was a Council of "*education* and registration." It was not a Council of "examination and registration." It was quite as much their duty to regulate study, and to see that that study was efficiently carried out, as to regulate and inspect examinations. They had worked for years with regard to examinations, but they had done nothing whatever to ascertain that education was properly carried on. The only possible way in which they could do the latter was by visitation. In his remarks on the subject of expense, Professor Turner had drawn a comparison between the visitation of examinations and the visitation of schools, and had mentioned that there would be thirty-three schools to be visited, whereas there were only nineteen licensing bodies holding examinations, and he had sought to lead to the inference that the visitation of the schools would be twice as costly as the visitation of the examinations. The fact was, however, that though there were only nineteen licensing bodies, there were fifty examinations, and, with the exception of the examinations at the University of London, each one required two days' visitation, and it even required a very careful adjustment of the arrangements to make two days' visitation suffice. A visitation frequently took three or four days. In order to visit the examinations in Scotland the visitors had, at least, to take six or seven separate journeys to Edinburgh. For the visitation of medical schools in Scotland one journey to that country would be sufficient; one journey would also be sufficient for the schools of Dublin; and one journey would suffice for the schools in London. He believed that all the medical schools in England could be visited at less than one-half the cost which was incurred in visiting the examinations, and he believed that more would be done by visiting the schools than by visiting the examinations. In going to the schools the visitors would be dealing with the sources and fountains of learning. As to the course to be pursued by the visitors, he never contemplated that the lecturers should be listened to and criticised, and that seeds of dissension should be sown between the teachers and the pupils. Medical pupils were generally sharp enough to know whether a teacher was efficient.

The Committee then divided on the motion, and the numbers, upon a show of hands being taken, were four in favour, and eighteen against it.

At the instance of Mr. Bradford the names and votes were recorded.

The following was the result:—*Majority* (18)—Dr. Pitman, Mr. Bradford, Dr. Rolleston, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Dr. Fleming, Mr. Turner, Dr. Thomson, Dr. Aquilla Smith, Mr. Macnamara, Dr. Leet, Dr. Apjohn, Sir Dominic Corrigan, Dr. Quain, Mr. Simon, and Dr. Hudson. *Minority* (4)—Sir James Paget, Dr. Humphry, Mr. Teale, and Mr. Lister.

The Council then resumed.

Dr. Humphry's Report, the consideration of which in committee had just been concluded, was then brought up as a whole in the following form, and considered clause by clause:—

That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject.

That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council.

That a letter be addressed to each of the examining boards whose certificate is accepted as a test of preliminary education by this Council, directing attention to the complaints which have been made by several of the licensing bodies with regard to the insufficiency of the general education of many of the candidates presenting themselves for their examinations.

That it be a recommendation to the licensing bodies that there be in future three professional examinations.

That the professional examinations be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study.

That the examinations, and the subjects included in each, be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.

That it is desirable that an examination in the earlier subjects of professional study should *take place* before the end of the first year of professional study.

The various clauses were moved by Dr. Humphry. A wish was expressed by Mr. Macnamara to rediscuss the first clause. To this course Dr. Wood objected. He reminded the Council that they had fully dealt with the Report in committee, and it would be a monstrous waste of time for them to discuss it again, and undo what they had been doing for the last four days. In reference to the last clause, Dr. Pyle stated that it would be a great hardship upon provincial students to go upon three separate occasions from the places in which they were studying to the towns in which the examinations were held. The report, as left by the Committee, was ultimately adopted *in toto* by the Council, although a slight opposition was offered to some of the clauses.

REPORT OF THE COMMITTEE ON RECOMMENDATIONS.

Dr. Wood brought forward the Report of the Committee on Recommendations on Clauses 5, 6, 10, and 11 of Dr. Humphry's Report. He said that there was a Report presented last year which had never been considered. He suggested that the Council should consider the two Reports on Recommendations together. He would therefore move—"That the Reports of the Recommendations Committee—namely, that of last year and that of the present year—on Clauses 5, 6, 10, and 11 of Dr. Humphry's Report be considered together."

The motion was seconded and agreed to.

The two following paragraphs were moved by Dr. Wood, and carried unanimously:—

1. That no person be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in general education as hereinafter provided.

2. That it be delegated to the Executive Committee to prepare annually, and lay before the Council for recognition, a list of examining bodies whose examinations fulfil the conditions of the Medical Council as regards general education.

Dr. Wood then moved paragraph No. 3, which was as follows:—

3. That for the present testimonials of proficiency granted by educational bodies, according to the subjoined list, be accepted; the Council reserving the right to add to or take from the list. (A degree in Arts of any university of the United Kingdom, or of the colonies, or of such other universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.)

LIST OF EXAMINING BODIES WHOSE EXAMINATIONS FULFIL THE CONDITIONS OF THE MEDICAL COUNCIL AS REGARDS PRELIMINARY EDUCATION.

I.—*Universities of the United Kingdom.*

Oxford.—Examination for a degree in Arts; Responsions; Moderations; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects, viz.:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

Cambridge.—Examination for a degree in Arts; Previous Examination; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects, viz.:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

Durham.—Examination for a degree in Arts; Examination for students in their second and first years; Registration Examination for medical students; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects, viz.:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

Oxford and Cambridge Schools' Examination Board.—Certificate to include—Arithmetic (including vulgar and decimal fractions), Algebra (including simple equations), Geometry (first two books of Euclid), Latin (including translation and grammar), and one of the following optional subjects:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

London.—Examination for a degree in Arts; Matriculation Examination.

Aberdeen, Edinburgh, Glasgow, and St. Andrews.—Examination for a degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery.

Edinburgh.—Examination of (senior) candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh.

Dublin.—Examination for a degree in Arts; Entrance Examination.

Queen's University (Ireland).—Examination for a degree in Arts; Entrance Examination; Examination for the diploma of Licentiate in Arts; Previous Examination for B.A. degree.

II.—*Other Bodies named in Schedule (A) to the Medical Act.*

Royal College of Surgeons of England.—Examination conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.

The Society of Apothecaries of London.—Examination in Arts.

Royal College of Physicians, Edinburgh, and Royal College of Surgeons, Edinburgh.—Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary Examination in General Education.

Royal College of Surgeons in Ireland.—Preliminary Examination, certificate to include Mathematics.

Apothecaries' Hall of Ireland.—Preliminary Examination in General Education.

III.—*Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.*

Royal College of Preceptors.—Examination for a First Class Certificate.

The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil.—Certificate to include all the subjects required by the General Medical Council.

IV.—*Colonial, Indian, and Foreign Universities and Colleges.*

Universities of Calcutta, Madras, and Bombay.—Entrance Examination, certificate to include Latin.

M'Gill College, Montreal.—Matriculation Examination.

University of Toronto: Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada.—Matriculation Examination.

King's College, Nova Scotia.—Matriculation Examination; Responsions.

Medical College, Halifax, Nova Scotia.—Matriculation Examination.

University of Fredericton, New Brunswick.—Matriculation Examination.

University of Melbourne.—Matriculation Examination, certificate to include all the subjects required by the General Medical Council.

University of Sydney.—Matriculation Examination.

University of the Cape of Good Hope.—Matriculation Examination.

Codrington College, Barbadoes.—1. English Certificate for students of two years' standing, specifying the subjects of examination. 2. Latin Certificate, or "Testamur."

Tasmanian Council of Education.—Examination for the degree of Associate of Arts, certificate to include Latin and Mathematics.

Christ's College, Canterbury, New Zealand.—Voluntary Examinations, certificate to include all the subjects required by the General Medical Council.

South Australia, South Australian Institute, Adelaide.—Preliminary General Examination; First Class Certificates.

The motion having been seconded,

Dr. Aquilla Smith moved, as an amendment, the following proposition, notice of which stood on the programme:—"That the nineteen 'colonial and foreign universities and colleges,' of which the examinations as regards preliminary education are recognised by the General Medical Council (Minutes xiii., 274), be struck out of the list of examining bodies for preliminary education." He said that they had evidence in the reports of the visitors that the preliminary examinations of the bodies to which he referred were inefficient. Evidence to the same effect was adduced last year by Dr. Haldane, and two days ago Dr. Andrew Wood had testified that there was too much proof that the preliminary education, as at present conducted, was unsatisfactory. He could corroborate this view from his own personal experience. When the Council were dealing last year with Mr. Cowper-Temple's Bill, which was intended to authorise the registration of foreign degrees, the Council urged, as a reason for refusing to admit foreign degrees on the Register, that they had no power to exercise supervision and control over the examinations upon which those degrees were obtained. The same argument might be applied to the recognition of the preliminary examinations of the nineteen colonial and foreign universities and colleges which were now recognised by the Council. The Council having so emphatically expressed their grounds for refusing to admit foreign degrees, they would be in a strange position, and their action would be anomalous and inconsistent if they recognised preliminary examinations conducted by universities and corporations whose examinations they were unable to supervise.

The amendment was seconded by Sir Dominic Corrigan.

Sir William Gull said that it would be very inconsistent for the Council to adopt the amendment. Only three days

ago they recommended to the Government that there should be a special list in the Register for colonial degrees.

Mr. Turner said that, as he listened to Dr. Aquilla Smith's speech, he thought that it savoured very much of a speech which had been prepared a week ago, and which Dr. Smith had not had an opportunity of delivering till that day. (Laughter.) It was more remarkable that it should have been delivered that day, because Dr. Smith was himself a member of the very committee which recommended the changes which had been acceded to two days ago.

Dr. Wood believed that some of the examinations which were referred to in Dr. Aquilla Smith's amendment were as good as they could have anywhere. Even if the Council had not passed the motion of three days ago, which had just been spoken of, it would be a very harsh measure indeed for them to say to the colonial colleges, "Having accepted your preliminary examinations, and relied on them for some years, we will now disfranchise you."

Dr. Aquilla Smith, in reply, said that he had merely desired to call the attention of the Council to what they did last year, and to point out what he regarded as a great inconsistency. No doubt, as Dr. Wood had said, the colonial examinations were good. He believed, from his own knowledge, that they were better than some which took place in this country.

The amendment was then submitted to the meeting, and negatived by a large majority, its only supporters being the mover and seconder. The original motion was then carried.

Mr. Macnamara said that it appeared to him that the time had now arrived for him to lay before the Council certain communications from the Royal College of Surgeons in Ireland, and which appeared on the programme, and to move the resolution of which he had given notice.

The following correspondence was then read by the Registrar:—

Dublin, April 7, 1877.

Dear Sir,—I am directed by the President and Council of this College to forward to you, for the information of the General Council of Medical Education and Registration, the enclosed copies of their correspondence with the Senior Lecturer of Trinity College, Dublin, on the subject of preliminary education and examination.

(Signed) J. Stannus Hughes, Secretary of Council.

To W. J. C. Miller, Esq., Registrar of the General Medical Council.

P.S.—For obvious reasons the name of the candidate referred to in the enclosed correspondence has been omitted by me, by the directions of the President and Council of this College. J. S. H.

[Letter No. 1.]

Royal College of Surgeons, Ireland, Dublin, March 16, 1877.

Reverend and dear Sir,—I have it in direction from the President and Council of this College to draw, through you, as Senior Lecturer, the attention of the Board of Trinity College to the following facts:—

A Mr. X presented himself as a candidate to pass the Preliminary Examinations conducted in this College upon the following dates:—20th of October, 1875, 19th of April, 1876, 19th of July, 1876, and 18th of October, 1876; upon all of which occasions he was rejected. In the month of November, 1876, through means of a Private Entrance Examination, and upon the payment of a fee of fifteen pounds, he was matriculated as a Junior Freshman of Trinity College, and thereby, in accordance with the existing arrangements of the General Medical Council, so far as preliminary education and examination are concerned, qualified to enter the medical profession.

The President and Council of this College desire to direct the attention of the Board of Trinity College to the difficulties thus thrown in their way of securing that which they look upon as a matter of primary importance—the enforcement of a good standard of preliminary education on the part of students seeking their licence.

(Signed) J. Stannus Hughes, Secretary of Council.

To the Rev. J. H. Jellett, Senior Fellow and Senior Lecturer,
Trinity College, Dublin.

Mem.—To this letter the Secretary of Council of the College of Surgeons received in reply the following letter (Letter No. 2) from the Senior Fellow and Lecturer of Trinity College:—

[Letter No. 2.]

Trinity College, Dublin.

Dear Sir,—I have looked into the details of the case of Mr. X, and find that the marks which he received in Greek and Latin, algebra, and English composition would not have justified me in rejecting him at an examination which is only intended to ascertain whether the candidate possesses sufficient knowledge to enable him to take advantage of the instruction given here.

An examination having such a purpose is never a severe examination, nor ought it to be regarded as indicating the amount of general knowledge required for a learned profession.

I have to observe that we do not regard this examination as a sufficient test of the general knowledge required of those who seek our licence in surgery. On the contrary, we require of candidates seeking that licence that they should complete a two years' course in arts.

(Signed) John H. Jellett, Senior Lecturer.

J. Stannus Hughes, Esq., M.D.

P.S.—I should add that I laid your letter before the Board, and write by their direction.

[Letter No. 3.]

Royal College of Surgeons in Ireland, Dublin, April 5, 1877.

Dear Sir,—I am directed to inform you that, at a meeting of the President and Council held this day, the following resolution was passed by them:—

"That this Council, having taken into consideration the letter of their Secretary addressed by their order to the Senior Lecturer of Trinity College, Dublin, bearing date March 16, 1877, and the reply thereto (undated) of the Senior Lecturer, hereby adopt the following ordinance:—'That, for the future, no certificate of preliminary education emanating from Trinity College, Dublin—unless it goes to prove that its presenter is of Junior Sophister standing—shall be accepted by the Inspection Committee as an equivalent to the Preliminary Arts Examination of this College.'"

(Signed) J. Stannus Hughes, Secretary of Council.

To the Rev. J. H. Jellett, T.C.D.

Mr. Macnamara, in whose name the following notice stood on the programme, then moved the resolution with which the notice concludes:—"To draw attention to the list published by this Council, of examining bodies whose examinations fulfil the conditions of the Medical Council as regards preliminary examinations; to inquire what steps, if any, were taken by this Council to ascertain the efficiency of the preliminary examinations conducted by these several bodies previous to the compilation of the said list; and to move the following resolution:—'That this Council take steps to carry out, as far as may be practicable, visitations of the examinations on preliminary education conducted by the several bodies, the certificates of which are accepted by this Council as being satisfactory.'"

Dr. Wood said that he should like to ask the representative of Trinity College, Dublin, what was the nature of their entrance examination.

Dr. Apjohn, in reply, stated that he had no hesitation in saying that the entrance examination at Trinity College was a very high one, and anyone who examined the College calendar would see that it included a great variety of the most important topics. The examination was not only a very formidable one to get through, but, in point of fact, it was an honours examination, and the different candidates were classed in the order of merit. A short time after the entrance examination there was a second scrutiny, at which a very severe test was applied. The men who had succeeded in getting places were subjected to an additional examination, and, as a result of this second examination, twelve exhibitions were distributed amongst the candidates. These remarks applied to the public entrance examination. There were two of these each year—namely, one in June and one in October. There was, however, a private examination, the object of which had been already stated in the correspondence by Mr. Jellett, and he (Dr. Apjohn) could not add anything to Mr. Jellett's explanation.

The President called attention to the fact that there was no motion before the meeting.

Dr. Wood said that he would move—"That under the head 'Dublin' [see list in foregoing resolution] for the words 'entrance examination' be substituted the words '*public* entrance examination.'"

The motion was seconded by Mr. Apjohn.

Sir Dominic Corrigan said that he wanted a little information of what Dr. Wood meant by "public."

Dr. Wood, in reply, explained that it appeared that there were two entrance examinations at Dublin—one public, and the other private. It also appeared from the documents which were before them that the private examination was inefficient. The public examination was one which, from what Dr. Apjohn had stated, seemed to be a very good one.

Sir Dominic Corrigan said that a candidate who could not pass at his university could go to Trinity College and pay five shillings and get matriculated as a medical student. Sir Dominic then moved the adjournment of the debate, and the Council rose.

Preservation of Ergot.—M. Mourrut states that the secale cornutum may be preserved in a powdered condition (which is its most efficacious preparation) for an indefinite period by combining with it 5 per cent. of gum benzoin, which entirely prevents any changes taking place.—*Journal de Thérapeutique*, April 25.

Youthful Parents.—The editor of the *Detroit Medical Journal* vouches for the truthfulness of the correspondent who furnished him with an account of the following extraordinary instance of early maternity:—The girl first menstruated when ten years and six months of age, and became pregnant at eleven years six months, and was safely delivered of a male child January 19, 1875. The reputed father of the child was at the time a hopeful of fourteen years of age. The child is still alive, but not very strong or bright."—*New York Medical Record*, March 31.

ORIGINAL COMMUNICATIONS.

TWO CASES OF

FEVER WITH HYPERPYREXIA.

By C. HANDFIELD JONES, M.B., Cantab., F.R.S.,
Physician to St. Mary's Hospital.

(*Continued from page* 501.)

THE next evidence we have to look to is that furnished by experiments on animals. Tscheschichin always observed a sinking of the general temperature after complete section of the spinal cord in various situations. He attributes this result to paralytic dilatation of the vessels, and consequent accumulation of the blood in them, and increased radiation of heat. The cooling might be prevented by enveloping the body of the animal in bad conductors of heat, as wool, cotton. When, however, he divided the medulla oblongata in a rabbit near to its junction with the pons, he found that immediately after the operation the general temperature began to rise, and the pulse and respirations were greatly quickened. After half an hour the thermometer marked 104·1°; after an hour, 106·1°; after two hours, 108·7°. Soon after this the breathing, accelerated before, became still more rapid, and convulsions set in, terminating in death. The reflex activity of the cord became greatly intensified immediately after the operation (*vide* Wunderlich on "Medical Thermometry," page 151). Naunyn's and Quincke's experiments seem to be in the main confirmative of Tscheschichin's. They believe the amounts of heat produced and of heat given off to be both increased. Division of the cervical cord they find to produce a more rapid rise of temperature than division of the dorsal. The rise which is produced by the operation can, they find, be prevented by the administration of quinine. Binz has confirmed this result, and has found the same to hold true also of alcohol. "Only if the conditions of the fever are too favourably constituted, the effect of quinine fails thoroughly" (vide *Praetitioner*, 1870, vol. ii., page 4). Schreiben (vide *Edinburgh Medical Journal*, 1875, page 759) shows that injury of any part of the pons, cerebellum, crura cerebri, or hemispheres, lowers the temperature of the rectum from 1° to 6° if the atmosphere be cold; but if the animal be kept warm, it rises 1° to 3°. But injury to a narrow area separating the upper limit of the medulla oblongata from the pons is always followed by a permanent rise of 3° to 5° even in a cold atmosphere. Fischer (*Centralblatt*, 1869, page 259) found in dogs and rabbits that section of the cervical cord produced an immediate elevation of temperature of 0·9° F. to 3° F. This rise did not ensue when the dorsal or lumbar cord was divided.

There is evidently a very considerable "consensus" between these different experimenters, and one can hardly avoid the conclusion which they more or less expressly adopt, viz., that a nerve-centre exists in or near the upper part of the cervical cord, whose function is to keep down the body-temperature from becoming excessive—just as the vagi control the action of the heart. Though the amount of heat given off by the animals before and after the operation was not measured as in Murri's experiments, it seems beyond doubt that the fall of temperature when it occurred was due to loss of heat from the surface, as otherwise how could non-conducting envelopes have prevented the cooling? Then, as the internal temperature was increased, it seems almost a necessary consequence that the loss of heat (by radiation) must have been also.

Thirdly, we have some evidence from the human subject afforded by cases where the nerve-power was seriously depressed by over-exertion. Wunderlich relates the case of an athlete, who, whilst running a footrace, became faint and insensible. His temperature soon after was 104·9°, his pulse 128, his urine contained one-tenth its volume of albumen. In two hours the temperature fell to 102·38°, and on the second morning was normal, and remained so. The albuminuria entirely disappeared in a few days. Dr. B. Woodman mentions the case of a lad, aged nineteen, who, after walking seventy miles in two days, had a temperature of 105°, with a pulse of 130 next day, and enormous quantities of lithates in his urine. In three days his temperature was normal. Another youth was similarly affected after great fatigue. With these may be ranked those cases noticed by Wunderlich (*vide* "Medical Thermometry," page 425), where, in the last stage of fatal neuroses, especially in tetanus, the temperature rises rapidly to extraordinary heights, 109·4°, 111·2°, and even 112·5°. The cause of the hyperpyrexia in these cases is probably exhaustion of nerve-force. This may be concluded from the period at which the symptom shows itself, "seeing (as Dr. Radcliffe says with regard to tetanus) that fever is absent at first, and present only when the system is becoming exhausted by starvation, sleeplessness, and spasm (*vide* "System of Medicine," vol. ii. page 631).(a) Similarly chorea is a non-febrile disease, yet Dr. Woodman records two fatal cases, supervening on acute rheumatism, which had temperatures of 105° and 106° for two or three days preceding death. I may mention here an observation of my own on a man, aged twenty-six, ill with typhoid fever. On the evening of the ninth day he was placed in a warm pack, and remained in it three hours. His temperature just before was 103·4°, at the end of the pack 105·2°, and two hours later 102·2°. When quite convalescent—forty-four days after the first—he was again placed in a warm pack. Temperature before was 98·8°, at end of two hours 100°, some time after pack 98·8°. This result certainly implies the existence of some regulating mechanism in the economy, which in the normal state keeps down the production of heat when it tends to accumulate excessively, but in fever has lost this power. In a non-febrile person the temperature at the end of three and a half hours' warm pack was 98·2°, the same as at the commencement.

Dr. Broadbent has kindly favoured me with the following account of some recent experience obtained at the Fever Hospital, which bears very strongly on this subject. He says—"In certain cases of scarlet fever with imperfect eruption, frequent pulse, and oppression of the nervous system, the hot pack has frequently been employed with great advantage. In two cases, however (and I believe there has been a third), instead of the relief usually obtained, there was a rapid rise of temperature to 107° Fahr. or higher, and death occurred from hyperpyrexia before the patient could be removed from the pack, or shortly afterwards. We now resort to the hot pack with extreme caution. My interpretation of the effects of the hot pack is exactly that suggested by you."

In the case of a lad, aged thirteen, now under my care, an electric warm bath raised the temperature from 98·8° (morning) to 105·2° at midnight. A cold pack reduced it soon after to 101·7°, and subsequently it fell lower, ranging for six days from 97·6° to 100·2°. Here the bath evidently was the cause of the high temperature, the nerve-centres having lost to a great extent their regulating power.

Fourthly, we have to notice the occurrence of hyperpyrexia in cases of rheumatic, typhus, typhoid, and scarlet fever. The symptom is commonly associated with low delirium, stupor, or coma. These might be regarded as the results of the overheated blood acting injuriously on the cerebral tissue. But as instances of relapsing fever and Mr. Teale's case show that very high temperature does not necessarily produce these symptoms, it seems more reasonable to regard them as co-effects of the hyperpyrexia, all being of the nature of paralyses, and all being produced alike by the original cause of the fever. High temperature is, I believe, most prone to occur in cases of the greatest gravity. In some fatal cases of scarlet fever Dr. B. Woodman has noted a temperature of 115°. The nervous system is so constantly and injuriously affected by the fever-poison in all severe instances of the above maladies that it is no more than might have been expected that the heat-regulating centre should occasionally be paralysed.

Fifthly, we have to notice the operation of excessive solar heat as a cause of hyperpyrexia. Though we cannot explain the fact, yet it is beyond question that this influence does act in a very remarkable manner on the nervous system, rendering it more or less paretic, and this in some persons much more than in others. Moreover, even when it acts with such severity as to kill, it does not always act in the same way. Some die of direct cardiac syncope, some of cerebral disorder (coma and convulsions), many with intensely congested lungs. One organ, therefore, may be affected much more in some cases than in others. The most constant change found in autopsies is a fluid state of the blood, from which one must conclude that the protoplasm of the body is similarly affected in all cases. Yet one patient dies with a temperature of 108°, and another with only 100°. There seems no way of

(a) In two cases recorded by Senator (vide *Virchow's Archiv*, No. 48, p. 295) the rise of temperature was small. In the first the temperature was almost the same height during the tetanic period as during six days previous of wound fever. In the second the temperature never exceeded 38·2° (100·7°).

accounting for this great difference, except by assuming that the heat-regulating centre is paralysed in the one, but not in the other.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LEEDS GENERAL INFIRMARY.

REPORT ON THE TREATMENT OF RHEUMATISM BY SALICINE AND SALICYLIC ACID.(a)

(By Dr. E. H. JACOB, Resident Physician.)

Before giving an account of the cases of acute rheumatism treated by salicine and salicylic acid in the Leeds Infirmary, a short sketch was given of the discovery of the use of the drug in rheumatism by Dr. Traube, and a tabulated list drawn up of the published cases of its use during the past year. It appears that in the space of twelve months no less than 312 cases have been reported, 29 being from Germany, 174 in England, 109 from America. As to results, in 14 cases only was the effect unsatisfactory, five cases proving fatal. As to cardiac complication, nine cases were attacked while under treatment, being about 3½ per cent. of the whole.

During the past year, out of 70 cases of acute and subacute rheumatism treated in the Leeds Infirmary, 62 received salicine, salicylic acid, or sodium salicylate, 30 being treated by the latter, 9 with salicylic acid, and 4 the alkaloid only. Seven received both salicine and salicylate, and 10 both salicylate and alkaline treatment. Of these cases 17 were of great severity, 25 moderately severe, and the rest mild or subacute. As to the results of treatment, the cases may be grouped under three heads—first, when the drug acted well; second, when the results were only moderately good; third, when the drug failed. In 35 cases the improvement was so rapid as to leave no doubt of the value of the drug, the average period of convalescence being three days after beginning the medicine, the shortest one day, the longest seven. With regard to the severity of the cases, 8 were severe, 17 moderately so, the remainder mild. One of the most remarkable cases was that of a lad who was treated in three attacks following each other closely: in the first and second the pain and pyrexia were reduced in three and five days respectively; but in his third attack he was treated for four days with blisters, with some relief to the pain, but the temperature still remained high. A few doses of salicylic acid then rapidly removed the pain and reduced the temperature. Two cases are noted in which, salicine having failed, possibly through smallness of the dose, salicylic acid proved successful. In these cases salicine acted well after the failure of alkalies.

In the second, or less favourable list, we have 22 cases, 6 being of great severity, and 6 of moderate intensity. In the majority of these cases a considerable effect was produced on the symptoms by the drug, but while the acute pain and pyrexia were subdued, the patients suffered from long-continued slight pain in the joints. In one case the rheumatism, which quickly yielded to sodium salicylate, was followed by typhoid fever with characteristic symptoms, on which the drug appeared to have no effect. In another case the patient remained for eight days in a more or less delirious state, while the temperature was not extreme, nor was there pericarditis. Salicine was given after the supervention of this state, but with no effect. Pericarditis occurred in two cases while the patient was taking salicine, in one case the dose being thirty grains, in the other ten grains every four hours. The average period in hospital of the cases in this class was five to six weeks.

In five cases only did the drug appear to have no effect. Four of these proved fatal, while the last recovered somewhat suddenly while taking potassium iodide. Of the four fatal cases, two have been already published in this journal. They were all characterised by hyperpyrexia, noisy delirium, and the typhoid state. The cold bath was used in all, but with only temporary benefit. This, however, was most marked. A post-mortem examination, obtained in two cases, showed slight pericarditis and mitral incompetence in both; the lungs were collapsed in one case, œdematous in the other. No joint affection was visible; the brains were healthy.

Salicylate of sodium has been given during the past few months in thirty to forty cases of chronic rheumatism in the out-patient department, and to about a dozen cases of rheumatism without pyrexia in the wards of the Infirmary. So far as can be ascertained from the reports of the out-patients, just two-thirds appeared to be considerably benefited by the drug, while in no case did it appear to do any harm. All the in-patients treated with it improved, but it is difficult to separate the effect of the drug in these cases from the influence of general hospital treatment.

The following conclusions seem justified by a year's experience in the use of salicine and the salicylates:—

1. That salicine and its congeners are powerful remedies in the treatment of rheumatism.

2. These drugs are of most use in acute rheumatism of moderate severity. They are of less value, though still useful, in the chronic and subacute varieties, while in the most severe cases—viz., those accompanied by hyperpyrexia and delirium—they appear to have little or no influence on the disease.

3. That in an attack of acute rheumatism of average type, treated by the drug, all signs of rheumatism are in most cases removed in from one to three days. If, however, the drug be discontinued there is serious danger of a relapse.

4. That cardiac complication, though occasionally met with in patients taking the drug, is rare.

5. In many cases toxic symptoms are developed after the patient has taken the drug for a few days. Of these the most common is vomiting; the deafness, tinnitus, and other phenomena of quinism are occasionally found. These symptoms are most marked in the case of salicylic acid, and less so in the case of salicine.

6. Of the three drugs in use, salicine appears the weaker; it is, however, the pleasantest to take, and is less apt to cause gastric disorder. Salicylic acid, although of greater power, is most nauseous, and may with great advantage be replaced by sodium salicylate, which has equal effect, and is freely soluble in water.

So far as we may judge from the above cases, the statements of the original introducers of salicylic acid as a remedy for rheumatism can hardly be accepted without considerable modification. In the very acute forms, with hyperpyrexia, we can hardly dispense with the cold bath, though even that may fail. It remains for future experience to point out (1) in what cases these drugs are contraindicated; (2) how far this mode of treatment is an improvement on the methods in general use as regards permanence of cure and prevention of cardiac complication. Already several cases of relapse have been noted; and it is possible that, as with colchicum in gout, and chloral in convulsions, we may occasionally find the patient more liable to a fresh attack than if other or expectant methods of treatment had been adopted.

As regards the manner of administration of the drugs, the following method was in most cases adopted. The patient was allowed to remain in hospital from one to three days without any medicinal treatment other than anodynes. After that period, if the symptoms still continued, salicylate of sodium or salicine in thirty-grain doses, salicylic acid in twenty-grain doses, was administered every four hours, till the temperature was reduced and the pain relieved. The drug was then continued thrice daily for ten days or a fortnight.

Subjoined is a tabular view of the cases under treatment:—

	First attack.	Second attack.	Third attack.	Fourth attack.	Severe.	Moderate.	Mild.
Males . .	22	15	1	1	9	19	12
Females .	13	7	1	0	8	7	6

	Cardiac complications.		Result.			
	Before admission.	After admission.	Good.	Moderate.	Nil.	Death.
Males . .	20	2	24	11	4	1
Females .	16	0	11	11	1	3

Since the above was written, fifteen additional cases of acute rheumatism have been under treatment by salicine and sodium salicylate. Of these, ten obtained speedy relief, being convalescent in two days on the average. One, however, had a serious relapse, accompanied by pneumonia, three days after the salicine was withdrawn. Of the others, two obtained no benefit. One of these was probably syphilitic; the other, after recovering from the pressing symptoms, suffered from

(a) Abstract of a paper read before the Leeds and West Riding Medico-Chirurgical Society.

long-continued pain and stiffness in both knee-joints. In three cases only moderate relief was afforded by the drug.

In no case was any scarlet rash observed from the action of the drug, such as has been described by Dr. Weber and others. In two cases the usual miliary eruption took the form of minute pearly blebs. It was observed that the urine of patients taking salicine gave the purple reaction with phenic chloride, precisely like that of salicylic acid, both pure and as excreted by the kidneys, showing the alkaloid to be excreted in the same form as the acid.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, MAY 26, 1877.

THE GENERAL MEDICAL COUNCIL.

On Tuesday last week, the fifth day of the present session, the Council received a Memorial from the Royal College of Surgeons of Edinburgh in regard to Dental Surgeons, and some important documents from the Royal College of Surgeons, England, relating to a legal difficulty hindering the College from taking part in a Conjoint Examination for Women-Candidates for a Licence in Midwifery,—all of which papers were referred to the Medical Acts Committee. The rest of the day's sitting was occupied in judicially considering and deciding on cases for the removal of names from, and the restoration of names to, the Register. In the case of John Joseph Mullen, L.R.C.S.I., L.K.Q.C.P.I., whose name had been erased, in conformity with Clause 14 of the Medical Act (a letter addressed to him not having been acknowledged within the prescribed time), the Council resolved that the name be restored to the Register, it having been satisfactorily proved that Mr. Mullen was in practice at Brisbane, Australia. The case of "Dr." Thomas Richardson was then gone into. It was stated by Mr. Ouvry that he was registered in 1859, on the ground that he had a diploma of the Metropolitan Medical College of New York, which diploma stated that he had been studying at that College in New York, and had been examined there, while he, in fact, had not been in America. The solicitor of "Dr." Richardson was heard in reply, and pleaded for the forbearance of the Council; but, after consideration, it was resolved that the name be erased from the Register in conformity with Clause 26 of the Medical Act. Mr. Butt, Q.C., was then heard in support of a petition from Michael Manvers Sheedy and James Meehan for the restoration of their names, which had been erased from the Register two years ago in consequence of their conviction of a misdemeanour. They had certified that they had examined applicants for life insurances, when they had not in reality examined them; and Mr. Butt now pleaded that, though they had done very wrongly, they had been misled by the representations of the agent for the insurance company, that they had no intention of committing a fraud, and that they had been severely punished. The Council considered the pleas, and resolved that the names be restored to the Register.

An application for restoration to the Register from Samuel Levenston was next taken, and it was resolved that the Council having considered the application decline to accede to it, unless Mr. Levenston shall furnish to the Executive Committee satisfactory evidence of character; and the Council delegated to that Committee the duty of inquiring into, and deciding on, the case, regard being had to the requirement of the Council. Mr. Henry Pearson also applied to have his name restored to the Register; but it was resolved that "the Council do not see fit to make any order for the restoration of Mr. Henry Pearson to the Medical Register."

On Wednesday, the sixth day, after the introduction of Dr. Alfred Hudson, the Crown nominee for Ireland on the Medical Council in place of Dr. Stokes, the Council went into Committee for the adjourned consideration of Dr. Humphry's Report, taking up again the resolution, "That the 'first' examination be passed before the commencement of the second year of professional study; the 'second' before the completion of the third year; and the 'third' after the completion of the fourth year of professional study." This led to a very long discussion and the proposal of several amendments, for all of which we must refer our readers to our detailed reports of the sittings of the Council. There was a very general feeling that there was a danger of the Council entering on over-minute and detailed legislation, though "legislation" is a very big word to apply to the "recommendations" of the Council; and in the end it was agreed, "That the professional examinations be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be complete at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study"; and to this was added the rider, "That the examinations, and the subjects included in each, be such, and in such order, as may insure, as far as possible, a due sequence of study." Dr. Humphry's motion, "That the 'first' examination be passed before the commencement of the second year of study; it being hereby intended that no time which may elapse after the first year of professional study shall count until the first professional examination shall have been passed," was then proposed. The intention of it was to prevent students from wasting the first year of study, but it met with but little support. Sir James Paget, indeed, said that he had felt very strongly in favour of an examination at the end of the first year, which is a time of danger to those students who have a tendency to fall into habits of idleness; and the question had been considered by the Council of the English College of Surgeons. But there were difficulties in the way of carrying out the plan, one of them being the expense; and to meet that difficulty it had been suggested in that College that the first examination might be held at the medical schools, under the inspection of visitors. This was approved of by Mr. Lister, who observed that "it would be beneficial to the teachers to know that they had to conduct

examinations in the presence of visitors or inspectors appointed by the Council." But the motion was lost, only five members voting for it. It was then resolved—"That the Committee on Recommendations last year be reappointed, and that proposals Nos. 5, 6, 10, and 11 of Dr. Humphry's report be referred to that Committee for consideration." These proposals will be found at page 357 of our last number. The Council then resumed, and the returns from the Army Medical Department, and communications from the Royal College of Surgeons of England and the University of Edinburgh on the subject of Certificates of Proficiency in Vaccination, were received, and ordered to be entered on the Minutes; as also was a report from the Executive Committee with reference to a resolution of the Branch Council of England in regard to the Lunacy Laws; and the President of the Council was requested to draw the attention of the Chairman of the Select Committee of the House of Commons now sitting on the Lunacy Laws to the report. A correspondence with the Registrar-General on the subject of the Forgery of Death Certificates was read, the most important parts of which are the following sentence of an opinion of Mr. Poland's—"I think it is desirable, if a clear case can be made out, to put a stop to the practice which prevails of unqualified medical men forging for their own purposes the names of qualified men to certificates of death,"—and the Registrar-General's assurance conveyed to the Medical Council that, "if a clear case can be reported to me of an unqualified medical man forging for his own purpose the name of a qualified registered medical practitioner, in hope of obtaining a conviction, as an example to deter others from similar misconduct, I will take the opinion of the legal authorities serving under the Lords of the Treasury whether legal proceedings should not be instituted." The assurance is satisfactory as far as it goes, but, considering the difficulty of obtaining a "clear case," it does not perhaps amount to much.

On Thursday and part of Friday the Council were occupied in discussing the Report of the Medical Acts Committee, a subject which we have noticed in another article; and after that was done with, so far as the Report was before the Council, they again went into committee for the adjourned consideration of Dr. Humphry's Report. It was agreed, "That it is desirable that an examination in the earlier subjects of professional study should *take place* before the end of the first year of professional study"; and the remainder of the sitting was taken up by a discussion on Dr. Humphry's motion—"That it is desirable that visitations of the several medical schools, the certificates of which are received by any of the licensing bodies, should from time to time be made by this Council." The motion was seconded by Sir James Paget, but was very strongly opposed on several grounds, as—that the practical difficulties of time and expense would be so great that the duty could not be undertaken by the Council; that such a work is unnecessary, for "it would be found a matter of commercial interest to a school to make itself efficient"; that in undertaking such a work the Council would be acting *ultra vires*, which was not denied; and that the medical schools not being public bodies, visitors might be open to actions for libel. The discussion was adjourned to Saturday, the ninth day of the session, and in the end the motion was negatived by eighteen votes to four, one member (Sir William Gull), who opposed it, being absent.

Through the rest of Saturday, the 19th, during the whole of the sittings on Monday, the 21st, Tuesday, the 22nd, and Wednesday, the 23rd inst., Dr. Humphry's Report, and the Recommendations on Education and Examination, were under consideration in committee of Council or in Council. The whole work of settling, for the present, the Recommendations of the General Medical Council on Education and Examination, general and professional, has been got through; but it has been done with a terrible waste of time. Minute verbal criticism of sentences in the Recommendations was carried to an extent which we must call simply inexcusable. Some members of the Council remonstrated over and over again against the amount of time consumed, and utterly wasted, in attempting over-minuteness of regulation. Sir James Paget, and not he only, pointed out that the councils of the various licensing bodies would consider themselves just as capable of settling details of education and examination as the members of the General Medical Council itself—and would do so. But all was in vain; the talking and discussing and criticising went on; and we do not suppose that the Recommendations—for they are merely recommendations—are much bettered or strengthened. But the whole subject is much too large to be considered now; we must leave it and other subjects to next week. We only add here that the Council are still at work as we go to press, though we suppose, and devoutly trust, they will not require to sit another day.

THE REPORT OF THE MEDICAL ACTS COMMITTEE.

A LARGE amount of time during the present long and wordy session of the Medical Council has been spent in the consideration of various matters relative to the amendment of the Medical Act; some of which matters had been referred to the Council by the Lord President of the Privy Council, and the rest had in other ways been brought to their notice. The preparation of the Report must have entailed no little labour on the Acts Committee; and it had to be considered in committee of Council and in Council—a process which absorbed the whole of the Council's time on Thursday last week, and part of the Friday; while it is certain that very little, if any, of the subjects on which legislation is deemed to be desirable can be brought before Parliament this year. We are not prepared, however, to say that the time spent on the matters referred to the Committee has been wasted or ill-spent, for they must have been considered some time or other, and it appears to be very difficult, if not impossible, to get a meeting of the Council earlier in the Parliamentary session. On the Thursday the Council went into committee on Sections (A), (B), and (C) of the Report of the Medical Acts Committee. The subject of Section (A) is the "Territorial Range of Titles to Practise," which means in effect the question of the registration of foreign and colonial degrees and licences. On this it was resolved that the Council would approve of amendments of the Medical Act to the following effect:—"That medical qualifications granted under legal authority in any part of her Majesty's dominions outside the United Kingdom, and entitling to practise in such part, should be registrable within the United Kingdom on the same terms as qualifications which are granted within the United Kingdom, but in a separate alphabetically arranged section of the Register"; and a proposal to omit the words requiring a separate section of the Register was negatived; "That the General Medical Council should have authority to establish, *under conditions*, in the Medical Register a distinct alphabetical section for 'foreigners practising in the United Kingdom, with qualifications granted in foreign countries, and entitling to practise in those countries respectively'"; and "That the Council should have authority to cause to be registered in this section of the Register such qualifications as it may in its discretion (having regard to the conditions under which they are granted) judge to be sufficient guarantees of 'the possession of the requisite knowledge and skill for the efficient practice of the profession.'" But it was further agreed—"That the Council would not approve, as a general rule, that British subjects should be allowed registration in the United Kingdom on the basis of foreign qualification; but the Council would approve the granting of a limited authority to the Council to permit,

in particular exceptional cases, and by way of special grace, the registration of persons long established in practice in foreign parts and of proved character and attainments, but not possessed of registrable qualifications"; and "That the Council would not approve that foreign qualifications should be registrable, as 'additional qualifications' under the Medical Act, by persons primarily registered under British qualifications."

Section (B) of the report dealt with the legal difficulties under Russell Gurney's Act and under "The Medical Act, Royal College of Surgeons of England, 1875." With regard to the first, the Council agreed to recommend that in Clause 1 the proviso which now applies to "registration" should be amended as follows:—"That if any university or medical corporation, which has not before the passing of this Act examined women for qualifications as aforesaid, shall at any time after the passing of the Act see fit so to examine women, no woman obtaining such qualification shall, in respect of it, except at the further discretion of the university or medical corporation granting the same, be entitled to take any part in the government, management, or proceedings of the university or corporation." With regard to the second part of the section, it was resolved that the Council agreed with the Royal College of Surgeons of England that the Act of 1875 required amendment, and would be ready to concur in recommending that the amendment should be undertaken by her Majesty's Government in connexion with the amendment of Russell Gurney's Act; and it was agreed to refer this part of the Report of the Acts Committee "to the President and Vice-Presidents of the College of Surgeons, and the representative of the College on this Council, for their consideration; and that their opinion be requested on the proposals made, before this Council continues the further discussion of the Report." On Section (C), regarding the "Appropriation of Penalties accruing under the Medical Act," the Council agreed to "promote such an amendment of law as would enable the Council to receive all penalties accruing under the Medical Act, anything to the contrary contained in any other Act, local or general, notwithstanding."

The Council then resolved that the President, with Mr. Simon (the chairman of the Medical Acts Amendment Committee), and two other members of the Council, should communicate the Report and the resolutions to her Majesty's Government; and on Friday, last week, the President stated to the Council, at length and with some nicety of phrase, the result of the interview with the Lord President of the Privy Council, with whom was Lord Sandon. The President said that he had stated to the Lord President—the Duke of Richmond—that, besides the subjects dealt with in the Report and resolutions communicated to him, the Medical Council had also under consideration the education of midwives; Dr. Lush's Bill to amend the Medical Acts; a Bill by Mr. Errington to amend the Medical Act of 1858; and an amendment of the Lunacy Acts; and that the Council would no doubt send to his Grace the conclusions which might be arrived at on those subjects. He had then asked whether the Government would be able to assist the Medical Council in what they judged to be necessary amendments in the law; and if so, whether the Government would undertake this during the present session of Parliament, or when they would do it. The Duke of Richmond's reply implied that, with regard to Dr. Lush's and Mr. Errington's Bills, he thought there was very little chance of a private Bill on any subject not of first-class importance passing during the remainder of the present session. All the other points mentioned were allowed by his Grace to be of great importance, but he was not able, without consultation with his colleagues, to give any definite answer, even with regard to the most urgent of them. At the same time, his Grace added, he should be very anxious to receive from the Medical Council the fullest expression of their opinion on the points referred to them by the Government, and on any other matters they might think requiring legislation; that he would then lay the matter before the Cabinet, and consider whether, and when, the Government would take the points up. It was suggested, though not by the Duke himself, that the most urgent matter—that affecting colonial practitioners—may perhaps be remedied by the alteration of a clause or two in the *Merchant Shipping Act* and *Passengers Act*, without raising the question of any amendment of the *Medical Acts*. The President added his impression that it was the Duke of Richmond's "conviction that it is essential, as well as desirable, to confer on all subjects of this kind with the Medical Council before undertaking legislation."

All this, and some more of what was said, is, no doubt, very pleasing. A Minister is bound to be polite and diplomatic to a deputation, and most of all so to a very polite deputation; and should it be objected that the profession would prefer "something done" to many things said only, it might be answered that the deputation to whom many things were said represented a body alleged to be very specially given to words rather than deeds, and that that body is supposed to represent the profession.

Having heard the President's statement, two more sections of the Acts Committee Report were considered. With regard to Section (D), which referred to a Memorial from the Royal College of Surgeons of Edinburgh with respect to Dental Surgeons, the Council agreed to send the Memorial to the Royal College of Surgeons of England for the information of that College. Section (E) of the Report, dealing with Dr. Lush's Medical Acts Amendment Bill, was then read and considered; and it was resolved that "the consideration of the question of introducing more stringent penal clauses into the Medical Act should be postponed till such time as those Acts shall have received all essential legislative amendments in the provisions relating to the profession itself, and shall then be in readiness for consolidation." The Committee, in their Report, expressed their extreme regret that the community should suffer by the unskilled practice of unqualified persons, but did not believe that a clause of such stringency as Clause 1 of Dr. Lush's Bill would have any chance of being accepted by the Legislature, even if it could be recommended by the Council.

As we said before, we are not disposed to complain of the time spent over this part of the work of the Council this session; but we add—provided the work stands, and the Council do not think it necessary to go all over it again in a future session. So far as concerns the representation of the matters dealt with to the Government, the work will no doubt have to be again done. We entirely sympathise with Mr. Simon in feeling "very great regret" that, when the Government received such a deputation, "they did not have in attendance any functionary connected with the medical profession." He declared that his long experience of public offices had taught him that there is practically no chance of getting matters of detail attended to unless some officer of the Government takes them in hand; and that in the case of such a deputation as that sent by the Council there ought to be a skilled person present on the part of the Government to take notice of what passes, for there is "in the long run no continuity of attention on the part of Governments in matters such as those dealt with by the deputation, unless they are taken up by the permanent officers of the Civil Service, who can inform successive politicians of the state of the different departments of legislation."

THE OUTBREAK OF SCURVY IN THE ARCTIC EXPEDITION.

At last the Report of the Admiralty Committee on the causes of the outbreak of scurvy in the recent Arctic Expedition

has been published. The Committee took the evidence of the Commander of the Expedition, of the principal officers and certain of the inferior officers and men, of officers and men who had taken part in previous Arctic voyages, and of the Medical Director-General of the Navy; and, after communication with the Royal Colleges of Physicians and Surgeons, they received also the evidence of the most eminent medical authorities of the day on the subject. Further, in consequence of the question (put in an unnecessarily offensive form) of the member for Galway to the First Lord of the Admiralty, we know that the Committee was a judicial one. The Report is therefore one of unusual value and weight; and it sets at rest any doubts that may have existed as to the cause of the outbreak of scurvy, and upsets at once and for ever all the ingenious theories that have been suggested in explanation of it in place of the very plain one that rested on all experience and on scientific knowledge—viz., that it was due to deliberate disobedience of the orders of the Admiralty and the instructions of the Medical Director-General respecting the use of lime-juice during the sledging journeys. The attention of the Committee was directed to three points—first, the cause of the outbreak; second, the adequacy of the provision made in the way of food and medicine; third, the propriety of the orders for provisioning the sledge parties. On the first point the Committee say "we attribute the early outbreak of scurvy in the spring sledging parties of the Expedition to the absence of lime-juice from the sledge dietaries"; though they add that, in their opinion, the long winter, extending over 142 days, and the confinement to a comparatively vitiated and somewhat damp atmosphere, with exposure to extreme changes of temperature and deprivation of fresh meat, had predisposed the officers and men to scurvy. The existence of these predisposing causes cannot, however, be taken as extenuating circumstances, for the Committee go on to point out that, in their opinion, their evil effects "could have been mitigated by a recourse to short journeys, utilised for laying out depôts of provisions, and other preparatory purposes, prior to those of a more extended character undertaken to effect the objects of the Expedition." As to the second point, the Committee find that "the provision made in the way of food, medicines, and medical comforts" was not only in every respect adequate, but that it was "more complete than that made for any previous expedition which has proceeded on Arctic service." And, in answer to the third head of the inquiry, the Committee find that "the orders of the Commander of the Expedition for provisioning the three extended and principal spring parties did not include lime-juice"; that this was a deviation from the Memorandum of Recommendations and Suggestions of the Medical Director-General furnished for his information; and that "the reasons assigned for this deviation being insufficient, the said orders were not proper."

The Report is short, and frank to a degree that a Frenchman would be apt to call brutal; and the verdict of the Committee on the judgment and conduct of the Commander of the Expedition in the matter referred to them is as emphatically against him as it possibly could be. The Expedition was more carefully and completely provided for in the way of food, medicine, medical comforts, and medical instructions than any previous Arctic Expedition had been; yet it failed; and out of 130 men concerned in it some fifty were attacked with scurvy, and three died. And all this was due to the neglect of the Commander to take reasonable precautions against the deterioration of the health of his crews before starting on the sledging expeditions, and to his deliberate disregard of his instructions to provide the sledging parties with lime-juice. There is no need to add a single word to the judgment delivered by the Committee, or to attempt to emphasise in any way the censure passed by it on Sir George Nares; it must be painful enough to him as it stands. And it is only fair to add that the Report has been severely criticised by Rear-Admiral Richards, an experienced Arctic traveller; and that Sir George Nares has written to the *Times*, giving a long list of Arctic explorers, upon the recorded experiences of whom he had based the judgment condemned by the Committee; each of these explorers, he states, "had performed sledge journeys under similar conditions and on similar rations, without lime-juice, and had completed their journeys with the sledge crews reasonably free from all sickness." We must suppose, however, that this, and all else that Sir George could urge in his own justification was laid before the Committee; and judged to be "insufficient." But we may rejoice in the completeness of the vindication the Report affords of the scientific opinion regarding scurvy, and the value of lime-juice as a preventive, and we may hope, with our contemporary the *Times*, that "the lesson will not be without its value in other military and naval enterprises." It is unhappily but too true that "it is the standing temptation of soldiers and sailors to override the dictates of medical science by the traditional experience on supposed necessities of the service"; and no less true that "such presumption is always extremely dangerous." But as good may come out of evil, the fact that in this instance such presumption "has proved unquestionably disastrous" may be of service in the future.

THE WEEK.

TOPICS OF THE DAY.

Her Royal Highness the Princess Louise was especially active last week on behalf of the medical charities of the metropolis. On Tuesday she opened a fancy fair at the Duke of Wellington's Riding-School, Knightsbridge, in support of the funds of the National Hospital for the Paralysed and Epileptic, Queen's-square, Bloomsbury; and the following day she presided at the opening of the new wards of the Royal Infirmary for Women and Children in the Waterloo-road. Only children are admitted as in-patients to this Hospital, and about forty cots are now occupied. Dr. Vivian Poore, Dr. Greenfield, and Mr. Canton accompanied her Royal Highness round the establishment, and explained the little patients' cases to the Royal party, and after a short religious ceremony the Princess declared the wards open. One of these, built at the expense of Mr. Hamilton, and hitherto known by his name, was, at his request and by permission of her Royal Highness, re-christened the "Louise Ward." The sum contributed during the day by purses and endowment of cots amounted to about £300. The Hospital requires additional annual subscriptions of at least £800. The patients all pay something towards their treatment; out-patients pay one penny for each visit, and the parents of in-patients contribute sixpence per week.

At the Sheffield Town Hall, last week, a chemist of that town was charged with selling adulterated drugs. Some jalap was purchased at one of his shops, fortunately only to be administered to dogs. Two valuable animals had a pennyworth of it administered to them, and died within ten minutes. Some more of the medicine was sent for, and on analysis was found to contain sufficient strychuine to cause immediate death to any person who took an ordinary dose of it. It was stated for the defendant that the strychnine was mixed in the jalap by misadventure; and as the owner of the dogs had commenced an action against the chemist to recover their value (stated at £30), the Bench imposed a mitigated penalty of £2 and costs. Meanwhile it is a subject of much congratulation that the victims of this apparent carelessness were animals, and not human beings.

The Caledonian Railway Company have just had built for them eight special trucks or carriages for the conveyance of

the fresh meat imported from America. Each truck has a double roof, and through the space between these roofs the fresh air is carried into the body of the carriage where the meat in quarters is suspended. It is consequently exposed to a continuous draught of fresh air, which it is stated will tend to improve the tenderness of the meat.

At the request of the Stafford House Committee, Mr. Barrington Bennett has consented to proceed to Turkey for the purpose of superintending the distribution of the further supply of stores which the Committee are sending out for the use of the hospitals in that country. Mr. Bennett has been employed in a similar capacity under the auspices of the Geneva Cross Society during the wars in France, Spain, and Servia.

It will have been seen from our advertising columns that the next examination for candidates for commissions in the Army Medical Department and the Indian Medical Service has been appointed to take place on August 13 next. The former service announces, as usual, fifty appointments for competition, and the latter nineteen. Experience and present information alike point to the conjecture that there may be a "competition," in the literal acceptance of the term, for the Indian appointments; but it is scarcely probable that Mr. Hardy's short-service scheme will attract a sufficient number of candidates even to fill the fifty vacancies, and it only remains to be seen how many further proofs the Government require to convince them that some alteration is necessary before a sufficient number of good men will be attracted to take service in the Medical Department of the Army.

The inadequate means for the removal of the sick in this country were again commented on by Dr. Hardwicke at an inquest recently held at the Central London Sick Asylum, Cleveland-street. The deceased had been ill eight weeks, and received parochial relief in money and kind, as well as medical aid. She expressed a wish to go into the Sick Asylum, and under an order of the district relieving officer at St. Pancras Workhouse a man brought the parish cab for her removal. On arrival at the Asylum she was insensible, and never recovered. Dr. Lidcard, medical officer of the Asylum, deposed that he made a post-mortem examination, and had no doubt that the cause of death was inflammation of the brain; there were no injuries of any kind. The Coroner protested against the general mode of removing sick or injured persons in this country, which, in this respect, was very far behind all the continental cities of Europe. In this case there ought to have been an ambulance in which the deceased could have laid down. The stretcher system of the police was a nasty and, he considered, an un-English introduction, and not only took four men to work it, but in cases of accident frequently converted simple fractures into compound fractures. His own opinion was that persons ought to be trained in the careful removal of the sick or injured to hospitals, etc., but in this country the police had no such training as they ought to have in such matters. In Paddington he had succeeded in inducing the parochial authorities to introduce a sort of Bath chair in which a poor sick person upon removal could lie down. It was a most important subject in the interests of the poor, and proper means of removal of sick, etc., ought to be made peremptory on the parochial and police authorities. A verdict in accordance with the medical testimony was ultimately recorded.

On Saturday last an inquest was opened at Liverpool to investigate the cause of death of a shipping clerk named Williams, which took place on the previous Thursday. Some days before, two doctors visited the men employed at the Wapping Goods Station, to ascertain if any of them would volunteer to allow some blood to be taken for transfusion into a young gentleman who had had his leg amputated, and was in a very critical condition. Williams consented to the request, and six ounces of blood were taken from him; he was subsequently taken ill, and died. The patient into whom the blood was transfused also died. The inquiry was subsequently adjourned.

In his return for the last quarter of the year 1876, the Registrar-General for Ireland considers it necessary to reiterate the complaint that the simplest laws of health are still completely ignored in some parts of that country, and that the information upon the subject supplied by the local registrars deserves the most earnest attention, coming as it does from competent observers who have peculiar facilities afforded them for observing details and acquiring a thorough knowledge of their several districts. A number of examples are given, from which we may quote the report of the Registrar of Hollymount, Ballinrobe. Visiting a house in which were three cases of malignant diphtheria, two of the victims dying after three days' illness, he found in one room, about eighteen feet by twelve feet, the owner and his wife, a sick child, three cows, two pigs, and a donkey. The Registrar reported the matter to the Sanitary Authority, but was not aware when he made his return that they had taken any action to compel the erection of external accommodation for the animals. Some of the registrars describe the people as willing to attend to sanitary arrangements when advised to do so; but other wants are more urgent, and dirt and cesspools soon appear again, and the mischief accumulates. The various statements given cannot be regarded as out of season when it is considered that the longest Bill now before Parliament is a Government Bill to consolidate and amend the Acts relating to public health in Ireland.

The fatal cases of small-pox in London, which in the two preceding weeks had been 54 and 78, were 70 last week, 32 of which took place in private houses. The number of new cases admitted during the week into the Metropolitan Asylum District Hospitals was 254, the largest number of admissions in any week of the present epidemic.

NORTHAMPTON LUNATIC ASYLUM FOR MIDDLE AND UPPER CLASSES.

The annual report for the year 1876 on the Northampton General Lunatic Asylum for the middle and upper classes shows that all pauper lunatics have now been removed from that institution, and only such cases are received as are capable of being paid for by their friends according to an established scale. In some cases, however, in which it is found that there is a real inability to meet the increased rate of payment which the governors of the Asylum have found it necessary to institute, the Committee themselves supply the deficiency. This presses heavily on the funds, but as the institution is passing through a transitional period it is hoped by careful management that the expenses may be kept within the limits of income. The number of private patients at the end of the year was 279, and, as the increase is steadily going on, the full complement of 300 will doubtless shortly be reached. Mr. J. Bayley, M.R.C.S., the Medical Superintendent, in answer to some observations which have been made on the use of restraint in this Asylum, states in his report that during the eleven years he has held his appointment no patients have ever been restrained, except those (very few in number) who have refused to allow necessary surgical appliances to be used. In such cases he considers restraint is justifiable, but as a means of controlling violent, destructive, or dangerous patients he condemns it as objectionable and quite unnecessary.

THE HEALTH OF LEICESTER.

The annual report of the Medical Officer of Health for the town of Leicester (Dr. J. Wyatt Crane) for the year 1876 shows that there has been a considerable decrease in the

mortality of the borough. The ratio of deaths per 1000 has been 22·52, estimating the population at 117,461. Scarlatina is reported to have been prevalent during the whole of the year under notice. Its commencement as an epidemic may be dated from the beginning of the year 1873, when there were 6 deaths attributed to it; in 1874 the number of deaths from this cause was augmented to 18; in 1875 to 175; and in 1876 to 173. The number of deaths from this disease is now, however, happily decreasing, and as so many children are at the present time protected by having been affected by it, it is hoped that it will shortly cease as an epidemic until such time as a new generation arises. The deaths from enteric fever are returned as 41, 3 of which were sent to the Fever House from the country; the deaths of townspeople would therefore be only 38; last year they amounted to 49. This decrease of 11 is adduced by Dr. Crane as an evidence that the sanitary condition of the town of Leicester has improved under supervision since the last report was issued.

THE EDUCATION AND CARE OF IDIOTS.

The President of the Local Government Board and the Chairman of the Commissioners in Lunacy last week received a large and very influential deputation at Whitehall, to present the report of the special Committee convened by the Charity Organisation Society on the education and care of idiots, imbeciles, and harmless lunatics. The report recommended that persons of this unfortunate class should be treated separately from acute cases of lunacy, and should all be suitably trained in childhood and youth, whereby the larger number might be made wholly or partly self-supporting, and the cases permanently placed in asylums might be confined to those requiring constant medical care. The Earl of Shaftesbury, Sir C. Trevelyan, Bart., Sir C. Reed, Lord O'Hagan, Lord Waveney, and Lord Wrottesley having set forth their views, Mr. Sclater-Booth, in replying, expressed his sympathy with the object of the deputation, and said he thought public opinion was nearly ripe enough for the subject to be dealt with in the direction which had been indicated. Classification of the different orders of the lunatic population was becoming absolutely necessary, and he believed it would be a financial advantage for the ratepayers, as well as a step in advance for the interests of humanity. He trusted that before long the Government and Parliament would see their way to dealing with the question.

DUBLIN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The members of the British Medical Association resident in Dublin and its vicinity are organising a branch, to be called the "Dublin Branch," and to include members from all parts of the province of Leinster. A preliminary meeting was held at the King and Queen's College of Physicians, Kildare-street, on Friday week, and an adjourned meeting was to take place yesterday to consider and adopt by-laws, and to elect officers. The movement has so far been very favourably received by the profession in Dublin, a result mainly due to the energy and zeal in the cause displayed by Dr. George F. Duffey, the lately appointed Honorary Secretary for Ireland of the Association.

THE LATE REGISTRAR TO THE GENERAL MEDICAL COUNCIL.

We are very glad to be able to state that, acting on a recommendation by the Finance Committee, the General Medical Council have resolved that 200 guineas be presented to their late Registrar, Dr. Hawkins, in recognition of his long and faithful services. Dr. Hawkins was Registrar for eighteen years, from the time the Council was called into existence till the autumn of last year; and it must have been very gratifying to the Council to be able to vote this special acknowledgment of the diligence, ability, and courtesy with which throughout that period he discharged all the duties of his responsible office.

EPSOM COLLEGE.

It will be seen from an advertisement which appears in our columns that an Epsomian Club is about to be formed, for the purpose of binding together those who have been educated at the College, and of affording opportunities for their meeting. Since the College was opened in 1855, a large number of young men have entered the various professions and other lines of life who still take interest in their *Alma Mater*. It will be to the advantage and success of the College itself that this interest should be kept up and stimulated in some such manner as is proposed.

PROFESSOR LISTER AT KING'S COLLEGE.

It is now an established fact that Professor Lister has at last yielded to the invitation from King's College. He has not accepted, however, the original offer of the chair of Systematic Surgery, with beds in the Hospital. A new and additional chair of Clinical Surgery has been created for him; and he will have, we believe, thirty beds allotted to him. King's College is consequently strong in having now two Professors of Clinical Surgery; but the chair of Systematic Surgery is still vacant.

MEDICAL PARLIAMENTARY AFFAIRS.

Mercantile Marine Hospital.—The second reading of this Bill was proposed by Captain Bedford Pim. By it all seamen would be required to undergo an examination before medical officers stationed at the principal ports under the control of the Board of Trade within seven days of signing the articles of service. For this purpose the sailors were to be taxed to the extent of 5 per cent. on their wages, amounting in all to £250,000 per annum, to provide sufficient hospitals afloat and on shore, and for the general medical superintendence of all our seamen. Under the provisions of the Bill the principle of the Contagious Diseases Acts would be applied to the mercantile marine. On a division the Bill was lost by a large majority.

Medical Act.—Leave was given to Mr. Errington to bring in a Bill to amend the Medical Act, 1858. It was read a first time.

The Arctic Expedition.—Mr. M. Henry asked the First Lord of the Admiralty whether the report of the Committee on the existence of scurvy in the recent Arctic Expedition, published in the newspapers on the 16th inst., was the original report, or whether it had been in any respect modified or mitigated, in consequence of pressure from the Admiralty, or from any other official quarter; and whether it was a fact that a large part of the supply of lime-juice sent down to be put an board the *Alert* and the *Discovery*, before they left England, was rejected by the commanders of those ships on the ground that it had arrived too late, and that there was not room for it on board. Mr. Hunt declined to answer the questions as they were put by Mr. Henry. Dr. Playfair said that if the right hon. gentleman had no objection he would be prepared to ask him, after the other questions had been disposed of, whether the report published in the newspapers on the 16th inst. was the original report as it passed the Committee, or whether it had been in any respect modified, without imputing any motives in connexion with the matter. He believed that if the right hon. gentleman knew the feeling which prevailed amongst medical men on the subject to which the question of the hon. member referred he would be very desirous to give information upon it. There was a general impression that a report was agreed upon by the Committee, and that, for some reason or other, it had been delayed, and finally altered by the Committee. Mr. Hunt, in reply, said: The report laid on the table of the House is the only report that I have seen or heard of. It was dated March 3, and it was presented to me by the chairman of the Committee, accompanied by a note stating that they had not yet obtained the report or memorandum of the members of the Medical Committee, which was not yet finally completed. The report was detained until that memorandum was received in a complete shape at the Admiralty. As soon as that memorandum was received in a complete shape at the Admiralty—viz., on the 7th of this month—the report was laid on the table of the House. There has been no delay whatever on the part of the Admiralty, and no intimation has been conveyed to the Committee by the Admiralty, except in the way

of thanking them for the pains they have taken in conducting the inquiry. There is no foundation in fact for the allegation implied by the other question.

GENERAL CORRESPONDENCE.

POISONING BY CHLORAL.

Letter from Mr. C. Holthouse.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust you will allow me to make a few remarks on the case of poisoning by chloral, in which my conduct and treatment are rather severely reflected on in the last number but one of your journal; and I would wish first to call your attention to these two facts, which, in my endeavour to screen my attendants, were not so prominently brought out at the inquest as they deserved to be—first, that *the chloral which was given to Mr. Leesson on the night of his death was given without my orders, knowledge, or sanction;* and secondly, that *the whisky was given contrary to my orders.* On the very day preceding his death I had strongly urged on him the absolute necessity of his giving up the chloral at once, and when I wished him good night he did not ask for it. And now for your comments: "If he cut off all supplies of stimulant from the patient at once, Mr. Holthouse seems to have freely permitted the use of a much more dangerous substance—namely, chloral." Again, "The arrangements with regard to the dispensing of this chloral seem to have been as careless as they well could be"; and again, "The chloral seems to have been kept in solution, and dispensed by a matron or housekeeper."

From the above quotations one would infer that the chloral was for the general use of the patients, and that they had only to ask the matron for it to get it. The actual practice is the following:—The solution referred to, together with some aromatic spirits of ammonia and peppermint, are kept in a small dressing-room, the only ingress to which is through my bedroom, and to which no one has the right of access but myself. When any patient requires chloral I tell the matron to bring me a bottle, and I make up the draught in her presence; but on two occasions, and two only, knowing that she understood dispensing, I requested her to make it up for me, and, relying on this, she, on the fatal night, presumed to do so of her own accord, without receiving orders from me, or even asking whether it was to be given. So much for your charge of want of care.

Another statement in your article on which I would wish to make a few remarks is the following:—"Cutting off stimulants from all habitual drunkards, and putting on choral, is not to be commended as a mode of treatment. It is a question whether it is not as bad as giving opium persistently and in considerable doses." Anyone on reading this would infer that my practice was to cut off the alcohol and supply its place with daily draughts of chloral, or the phrase "and putting on chloral" would have no meaning; so likewise must the "giving opium persistently" be interpreted; and the very exceptional case of Mr. Leveson is commented on as if it were the usual practice to give nightly draughts of chloral to my other patients. Opinions are divided on the question of whether the alcohol should be given up gradually or abstracted suddenly. I have had no experience of the former method, except in the fatal case which has called forth these remarks, and which certainly does not commend itself to my judgment; but from what I have heard from others, the treatment is admittedly a very slow one, many weeks elapsing before the patient is able or willing to give up his accustomed stimulus, even if he eventually succeeds in doing so. The cutting off the alcohol at once has proved in my hands a very safe, speedy, and effectual cure; a few days or a week is usually sufficient to make a new being of the patient.

I may mention that several of my patients have required no medical treatment whatever on admission, having begun to abstain before they entered; but with these exceptions nearly all require a composing draught the first night, some require it for the first two or three nights, but very few indeed beyond the first week of their admission, when it is always given in smaller doses. My directions are invariably given personally to the patient, if he is in a condition to comprehend them, and are to this effect—"Don't take the draught if you can get to sleep without it"; and the knowledge that they have something at hand which will produce the desired effect is often sufficient, so that the draught is left untouched. The quantity of chloral which I give necessarily depends on the condition and the habits of the patient, the average dose prescribed being from twenty to thirty grains. Under this treatment, combined with the use of a tonic of ten to twenty minims of the tinct. ferri perchlor., five minims of the liq. strychniæ in an ounce of aq. camph. three times a day, and preceded by a blue pill and black draught, my patients rapidly regain health and strength.

Time will not permit me to write more at present. What I wish to impress upon your readers is that they must not judge of the general treatment of my patients by an exceptional case like that which has ended so unfortunately.

I am, &c., Carsten Holthouse.

[We were very sorry to be unable to insert Mr. Holthouse's letter last week, but it came into our hands after the journal was made up, so that we could not manage it. We must observe that Mr. Holthouse admits in the latter part of his letter that "nearly all" of his patients require composing draughts for one or more nights after coming under his care, which seems to justify the phrase, "putting on chloral," that we used, and to which he takes exception. We, however, very willingly publish his letter, and leave it to the judgment of our readers. We trust that in the future Mr. Holthouse will keep his drugs under lock and key.—Ed. *Med. Times and Gaz.*]

OBITUARY.

WILLIAM COULSON, F.R.C.S. Eng.

This distinguished surgeon died at his residence on the 5th inst., at the age of seventy-five. He was a Cornishman, having been born in Penzance in the year 1802. He began his medical studies in the old-fashioned way by serving an apprenticeship to a surgeon, and as he showed great promise he was sent to London "to walk the hospitals" at a much earlier age than was usual at that period. He got on remarkably well, and, after passing the College, became associated with Tyrrell and others in founding the Aldersgate School of Medicine. He had previously resided for some time on the Continent, and made himself acquainted both with the teaching and literature of the French, as well as of the German school. This materially helped him on, and contributed, no doubt, greatly to his future success. On the opening of St. Mary's Hospital he was elected Surgeon, and his presence and energy did much to establish the reputation of this now prosperous school. He then brought out his work "On Lithotomy and Lithotrity," which became and long remained a standard work on this important subject. He was author of many other works, among which may be mentioned "Diseases of the Hip-joint," and "Diseases of the Bladder and Prostate Gland." He wrote also on Perineal Section and other subjects for "Cooper's Surgical Dictionary." He was possessed of great power of will, and gave individuality to any subject which he took up. He was extremely methodical in his work, punctual to a fault, and thoroughly conscientious in all his doings and dealings with his professional brethren. He was fond of and fitted for society, and never so happy as when entertaining his old and trusted friends. He was more than usually fortunate both in his practice and in his private life, as the ample fortune which he has left behind sufficiently testifies. His loss will be felt by a large circle of friends and acquaintances.

Oxalate of Cerium in Obstinate Vomiting.—Dr. Peters reports four cases of obstinate vomiting, associated with different forms of disease, all of which had been benefited in a very striking manner by the use of large doses of oxalate of cerium, after an almost endless variety of measures had been unsuccessfully employed. In one of them—a case of cancer of the stomach—the oxalate was administered in the dose of four grains every two hours while the patient was awake, and continued until probably 600 grains were taken within three weeks, not only without inconvenience, but with such marked benefit that food was taken and retained with comparative comfort.—*New York Medical Record*, March 3.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma were admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst., viz. :

Bailey, Henry Frederick, L.S.A., Newport Pagnell, student of University College Hospital.
Bradley, Charles Augustus, Macclesfield, of the Manchester School.
Cant, William John, L.S.A., Birmingham, of the Birmingham School.
Edwards, John, L.R.C.P. Edin., Anglesey, of the Dublin School.
Glanville, Francis Ferratus, Putney, of St. George's Hospital.
Jones, David Johnston, M.B. Edin., Liverpool, of University College Hospital.
Lewis, Thomas Hope, L.S.A., Carmarthen, of St. Bartholomew's Hospital.
Lightfoot, William Spencer, L.S.A., Hanwell, Berks, of St. Thomas's Hospital.
Lloyd, Edward James, M.D. Aber., Bangor, of St. Bartholomew's Hospital.
Malvin, Mark, Stockton-on-Tees, of the Newcastle School.
Martland, Edward William, Wigan, of the Manchester School.
Merriman, William Temple, L.S.A., Knutsford, of the Manchester School.
Oxley, Alfred James Rice, Conisbro', Yorkshire, of the London Hospital.
Payne, Algernon Archibald, L.R.C.P. Edin., Sheffield, of St. Bartholomew's Hospital.
Pratt, Alfred, L.S.A., Hounslow, of the Birmingham School.
Prees, William Marpole, L.R.C.P. Edin., Conway, of the Dublin School.
Risk, Reginald Rodd Tudor, L.R.C.P. Edin., Harrow, of King's College Hospital.
Tomkins, Henry, L.S.A., Manchester, of the Manchester School.
Twinem, John, Liverpool, of the Liverpool School.
Woodcock, Robert Fraser, York-street, W., of University College Hospital.

One candidate was approved in Surgery, and when qualified in Medicine will be admitted a Member of the College; and eleven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following gentlemen passed on the 23rd inst., viz. :—

Battye, John Howard, St. George's-road, S.W., student of St. Thomas's Hospital.
Bellaby, Frederick, L.S.A., Nottingham, of the Middlesex Hospital.
Broster, Arthur Erdswick, Beaminster, Dorset, of University College Hospital.
Browne, James William, M.A. and M.B. Oxon., Bodfari, North Wales, of the Middlesex Hospital.
Clarke, William Bruce, B.A. Oxon., North Wootton, Norfolk, of St. Bartholomew's Hospital.
Cockell, Frederick Edgar, Dalston, of St. Thomas's Hospital.
Cones, George Augustus, Brompton-square, of St. George's Hospital.
Ekens, Joseph William, L.S.A., Alresford, Hants, of Guy's Hospital.
Fisher, Frederic Bazley, Tiverton, Devon, of the London Hospital.
Fraser, Duncan, M.B. Toronto, Shakespeare, Canada, of St. Thomas's Hospital.
Green, Thomas Beaufoy, Kendal, Westmoreland, of University College Hospital.
Hayman, Sidney Arthur, Stokenchurch, Oxon., of St. Bartholomew's Hospital.
Khan, Mirza Hussein, L.S.A., Fabrysz, Persia, of St. Mary's Hospital.
Pickford, John Kemble, L.R.C.P. Lond., Toller Fratoun, Dorset, of St. Thomas's Hospital.
Schofield, Robert Harold Ainsworth, B.A. Oxon., Cambridge-gardens, W., of St. Bartholomew's Hospital.
Smith, Ebenezer Stanley, Finsbury-circus, of the London Hospital.
Stevens, Arthur Frederic, Brixton, of Guy's Hospital.
Wilkinson, John Cooper, Lee, Kent, of Guy's Hospital.

Four gentlemen passed in Surgery, and when qualified in Medicine will be admitted Members of the College; and six candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received his certificate to practise, on Thursday, May 17 :—

Ewen, Harry Walter, Manchester.

The following gentlemen also on the same day passed their primary professional examinations :—

Buzzard, Thomas Hardy, Birmingham General Hospital.
Garman, Vincent Cornelius, London Hospital.
Instone, Samuel Vaughan, Guy's Hospital.
Thorpe, Henry Stanley, St. Bartholomew's Hospital.
Walker, Lawrence Newman, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ANDERSON, A. H., M.R.C.S. Eng., L.S.A.—House-Surgeon to the Nottingham General Hospital.

WALKER, WILLIAM, M.R.C.S. Eng., L.S.A. Lond.—House-Surgeon to the Doncaster General Infirmary and Dispensary.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major George Paul Minchin Woodward, M.D., retires upon half-pay, with the honorary rank of Deputy Surgeon-General.

SCOTS GUARDS.—Surgeon-Major John William Trotter, Battalion Surgeon, retires on temporary half-pay.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of February 22, 1870, Fleet-Surgeon Charles Douglas Sheppard has been placed on the Retired List of his rank from the 9th inst.; Staff-Surgeon William Anderson has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of March 23, 1877.

BIRTHS.

GEE.—On May 16, at 54, Harley-street, the wife of Samuel Jones Gee, M.D. Lond., of a daughter.

ILOTT.—On May 17, at Bromley, Kent, the wife of Herbert James Ilott, M.B., of a daughter.

JONES.—On May 14, at Ty-Mawr, Aberdare, the wife of Evan Jones, M.R.C.S. Eng., of a son.

LOMAS.—On May 19, at 99, Gower-street, W.C., the wife of William Lomas, M.D., M.R.C.P., of a son.

ORTON.—On May 21, at Crouch-end, N., the wife of Frederic Orton, M.D., of a daughter.

WATSON.—On May 18, at Weirfield House, Penistone, Yorkshire, the wife of Alfred M. Watson, M.D., of a son.

MARRIAGES.

BENNETT—BAKER.—On May 12, at the parish church, Woodford, Essex, Frederick Henry Bennett, son of Frederick Bennett, M.R.C.S. Eng., of Linton, Cambs, to Emma, eldest daughter of the late James Kingsby Baker, of Sutton, Suffolk.

BROCK—HUBBUCK.—On May 22, at the parish church, Greenwich, John Brock, M.R.C.S. Eng., of Guy's Hospital, to Elizabeth Abigail, eldest daughter of W. A. Hubbuck, Esq., of Rosenthal, Catford, Kent.

WEBB—HOUNSHAM.—On May 17, at St. Philip's, Dalston, William Henry Webb, M.R.C.S., of Kingsbridge, Devon, to Florence Phœbe, second daughter of the late James Bishop Hounsham, of Ipswich.

DEATHS.

EPPS, EDWARD, M.D., M.R.C.S.E., at 89, Great Russell-street, on May 18, in his 47th year.

GRAHAM, CHARLES, M.D., at Dalkeith, N.B., on May 17, aged 79.

HAMILTON, DANIEL EDWARD, M.D., at Cluny-hill, Forres, on May 12, in his 58th year.

MACFARLANE, HARRIETT ISABELLA SOPHIA, wife of Donald Macfarlane, M.D., late of the Madras Medical Establishment, at 11, Southwick-place, Hyde-park, W., on May 20.

OLIVE, EUSTACE HENRY, B.A., M.R.C.S., only son of the late John Comley Olive, of Clifton, Bristol, at Northampton, on May 10, aged 46 years.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CARNARVONSHIRE AND ANGLESEA INFIRMARY, BANGOR.—House-Surgeon. Candidates must be registered to practise in medicine and surgery, and acquainted with the Welsh language. Applications, with testimonials, to the Secretary, on or before June 14.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. Eng. or M.C. of some British University, and L.A.C. Applications, with testimonials, to Mr. C. Rolandson, Hon. Sec., The College, Durham, on or before May 30.

NORTH LONDON CONSUMPTION HOSPITAL, LONDON AND HAMPSTEAD.—Physician. Candidates must be Doctors of Medicine, and Fellows or Members of the Royal College of Physicians. Applications, with testimonials, to the Secretary, 216, Tottenham-court-road, W., on or before June 7.

PROVIDENT SURGICAL APPLIANCE SOCIETY, 37, GREAT ORMOND-STREET, LONDON, W.C.—Assistant-Surgeon. Candidates must be M.R.C.S. Applications, stating age, qualifications, etc., with testimonials, to the Secretary, on or before June 11.

RIPON DISPENSARY AND HOUSE OF RECOVERY.—Resident House-Surgeon and Dispenser. Candidates must be single. Applications, with testimonials as to professional ability and moral character, to the Honorary Secretaries, on or before May 31.

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Honorary Surgeon. Candidates must be Fellows or Members of a College of Surgeons, not engaged in pharmacy or midwifery. Testimonials and diplomas (under cover) to the Secretary, on or before May 28.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of London, Edinburgh, or Dublin, and be possessed of a medical qualification. Applications to the Chairman of the Medical Committee, at the Hospital, on or before June 11.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Lincoln Union.—Mr. J. T. H. Sealy has resigned the No. 6 and No. 12 Districts. No. 6 District, area 7329; population 1638; salary £15 per annum. No. 12 District, area 12,276; population 1406; salary £15 per annum.

APPOINTMENTS.

Atcham Union.—Mr. Alfred Allen Gillillie, L.R.C.P.S. and L.M. Edin., M.R.C.S. Edin., to the Pontesbury District. Mr. William Henry White, M.B. and M.C. Ire., Licentiate in Midwifery of the College of Physicians, Ireland, to the Alberbury District.

Billesdon Union.—Mr. Robert Samuel Mutch, M.R.C.S. Eng., L.R.C.P. Lond., to the Western District.

Cosford Union.—Mr. Joseph Clement Norman, M.R.C.S. and L.S.A. Eng., to the Kersey District.

Hartlepool Union.—Mr. John Fergus, L.R.C.P. and L.R.C.S. Edin., to the Greatham District.

Middlesbrough Union.—Mr. John Andrew Malcomson, M.D. and M.C. of the Queen's University, Ireland, to the Third District.

Reeth Union.—Mr. John Herbert Mearns, B.M. and M.C., to the Muker District.

West Firle Union.—Mr. Frank Algernon Hall, M.R.C.S. Eng., L.S.A. Lond., L.R.C.P. Lond., to the First District.

THE THROAT HOSPITAL, GOLDEN-SQUARE.—One of our contemporaries states that the Chairman, Vice-Chairman, Trustees, and some members of the Committee, also the Surgeon, Secretary, and other officials, have resigned in consequence of the management of the medical department of the Hospital having been called in question. It is also stated that an investigation is about to be made into the causes which have led to this general resignation.

REMOVING FOREIGN BODIES FROM THE NOSE.—A correspondent of the *New York Medical Record* (March 31) observes, on perusing an account of a discussion on the removal of a button from the nares, that he finds no mention of a very simple procedure which has often succeeded after instruments have failed. It is merely to blow the patient's nose for him by closing the empty nostril with the finger, and then blowing suddenly and strongly into the mouth. The glottis closes spasmodically, and the whole force of the breath goes to expel the button or bean, which commonly flies out at the first effort. This plan has the great advantages of exciting no terror in the child, and of being capable of being at once employed by the parent before delay has given rise to swelling and impaction.

MODE OF EMPLOYING CHLOROFORM.—Dr. Sayre observed that he never employed ether in consequence of the struggling of the patient and the slowness of its action, and he never had met with any accident from chloroform, which he attributed to his mode of administration. He places five, or at most ten, drops in some convenient receptacle, by means of which *all* atmospheric air is excluded from the mouth and nose. If *all* air is excluded this small quantity will quickly and safely produce anæsthesia, and, if unpleasant symptoms should arise, artificial respiration would keep the patient alive until the effect from such a small quantity had passed away, while when alarming symptoms are developed after the patient has been inhaling *diluted* chloroform for some time, it would not be easy or perhaps not possible to resuscitate him.—*New York Medical Record*, March 24.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting, held last Friday at the General Infirmary at Leeds, a very satisfactory report was presented for the past year. The following were elected office-bearers for 1877-78:—*President:* Mr. Scattergood (Leeds). *Vice-Presidents:* Dr. T. Clifford Allbutt (Leeds), Dr. Holdsworth (Wakefield). *Treasurer:* Dr. Heaton (Leeds). *Hon. Secs.:* Mr. A. F. McGill (Leeds), and Dr. E. West Symes (Halifax). *Librarian:* Mr. Horsfall (Leeds). *Committee:* Mr. E. Atkinson (Leeds), Dr. J. H. Bell (Bradford), Dr. Deville (Harrogate), Dr Eddison (Leeds), Dr. Ginders (Normanton), Mr. Lodge (Bowling), Dr. Major (Wakefield), Dr. Myrtle (Harrogate), Mr. Nunneley (Leeds), Dr. Tibbits (Bradford), Mr. C. J. Wright (Leeds), and Mr. J. Hodgson Wright (Halifax).

SOCIETY OF PUBLIC MEDICINE AND PROFESSIONAL HYGIENE.—Under this name it is proposed to form a new Society in Paris, under the presidency of Prof. Bouchardat and the vice-presidency of M. Léon Colin, Professor of Epidemiology at Val-de-Grâce, Prof. Gubler, M. Laussedat, Deputy to the National Assembly, and Senator Freycinet, mining engineer. Its objects are the thorough investigation and popularisation of questions of hygiene, of salubrity, of national and international sanitary medicine and police, of epidemiology, of climatology, of medical statistics, and especially of professional hygiene—in a word, of every description of question bearing on social medicine. Essentially scientific, the Society will be accessible to all *savants* who, by their position, works, or special competence, will be likely to further its objects—thus embracing medical men, veterinarians, chemists, physicists, meteorologists, engineers, and architects. While this Society was being formed, another, termed the "French Hygienic Society," with M. Chevallier for its president, has been set on foot.—*Gazette Médicale*, May 12.

THE PARIS NIGHT MEDICAL SERVICE.—This, which has now been in force for two years, has proved a complete success, and is now in regular operation in the eighty *quartiers* of the capital. Its cost to the Municipality is but small, owing to the carrying out of the principle that the fee paid to the medical practitioner by the police of the *quartier* in which he is summoned must, with the exception of the indigent, be repaid by the person demanding his services. Practically, but few indigent persons resort to this service, and the annual expense does not amount to more than 40,000 francs, or about 500 francs per *quartier*.—*Union Méd.*, April 12.—[A correspondent of the *Lyon Médical* states that at Lyons, where this service also exists, some obscure practitioners, who do but little by day, manage, by feeing the police, to get a good run of night practice.]

INTERNAL ADMINISTRATION OF GLYCERINE.—M. Catillon read a paper at the Société de Thérapeutique, giving an account of an experimental investigation he has made concerning the effects of glycerine administered internally. He concludes as follows:—1. Glycerine exerts a favourable effect upon nutrition, increase of weight resulting from its use. This effect is produced by its furnishing a combustible aliment, the fatty matters of the economy as well as the azotised being economised, while the production of animal heat is rather increased than diminished. 2. Glycerine increases the appetite so that, under the influence of the augmented alimentation which its use induces, the proportion of urea augments in the urine. 3. In spite of this, glycerine diminishes in an absolute manner the production of urea in the economy. 4. Glycerine is eliminated principally by the kidneys, and that very rapidly. 5. It remains but a short time in the blood, not being found there an hour or two after its ingestion. 6. It does not diminish the normal proportion of sugar in the blood, except when given in very large (*massives*) doses; and if it is useful in diabetes it is so only by modifying nutrition. 7. Glycerine has laxative properties. 8. Given in large doses it only kills when given at once. (Dogs will bear quite well 200 grammes a day, given in divided doses, and even twenty grammes per kilogramme of their weight without being much inconvenienced.) 9. Doses of from fifteen to thirty grammes per diem are strengthening and regulative of the digestive functions, and doses of from forty to sixty grammes stimulate the kidneys.—*Journal de Thérapeutique*, April 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** The two following productions having found their way into our letter-box, we give them for the instruction, edification, or amusement of our readers. The first has appeared before, we believe, as having been addressed to Professor Lister by Professor Blackie; but we cannot say whether that is a true history, nor can we pretend to judge whether or not the second effusion, evidently written in haste, and under much emotion, really proceeds from the same pen as the first:—

Professor Lister.

(1.)

"Some live to feed ambition, some for fame;
Others for gold; and some, the nobler few,
For honest work achieved and service true,
With wage of truth and love. This last thy claim
And glory, Lister. When the Southrons laid
Their golden snare for thee, and every charm
Of that gross-monstered Babylon displayed,
To lure thee from thy station for our harm,
Thou didst stand firm. For this my humble rhyme
Thee honours, and Edina gives thee place
High-perched with the prime patterns of her race,
Scott, Chalmers, Wilson, Hamilton, and Syme,
And bids thee bloom on Scottish soil and grow
Proudly, like stout old pines where stiff old breezes blow."

April, 1877.

(2.)

"O Professor, fickle-hearted! O my Lister, mine no more!
O the class-room, now deserted, where undying troth thou swore!
Weaker than I could have fancied, weakest where I sang thee strong,
Slave to personal ambition, captive of the Southron's tongue!
Is it well to wish thee happy?—having taught here, to decline
To a lower mode of teaching; in a lesser chair to shine!
Yet it shall be; thou must lower from thy greatness day by day,
Thy finer art in teaching growing sham-like as the Southron's way."

May, 1877.

E. de Clinton P.—The Astronomical Observatory at Oxford was built by the trustees of Dr. Radcliffe. The site on which it is built, and the attached grounds, were presented to the University by the Duke of Marlborough.

Ambrose D. G.—The calculation, made from the best sources of information on the question referred to, is that an annual sum of £600,000 is expended in London in gratuitons medical relief This does not, of course, inclnde the amount raised by rates for the medical relief of the sick poor, etc.

THE CONTAGIOUS DISEASES ACT, BOMBAY.

After a lengthened discussion on the proposal to reintroduce the Contagious Diseases Act, the Bombay Corporation has made a curious compromise between those who are for and those who are against it. It has decided that it approves of the proposal, but that it has no fnnds to spend to carry it ont.

HANWELL COUNTY LUNATIC ASYLUM.

It appears from the last report of the Hanwell Connty Lunatic Asylnm that the Asylum was in a healthy and efficient condition, and there had been no instances of infectious diseases, suicide, or serious calamities. The number of patients in the Asylum on December 31 last was 1831, of whom 733 were males and 1098 females. In 1876 the nnmbers admitted were 357, of whom 218 were males and 139 females. The numbers discharged recovered in 1876 were 110—50 males and 60 females. In 1876 the deaths were 162—100 males and 62 females,—being a decrease of 13 on the previous year. The report expresses gratification that there had been no mechanical restraint used to any of the patients during the year, which now made an unbroken period of five years of that fact.

COMMUNICATIONS have been received from—

Dr. H. BENNETT, Minorca; Mr. A. F. M'GILL, Leeds; Dr. ROBERT HARVEY, Simla; Dr. J. S. DOWSE, Highgate; Mr. BRAIDWOOD, Birkenhead; Mr. E. COOPER, Norwich; Mr. J. F. SMITH, London; Dr. JOHN CADDY, Kensington; THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; THE REGISTRAR OF THE APOTHECARIES' HALL, London; Mr. WM. ADAMS, London; Dr. PATRICK BLACK, London; Dr. J. W. MOORE, Dublin; Mr. C. PUZEY, Liverpool; Dr. BARLOW, London; Dr. JOHN WILLIAMS, London; Dr. OCTAVIUS STURGES, London; Mr. JOHN CHATTO, London; Dr. C. HANDFIELD JONES, London.

BOOKS AND PAMPHLETS RECEIVED—

Report of the Metropolitan Board of Works, 1876—William H. Pearse, M.D., Geography of Devonshire and Consumption—Berkeley Hill and Arthur Cooper, The Student's Mannal of Venereal Diseases—Charles Rose, How to Cure and Prevent Small-pox—Mrs. Caddy, Household Organisation—Henry Robinson and John Charles Melliss, Purification of Water-carried Sewage—W. L. Richardson, M D., Hydrate of Chloral in Obstetric Practice—J. Roussel, M.D., Transfusion of Human Blood—Charles Parsons, M.D. Edin., Sea-Air and Sea-Bathing; their Influence on Health—J. Mortimer Granville, M.D., F.S.S., The Care and Cure of the Insane.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Medical Inquirer—La Province Médicale—Dairyman—Guy's Hospital Gazette—Boston Journal of Chemistry—Canada Lancet.

APPOINTMENTS FOR THE WEEK.

May 26. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Mr. W. H. Pollock, "On Modern French Poetry."

28. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. *Tuesday*.

Operations at Gny's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. James Dewar, "On the Chemical Philosophy of Sir Humphry Davy."

30. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex. 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

31. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Heat."

June 1. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Sonth London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Gny's, 1½ p.m.

ROYAL INSTITUTION (Weekly Evening Meeting, 8 p.m.), 9 p.m. Mr. Oscar Browning, "History of Education."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 19, 1877.

BIRTHS.

Births of Boys, 1247; Girls, 1163; Total, 2410.
Average of 10 corresponding years 1867-76, 2167·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	791	773	1564
Average of the ten years 1867-76	683·5	611·0	1299·5
Average corrected to increased population ...	...	...	1390
Deaths of people aged 80 and upwards ...	...	...	69

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	1	2	2	7	...	1	2	1
North... ...	751729	30	14	3	2	14	...	...	1	4
Central. ...	334369	...	9	1	...	9	...	...	...	3
East	639111	16	19	7	...	15	...	...	...	5
South... ...	967692	23	16	7	...	14	2	5	1	9
Total	3254260	70	59	20	4	59	2	6	4	22

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·671 in.
Mean temperature	51·1°
Highest point of thermometer	64·9°
Lowest point of thermometer	41·6°
Mean dew-point temperature	45·7°
General direction of wind	Variable.
Whole amonnt of rain in the week...	0·80 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 19, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending May 19.	Deaths Registered during the week ending May 19.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2410	1564	64·9	41·6	51·1	10·62	0·80	2·03
Brighton	102264	43·4	73	31	62·0	45·0	51·7	10·95	0·97	2·46
Portsmouth ...	127144	28·3	69	42	70·0	48·6	55·7	13·17	0·82	2·08
Norwich	84023	11·2	47	35	65·0	42·2	49·7	9·83	0·89	2·26
Plymouth	72911	52·3	52	30	62·0	44·0	52·0	11·11	1·57	3·99
Bristol	202950	45·6	130	100	63·5	41·2	51·2	10·67	0·99	2·51
Wolverhampton ...	73389	21·6	57	33	61·8	40·6	48·7	9·28	1·29	3·28
Birmingham ...	377436	44·9	284	177	...	...	...	...	...	...
Leicester	117461	26·7	84	48	...	...	...	...	...	...
Nottingham ...	95025	47·6	63	47	64·6	38·5	48·9	9·39	1·09	2·77
Liverpool	527083	101·2	390	268	60·8	45·1	50·2	10·11	1·01	2·57
Manchester ...	359213	83·7	249	213	67·0	32·8	49·2	9·55	1·66	4·22
Salford	141184	27·3	121	90	60·8	40·3	48·1	8·95	1·57	3·99
Oldham	89796	19·2	65	59	...	...	...	...	...	...
Bradford	179315	24·8	119	83	60·2	41·2	47·0	8·33	1·22	3·10
Leeds	298189	13·8	192	139	64·0	42·0	48·0	8·89	0·95	2·41
Sheffield	282130	14·4	182	142	64·0	42·0	48·3	9·06	1·66	4·22
Hull	140002	38·5	102	53	...	...	...	...	...	...
Sunderland ...	110382	33·4	66	45	65·0	42·0	48·1	8·95	0·75	1·90
Newcastle-on-Tyne	142231	26·5	120	72	...	...	...	...	...	...
Edinburgh	218729	52·2	127	103	62·0	40·0	48·1	8·95	1·17	2·97
Glasgow	555933	92·1	432	315	59·5	41·5	50·6	10·34	1·70	4·32
Dublin	314666	31·3	159	155	66·7	40·5	53·2	11·78	1·13	2·87
Total of 23 Towns in United Kingdm	8144940	38·3	5596	3864	70·0	32·8	50·0	10·00	1·18	3·00

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·67 in. The lowest reading was 29·43 in. at the beginning of the week, and the highest 29·93 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

MEETING OF THE GENERAL MEDICAL COUNCIL,

HELD AT THEIR HOUSE, OXFORD-STREET, W.

TENTH DAY—MONDAY, MAY 21.

THE Minutes of the last meeting were read and confirmed.

The PRESIDENT announced that, looking at the general business of the Council, there were seventeen distinct subjects on their programme, which had given rise to twenty-one notices of motion, seven of them relating to the question of education, and one by Mr. Lister concerning double qualifications. There were other subjects which would occupy time upon the action of the Medical Amendment Act, and one concerning an application by Mr. Henry Comyn, besides some valuable statistics which had been furnished by Dr. Aquilla Smith.

The Council then, on the motion of Dr. ANDREW WOOD, seconded by Dr. HUMPHRY, went into committee for the adjourned consideration of the Report of the Committee on Recommendations.

Dr. ANDREW WOOD moved, seconded by Dr. APJOHN—"That, under the head 'Dublin,' on p. 273 of vol. xiii. of the Minutes, for the words 'entrance examination' be substituted the words 'public entrance examination.'"

Sir DOMINIC CORRIGAN said there was no public entrance examination recognised by Trinity College. There were three ways by which entrance was obtained—first, the ordinary entrance examination, which consisted of a number of young men being placed round a table, the examiner going round from one to another, and the candidates assisting each other; then there was the private examination in the professor's room; and lastly, by the payment of 5s., a certificate might be obtained, under which the student matriculated, so that he could go on with the whole of his medical studies for three years without having passed any examination at all. He thought the University of Dublin had followed a very unworthy course by issuing their licence in medicine and surgery after two years' training, so that they enabled a student to get, not a degree as in the Edinburgh and other universities, but a licence which was a thing sold by them in addition to the degree. They really went into the market with two qualifications for disposal—the M.D. degree, and the licence. A student having got the licence was under the Medical Acts entitled to all the privileges conferred by the degrees granted by other universities, and to fill public appointments, medical offices in the army and navy, and so forth. He might take charge of H.M.'s ships and soldiers, and after three or four years' service he might come back and get his M.D. by going through the course of Arts, which was not a very great trial. In trying for his degree he was not asked a single question to ascertain whether among the Ashantees, on the West Coast of Africa, or wherever he might have been stationed, he had forgotten all he previously knew or not—in fact, he was put through no real medical examination whatever, but he simply went in on payment of the money.

Dr. ANDREW WOOD asked if Sir Dominic Corrigan meant to object to putting the public entrance examination of the Dublin University upon the list, as he had stated there was no such examination.

Sir DOMINIC CORRIGAN only wished to insure that candidates possessed a sufficient amount of knowledge to enable them to take advantage of their subsequent studies.

Dr. APJOHN explained that the education and examination of the licentiates was precisely the same as that exacted for the degree of M.B.

Dr. ANDREW WOOD inquired if the public entrance examination was completed before the student was allowed to commence his professional education for the M.B.

Dr. APJOHN said no doubt that was so.

Sir DOMINIC CORRIGAN said it was in fact completed on payment of the 5s.

Dr. ANDREW WOOD said the effect would be that a man would go up, pay 5s., and, without passing any examination at all, be allowed at once to commence attending lectures.

Dr. APJOHN said that would not enable him to take a degree, although he would be registered as a medical student.

Dr. HUDSON pointed out that the 5s. fee was paid under a very old Act of Parliament, the object of which was to matriculate persons who did not intend to enter at Trinity College, but to go on after attending the lectures either to Edinburgh or Glasgow; and, in fact, five-sixths of the students who matriculated had had nothing more to do with the College, but went on to other universities.

Sir DOMINIC CORRIGAN said the matriculation was intended only for students who wished to pursue the course of Arts, and the Council could not repeal the Act of Parliament. The real value of the matriculation, quite irrespective of the question of examination, was that it gave the authorities power over the students.

Dr. THOMSON understood Dr. Apjohn to say that no student could go on with his studies unless he was registered, but where was he registered? He certainly could not be registered for this matriculation, and the Council should have distinct information on the subject, whether registration took place on the mere matriculation, or what means were taken to ascertain if the students had passed a preliminary examination.

Dr. MACNAMARA said if a student, after passing his preliminary examination at Trinity College, wished to avail himself of the lectures, he paid the fee of 5s. under this old Act, which was simply dug up to be held *in terrorem* over the College of Surgeons; but the licentiateship had really fallen into abeyance, and he did not think there were five men on the list. He was instructed by the authorities of his College to press urgently upon the Council the necessity of ascertaining the manner in which the preliminary examinations of a number of bodies were conducted—for instance, those of the Irish College of Surgeons and the Apothecaries' Hall, and several medical bodies in London, Edinburgh, and Glasgow. It was necessary, if they desired to put medical education on a proper footing, that they should ascertain what those preliminary examinations were. They were perfectly satisfied with the matriculation examinations of the London University and a few others, but the fact was that the members of the Council knew very little about the matter.

The motion was then put and carried.

Dr. ANDREW WOOD moved—"That it be recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in—1. English Language, including grammar and composition.(a) 2. Arithmetic, including vulgar and decimal fractions. Algebra, including simple equations. 3. Geometry—first two books of Euclid. 4. Latin, including translation and grammar. And in one of the following optional subjects:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics."

Mr. TURNER said they should free the professional examinations as far as they could of the preliminary subjects.

Sir JAMES PAGET thought the best form in which to put it would be to say that those who passed in physical subjects in their preliminary examination should be excused from subsequent examination in them.

Professor ROLLESTON submitted that the Council should be careful what they were doing in this matter. The consequence of this stipulation would be that they would be requiring every school in the country to teach natural philosophy, comprising, among other things, an exhaustive knowledge of mechanics. Had they made up their minds that it was well to commence these branches of the training of the doctors of the future while attending school, or would they not rather consider it was of greater moment to get students through a certain amount of linguistic and mathematical training before coming up for their medical examination? Before throwing upon them the onus of learning zoology, botany, natural history, and so forth, certain alterations should be insisted on with regard to teaching the languages. For instance, what was

(a) The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1st. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition. 2nd. To write a portion of an English author to dictation. 3rd. To explain the grammatical construction of one or two sentences. 4th. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature. 5th. To give the derivation and definition of a few English words in common use.

Provided always, that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

meant by the Latin translation? Did it mean translation into or out of the Latin, for they were two very different things? They should really consider well before putting boys between sixteen and eighteen through natural science subjects. At that age they would have quite enough to do to get a satisfactory amount of linguistic and mathematical knowledge into boys' heads. Altogether, the subject was a very serious one.

Mr. Simon inquired whether natural philosophy was intended to comprise more than mechanics, hydrostatics, and pneumatics.

Dr. Andrew Wood would add to those subjects heat, light, and electricity.

Professor Rolleston pointed out that the latter would be included in physics. With regard to the Latin translation, he would give students the option of translating from English into Latin, or *vice versâ*.

Mr. Simon proposed that to the optional subjects should be added physics, heat, light, and electricity; and after those, organic compounds. He would propose—"That the Council bring under the notice of the licensing bodies the opinion previously expressed by the Council with regard to encouraging the natural sciences as a part of preliminary education, and that they use their influence with the examining bodies to remove the preliminary from the professional curriculum."

Dr. Andrew Wood thought that this proposal could hardly be accepted. If a young man began his medical studies at seventeen it might be utterly impossible for him to have embodied all those subjects before that period. Another objection was, that they should not be satisfied with such a knowledge of chemistry as would be thus obtained (for if a student had been examined in it once, he would not be examined again), because he could not at that early period be expected to know as much about chemistry as a medical man should know. When the Council discussed the subject before, they considered that chemistry should still keep its place in the first division of the medical subjects for examination. He doubted very much whether physics, heat, light, and electricity should be permitted to be optional. It would be taking a step backward to permit it, for every student should be acquainted with those subjects, and without them no man could profit as he should from his subsequent studies. Examination in English also should not be omitted.

Dr. Humphry said the very best examination the Council could adopt was that of the Oxford and Cambridge School Boards. There the English was tested by the knowledge shown incidentally in writing. The great point was that the medical student should be well educated in ordinary school knowledge; and if they travelled beyond that, they would be doing harm.

Sir Dominic Corrigan asked for an instance from any member of the Council in which it would be really necessary for a medical man to be able to translate from English into Latin.

The motion (seconded by Mr. Turner) was then partially carried as follows:—"That Recommendation 4 of the Report (p. 275), down to the words 'examined in,' be adopted, viz.:—'4. That it be recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in ——.'"

The President, explaining how these divisions came to be made, said the Council, in considering the matter originally, had desired to settle the question once for all as far as they were concerned, leaving them to be afterwards carried out by the different examining bodies. The matter had been then considered by the Council much more fully than could possibly be done now.

Dr. Andrew Wood then moved, seconded by Dr. Humphry—"That the first section of the Recommendation, with the accompanying foot-note, be adopted—viz., 'English language, including grammar and composition.'"

An amendment by Dr. Fleming, seconded by Dr. Haldane—"That the note stop at the words 'in common use,'"—was put and negatived.

The motion was then carried.

Moved by Dr. Andrew Wood, seconded by Dr. Humphry, and agreed to—"That Section 2 of Recommendation 4 be adopted, viz.: 'Arithmetic, including vulgar and decimal fractions.' 'Algebra, including simple equations.'" And "That Section 3 of Recommendation 4 be adopted, viz.: 'Geometry, first two books of Euclid.'"

Dr. Andrew Wood moved (seconded by Dr. Humphry)—"That Section 4 of Recommendation 4 be adopted, viz.: 'Latin, including translation and grammar.'"

Upon this resolution Professor Rolleston thought, with Matthew Arnold, that it was better only to require the treatment of these ancient languages as literatures, for the purpose of requiring translations in the concrete, than to demand knowledge of them as philologies to the extent of ability to think in them. He would therefore propose the alternative of a translation from some Latin author at sight, or from an English author into Latin.

Dr. Andrew Wood objected. If an alternative were to be given, why not leave the resolution as it was? At Edinburgh they gave the students the choice of two books—say Cæsar and Cicero,—and then an unprescribed passage from some other Latin author. If a sufficient number of marks were obtained for the first, a small deficiency in the unprescribed test would not be fatal.

Dr. Rolleston, while withdrawing his proposal, must still insist that the two powers of translation and, so to speak, origination in another language were very different, and not both to be expected from all students.

The motion was then carried.

Dr. Andrew Wood, in moving the next clause of the optional subjects (Greek, French, German, and Natural Philosophy, including mechanics, hydrostatics, and pneumatics), proposed to omit for the present Natural Philosophy.

Mr. Simon suggested the addition of "Physics, meaning thereby heat, light, and electricity; Chemistry, simple and inorganic compounds." He would not desire that either chemistry or physics should be optional, being quite indispensable portions of medical education, but merely that they might be passed earlier instead of at the later period of registration among the optional subjects.

After some remarks from Dr. Rolleston, it was moved by Dr. Andrew Wood, seconded by Dr. Humphry, and agreed to—"That the 'optional subjects' in the last paragraph of Recommendation 4 be adopted, with the substitution, in the fourth line, of the words 'meaning thereby' for the word 'including'; so that the paragraph shall be as follows:—'And in one of the following optional subjects:—Greek; French; German; Natural Philosophy, meaning thereby mechanics, hydrostatics, and pneumatics.'" And "That Recommendations 5 to 11 be as follows, viz.:—'5. That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject (Minutes, vol. xiv. page 142).' '6. That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council (Minutes, vol. xiv. page 142).'"

Dr. Andrew Wood said the next point was the registration of medical students.

Mr. Lister pointed out that the mere fact that a student had begun his education in 1876 would be no evidence at all that he was educated in 1880. It was necessary that students should be much more frequently registered, in order to insure that a student registered in one year had been really undergoing a course of medical study for the four following years.

The clauses were then gone through *seriatim*, and passed as follows:—

Registrations of Medical Students.

7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.

8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study.

9. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

In answer to Mr. Turner, Dr. Andrew Wood explained that the fifteen days' stipulation was inserted to prevent young men registering, it might be two or three months after entering on their studies.

The remaining clauses were then adopted as follows:—

10. The registration of medical students shall be placed under the charge of the Branch Registrars.

11. Each of the Branch Registrars shall keep a register of medical students according to the subjoined form:—

Form for the Registrations of Medical Students.

Date of registration.	Name.	Preliminary examination and date.	Place and date of commencement of medical study, as certified by a master, teacher, or official in a medical school or hospital.

12. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed forms, which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.

Form of Application for Registration as a Medical Student.

I hereby apply to be registered as a student in medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars:—

Name of applicant (to be written in words at length).		Preliminary examination.	Date of preliminary examination.	Place and date of commencement of medical study, as certified by a master, teacher, or official in a medical school or hospital.
Surname.	Christian name.			

Applicant's signature _____

Address _____

Date of application _____

Certificate of Commencement of Medical Study.

I hereby certify that Mr. _____

has commenced his study of medicine in* _____

Signature of Master, teacher, or official in a medical school or hospital _____

Place and date _____

The Registrar of the Branch Council for _____

* Insert name of school, or of hospital, or of place of apprenticeship, as case may be.

N.B.—The word teacher will be held to include any registered practitioner whose pupil the applicant may be at the time.

The certificate of examination must testify that the student has been examined in—1. English Language, including grammar and composition. 2. Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations. 3. Geometry: first two books of Euclid. 4. Latin, including translation and grammar. And in one of the following optional subjects:—Greek, French, German, Natural Philosophy, meaning thereby mechanics, hydrostatics, and pneumatics.

The above form of application, duly and legibly filled up, must be forwarded to the Registrar, post-free, and be accompanied by a certificate of the applicant's having passed a preliminary examination as required by the General Medical Council.

13. The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.

14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of medical students.

15. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration for reasons which shall appear to them satisfactory.

16. A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before December 31 in each year, to the Registrar of the General Medical Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.

17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

18. The Branch Councils are desired to take means to make these regulations known at the various medical schools.

It was then resolved, under the head of "Age for Licence to Practise, etc."—"19. That the age of twenty-one be the earliest age at which a candidate shall obtain a licence to practise, and that the age shall, in all instances, be duly certified. 20. That no licence be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student."

Dr. Andrew Wood then moved (seconded by Dr. Humphry)—"That Recommendation 21 be as follows, viz.:—"Chapter IV. Professional Education.—21. That the course of professional study required for a licence shall comprehend attendance during not less than four winter sessions, or three winter and two summer sessions, at a school recognised by any of the licensing bodies mentioned in Schedule (A) to the Medical Act."

Mr. Turner said this clause was hardly in accordance with the resolution they had passed upon Professor Humphry's Report, that a four years' course of study should be stipulated for with regard to every medical school, and he would therefore propose that four winter sessions and at least two summer sessions should be attended.

Mr. Teale agreed with a suggestion of Sir James Paget, that students should be allowed to pass six months under some good teacher before entering a hospital for their course of study.

Dr. Rolleston was adverse to the whole system of certificates. They should be careful, having to supply the nation with doctors, not to impose impossible restrictions which they could not enforce. The utmost they could do in this instance would be to insure that a man would be so much longer loafing about a hospital, whereas by fixing a time for the commencement of his studies with periodical examinations they could secure a definite result.

Sir Dominic Corrigan had in his own experience learned more practical surgery while acting as assistant to a surgeon than in any other way, and he could echo Dr. Rolleston's statement that young men frequently loafed about the hospitals learning absolutely nothing of their profession. He would therefore prefer to extend the period of teaching under recognised practitioners rather than that in hospitals.

Dr. Humphry said the question they were discussing was whether the whole four years of professional study were to be passed in hospital or partially under practitioners in the country, and he thought it would be much better to leave an option to the students to spend part of that time in the manner suggested either with practitioners or in the medical schools. He had himself gone through the process of acting as assistant to a practitioner in the country (it was true there was a hospital connected with the practice), and he could say that the information he then obtained was among the best he had ever gained, in addition to which he had a most valuable example of activity and of professional conduct shown him by his master—a very useful lesson to any young man. Country practitioners to his own knowledge took the greatest pains with their assistants, and prepared them in the best way for the instruction they were afterwards to receive. A student who had acted in that capacity would, on subsequently going to one of the medical schools, gain far more information than one who spent the whole of his four years loafing about and, as it was popularly called, "walking the hospitals."

Dr. Andrew Wood honestly confessed that when he first became a member of the Council he would not have allowed any period of service as an apprentice to be taken in lieu of education in a school, but he had since altered his opinion. Young men often passed their examinations even with honours without having the slightest practical knowledge of their profession. He had himself been an apprentice, and had gained thereby such valuable information that he believed that a certain portion of a student's four years spent in that way would be more profitable to him than by fixing him entirely within the walls of any university, hospital, or school. If a man gave sufficient evidence that he had learned his profession, that was enough for them.

Mr. Simon said he was only prepared to accept the principle of requiring by hard-and-fast lines that a certain amount of knowledge had been obtained in particular places as far as the confessed utility of examinations went. He was not prepared to say that examinations were so good a test that they could afford to dispense with evidence that a man had had other opportunities of education. The Council might well abstain from saying anything about summer sessions, and simply say that the course of professional study (the time had

already been fixed) required for obtaining a professional licence should be not where the student liked, but at some school, or under teachers recognised by the licensing bodies mentioned in Schedule (A), which would be really saying that the time must be spent where there were opportunities of learning those things which the student was professing to learn, so that he could show that he had either been at an anatomical school, or that he had had unusual opportunities of learning dissection. All they should require of the licensing bodies was that they should satisfy themselves that a man had really studied throughout his whole time.

Sir James Paget thought they should assume that men were capable of judging for themselves where to go in order to best learn their profession. There were large provinces of study which could only be pursued in private practice, such as the ordinary manner of attendance on the sick, and of writing prescriptions. Even with regard to anatomy, a good practitioner in the country would undertake to teach a student at least as much as he could learn in London. There were plenty of good men, who, if they were encouraged, would take pupils in that way and teach them; and everything was in favour of putting a student at once to the daily honest practice of his profession; but the student would be a remarkably fortunate man who in a London school got that. He could only say that he would certainly for the first year send a young man to be apprenticed in the country.

Mr. Turner, in moving an amendment (seconded by Mr. Lister)—"That the course of professional study required for a licence shall comprise attendance during not less than four winter and two summer sessions at a school recognised by any of the licensing bodies mentioned in Schedule (A) to the Medical Act,"—said he did not wish to be regarded as antagonistic to the apprenticeship system, for he attached great value to a limited apprenticeship; the five years formerly insisted on was much too long. Having been an apprentice for three years, he acknowledged with gratitude the great advantage it was to him, as he had been apprenticed to a master who took a great deal of trouble to teach him thoroughly. No doubt a limited apprenticeship might be advantageously superadded to the four years' study in the schools. The Council had already committed themselves to the view that four years must be passed in professional study, that the subjects for examination must be divided into two classes, and that the second division was not to be taken up until two years had elapsed after the first had been passed, thus leaving only one year to the student in a medical school in which to acquire his remaining subjects. They were, therefore, actually laying down regulations which would have the effect of limiting the time for medical studies—anatomy, physiology, chemistry, and materia medica—to one year, whereas there should be at least two years devoted to those subjects.

Mr. Turner's amendment was put and negatived.

The President then put the following amendment by Mr. Simon (seconded by Dr. Rolleston)—"That the whole required course of professional study shall be at schools or under teachers recognised by the licensing bodies which accept the certificates of the education."

Mr. Simon explained that he would leave the election perfectly free.

Sir Dominic Corrigan asked if it was intended to put the licensing bodies to the trouble of ascertaining the capability of the practitioners or teachers.

Dr. Aquilla Smith objected that no time was specified during which study should be pursued in the way proposed.

The amendment was then put and negatived.

Mr. Macnamara moved (seconded by Sir James Paget)—"That the course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act."

This amendment was carried, and, being put as a substantive motion, was agreed to.

The Council then resumed, and adjourned.

Eleventh Day—Tuesday, May 22.

After the Minutes of the previous meeting had been read and confirmed,

The Council was at once resolved into committee for the adjourned consideration of the Report of the Committee on Recommendations.

Dr. Andrew Wood introduced for consideration Recommendation No. 21, on Professional Education for 1876—"That the following are the subjects without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—Anatomy, Physiology, Chemistry, and heat, light, and electricity; Materia Medica, Pharmacy, and Therapeutics; Medicine and Clinical Medicine, Surgery and Clinical Surgery, Midwifery, and Forensic Medicine." It was now proposed that the first subject should be physics (meaning thereby heat, light, and electricity) and chemistry; then general anatomy, it had been recommended, should be struck out, because that was not treated as a separate subject in the schools, but was classified both with anatomy and physiology. The next would be anatomy, then physiology, and next materia medica and pharmacy. Those would be the subjects comprised in the first division of the examinations. It was then proposed—"That the second division shall include the following subjects, viz.:—(1) Morbid Anatomy and Pathology; (2) Medicine, with medical anatomy, clinical medicine, and therapeutics; (3) Surgery, with surgical anatomy and clinical surgery; (4) Midwifery; (5) Forensic Medicine." The object of putting in "Physics (meaning thereby heat, light, and electricity) and Chemistry" was that heat, light, and electricity had entirely dropped out of the lectures on chemistry, which had now become greatly expanded in other directions, and physiology could not be properly taught without them.

Dr. Rolleston proposed as an amendment that chemistry instead of physics should be placed in the foreground, otherwise the consequence would be that they would have special professors and special papers on physics. Putting chemistry in the background to physics would be too great a change. For the proper education of students natural philosophy should be included, and, in addition to physics, candidates should be required to know the elementary mechanics of solids and fluids—what was called at Cambridge "mechanics, hydrostatics, and pneumatics." He would propose that chemistry should include chemical physics.

Mr. Simon suggested the insertion of covering words, "if those subjects were not passed at the preliminary examinations."

Mr. Lister, on the proposal that the first subject should be "Chemistry, including chemical physics (meaning thereby heat, light, and electricity)," moved as an amendment that it should be "Physics (meaning thereby mechanics, hydrostatics, hydraulics,—if it were considered necessary to be introduced—pneumatics, heat, light, and electricity)." Unless the first set of those subjects were required for professional examination there would be no security that the students had really studied them. However slightly they might be taken up, he had been impressed over and over again at examinations with their absolute necessity. At Edinburgh they were looked upon rather as accomplishments than required as essentials, and the university degree might be taken without the possession of any knowledge of mechanics. Not being required it was not gained, and men had come up for their degrees who were entirely ignorant even of the principles of atmospheric pressure. With regard to the subjects of hydraulics and hydrostatics, it was, for instance, a well-known fact that the weight of the blood in the arteries exactly counterbalanced the weight of that in the veins, so that the circulation was not affected; but such facts as that were entirely unknown to most medical students, who might in the course of time, in the pursuit of their profession, have to speak *ex cathedrâ*, and would then certainly commit blunders, and be entirely confused in such matters. Of course if a man had gone through a course of art study in a university it would be a great hardship upon him to insist upon his undergoing it again, and therefore he thought the whole subject of physics might be left optional with students as a preliminary matter. His amendment, he should add, besides the other subjects comprised chemistry.

Dr. Andrew Wood suggested that that should be treated separately.

Dr. Storrar would insert the proviso, "unless previously passed in the preliminary examinations," as those subjects should be disposed of before the students commenced their strictly medical studies.

Mr. Lister said a sufficient examination in them should have been passed.

Dr. Rolleston hoped the Council would not recognise the principle of accepting the verdict of previous examinations, thus taking opinions at second-hand for the purpose of the professional examinations, but they should take care to satisfy themselves and give their own report to the public. They must remember that they were not legislating for class-men,

but for pass-men, and that on no subject could a man be actually plucked if he would only get up a certain necessary amount of knowledge on it. He trusted that the Council, in stipulating for an examination in chemistry, would not receive certificates from other boards which were simply a delusion and a snare from beginning to end for pass-men.

Dr. THOMSON considered they were rather anticipating the discussion which should occur on the next chapter, and that they ought at present to confine themselves to the subjects under consideration, in which students would be examined. Students should decidedly commence their studies with a previous knowledge of natural philosophy and physics, for they undoubtedly required both, and were not qualified to carry on their medical course in anatomy and physiology without such knowledge. The subjects alluded to by Mr. Lister formed part of the preliminary examination, and the Council must not confound one of the four optional subjects with one which they were exacting in all cases as a professional subject.

Mr. TEALE pointed out that if the Council had one function to discharge more than another, it was to give expression to the desire they had already enunciated of unloading the curriculum; but by accepting this proposal they would be to a great extent negativing that feeling.

Mr. SIMON, with reference to Dr. Rolleston's objection to receiving second-hand opinions from examining bodies, said by accepting their certificates they would be carrying that principle no farther than they did by recognising the certificates of those bodies in Latin and other subjects, so that in these matters they might well accept the verdict of non-medical examiners. Mr. Lister had already given illustrations of the advantage of chemical knowledge to medical students in their clinical examinations, and he could himself testify to the want of such knowledge for hygienic purposes. There was not a doctor now entering the profession who might not be called upon to give advice in questions of ventilation and drainage, and how could he pretend to do that without a knowledge of pneumatics and hydrostatics? A doctor might, for instance, become *ex officio* an officer of health, when such knowledge would be not only of the greatest value, but actually indispensable to him. A better form for the resolution to take would perhaps be—"Physics, meaning thereby [the several subjects mentioned]," and then to add "Chemistry, organic and inorganic," bracketing them together with a proviso, "so far as a sufficient examination thereon had not been already passed."

Dr. ANDREW WOOD said the Council should in this matter be guided by the advice of professed teachers of chemistry as to the difficulty of acquiring anything like a satisfactory knowledge of it. Already they had required, as optional subjects, mechanics, hydrostatics, and pneumatics, and if they now added these subjects, the result would be that students would altogether shunt the languages—Greek, French, and German.

Dr. ROLLESTON hoped these would not get into the preliminary examination as compulsory subjects.

Mr. LISTER thought the recommendation would work better with students if it were left to their option to take these subjects either in their preliminary or professional examinations. Really, instead of the curriculum being overloaded, students in their first year had but little to do, and chemistry and elementary anatomy would be all they had to work at. His amendment would now stand—"Natural philosophy, meaning thereby mechanics, hydrostatics, hydraulics, and pneumatics, with a proviso, unless the student had previously passed in them; and then chemistry and chemical physics, meaning thereby heat, light, and electricity."

Mr. SIMON proposed, as an addition to the optional subjects after natural philosophy—"Physics, meaning thereby heat, light, and electricity; and, secondly, chemistry and inorganic compounds."

Dr. ROLLESTON said experience was altogether in favour of making chemistry a part of the general education, and it should be made optional in the schools.

Dr. ANDREW WOOD said the object of Mr. Lister's motion was to make the study of mechanics, hydrostatics, and pneumatics imperative, and the only way to do so was to make them part of the professional examination. He would therefore give notice that if it was passed he would, on the bringing up of the Report, move that those subjects be made compulsory.

Dr. STORRAR, having conferred with many schoolmasters on the point, cautioned the Council against expecting to get any considerable amount of physical science work done in the schools. Here and there a boy might be found who would throw everything aside to work at chemistry; but those were exceptional cases, and they could not rely on obtaining from that source so advanced a knowledge of it as was required for the medical profession.

It was then moved by Mr. SIMON, seconded by Dr. ROLLESTON, and agreed to—"To add to 'optional subjects,' after 'natural philosophy,' in Recommendation 4, 'Physics, meaning thereby heat, light, and electricity.'"

Mr. LISTER suggested that two optional subjects should be given, one of which should be a language.

The PRESIDENT said it was proposed to add "Chemistry, elementary and inorganic compounds."

Dr. ROLLESTON hoped chemistry would be allowed to stand with the other five subjects for school study as preliminaries to the professional examinations.

Mr. TUENER said they should take into consideration not merely the subjects of education in view, but the large number of schools from which medical pupils came, and so looking at the matter, they would agree that it was impossible to exclude chemistry from the professional examinations. It was therefore unnecessary to be mentioned twice, and might be left for that portion of the curriculum where it would naturally take its place.

Dr. THOMSON was of opinion that the popular system of teaching chemistry was entirely inadequate for medical students, though it would be a great advantage to them if its elementary portion were separated from the rest, and they were allowed to study it before commencing their professional course. He could not agree with Mr. Simon that the study of organic chemistry should be left to be dealt with in the physiology instruction, and he thought the principles of combination and decomposition should be separately taught.

Dr. ROLLESTON warned the Council not to value too highly the preliminary examinations. They must after all get what was really wanted in the professional examinations.

Dr. HUMPHRY said they should not seek to guard the preliminary education as special to themselves, but should accept it as being common to all educated men. Their great object was to train lads for future work, to teach them to use their faculties, and to encourage them in those habits of industry and application which were in reality the true secret of one man's superiority over another. The great basal subjects no doubt were language, mathematics (including arithmetic), and so on, and perhaps they might hope a great subject of teaching in the future would be the simple properties of matter as they would be gathered from the study of natural philosophy and physics as the Council had defined them. Those ought all to be necessarily subjects of elementary education, and there was no reason why they should be placed among the optional subjects.

Sir WILLIAM GULL feared by making these stipulations they would force the men to cram too much, and what was being now proposed was in reality unattainable for any useful purpose.

It was then moved by Mr. SIMON, and seconded by Dr. ROLLESTON—"To add to 'optional subjects,' in Recommendation 4, 'elements of chemistry, including the laws of combination and decomposition.'"

The motion was negatived.

Moved by Mr. LISTER, seconded by Sir JAMES PAGET, and agreed to—"That the line introducing 'optional subjects,' in Recommendation 4, be as follows, viz.:—'And in either one or two of the following optional subjects.'"

The CHAIRMAN said, upon Dr. Wood's motion, that the first of the professional subjects should be chemistry, including chemical physics, meaning thereby heat, light, and electricity. Mr. Lister had moved as an amendment (seconded by Dr. Storrar)—"That the first subject be natural philosophy, meaning thereby mechanics, hydrostatics, hydraulics, and pneumatics."

Sir WILLIAM GULL said the Council had already decided, after a long discussion, that preliminary education, over which they had really no control, should remain free from their interference. They had, after several days' consideration, expressed the desirability of their treating that as a separate matter, and they were now, in the face of that, proposing to receive partial certificates.

Dr. ROLLESTON pointed out that the question now raised meant nothing more nor less than the addition of a ninth subject to the examinations, and one which would cause more rejections if it were even decently examined in than any other.

Neither would it be well that boys should be taught these matters as applied sciences during their school-days with the effect of separating the future doctor from the future lawyer, clergyman, or engineer; but by adding this further subject of mechanics they would be opening the door either to plucking the men on an enormous scale or corrupting their only safeguard by making the examination merely illusory.

Dr. Pitman reminded the Council that they were framing recommendations for the licensing bodies, and they could not fairly expect they would be accepted if only passed by narrow majorities, so that they were laying themselves open to having their recommendations passed by. Those recommendations should be so strong on the face of them that no opposition could be ventured to them, whereas the Council had now been occupied for two hours in discussing matters on which, if necessary at all, they should be unanimous.

The President then put the amendment moved by Mr. Lister, and seconded by Sir Dominic Corrigan—"That Section 1 of Recommendation 22 be as follows, viz.:—'Natural Philosophy, meaning thereby mechanics, hydrostatics, hydraulics, and pneumatics, unless an examination in those subjects shall have been previously passed.'"

The amendment was negatived.

Dr. Andrew Wood's motion, seconded by Dr. Rolleston—"That Section 1 of Recommendation 22 be as follows, viz.:—'(1) Chemistry, including chemical physics, meaning thereby heat, light, and electricity,'"—was then put to the vote and carried.

The Council then resumed, and balloted for the Executive Committee, when the following members were found to be elected:—Sir James Paget, Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, Dr. Quain, and Mr. Simon.

The Council was then again resolved into committee for the consideration of the Report of the Committee on Recommendations, when it was moved by Dr. Andrew Wood, seconded by Dr. Rolleston, and carried—"That Section 2 of Recommendation 22 be as follows, viz.:—'(2) Anatomy.'"

An amendment by Mr. Simon to add the definition "topographical and structural" found no seconder, and Mr. Simon protested that the word "anatomy" above was quite indefinite and would hereafter give rise to all kinds of discussion.

Moved by Dr. Andrew Wood, seconded by Dr. Rolleston, and agreed to—"That Section 3 of Recommendation 22 be as follows, viz.:—'(3) Physiology.'"

Moved by Dr. Andrew Wood, seconded by Dr. Humphry, and agreed to—"That Section 4 of Recommendation 22 be as follows, viz.:—'(4) Materia Medica and Pharmacy.'"

Dr. Andrew Wood then moved—"That Section 5 be 'Morbid Anatomy'"; to which he was willing to add "pathology."

Mr. Simon proposed that it should stand "pathology" alone.

Sir William Gull objected that there was no real distinction between morbid anatomy and pathology; and, indeed, it was impossible to separate the teaching of those subjects in the schools. Even if they could be separated it would not be desirable to do so, they being generally taught, in fact, by the same person. He would agree with Mr. Simon, however, in saying that morbid anatomy should not exclude morbid chemistry.

Mr. Simon would propose "Pathology, including the anatomy and chemistry of disease."

Dr. Thomson fully admitted the importance of pathological anatomy, which they knew more about, and which it was more easy to teach than many other subjects; but he greatly demurred to the statement that there was no part of pathological which could be distinguished from morbid anatomy. He would propose in substitution "Pathological Anatomy, including morbid anatomy."

Dr. Andrew Wood said their only object was to let the students know they must study morbid anatomy.

Sir William Gull inquired what was known about the mere pathology of many disases—for instance, malaria and diabetes. Morbid anatomy was the principal basis of pathology.

Dr. Haldane quite agreed with Sir William Gull, and Dr. Quain supported the original motion—"morbid anatomy" standing alone.

Mr. Simon said it had been proposed that "histology" should be used in order to cover physiology.

Moved by Dr. Andrew Wood, and seconded by Dr. Humphry—"That Section 5 of Recommendation 22 be as follows, viz.:—'(5) Morbid Anatomy.'"

The motion was negatived.

Mr. Simon proposed that the resolution should stand "pathology." He had no objection to add the words "including morbid anatomy," though he thought it would be better without them.

Sir William Gull repeated that there was no such thing as pathology alone; it was only a branch of physiology, the study of which must necessarily include it.

Moved by Mr. Simon, seconded by Dr. Andrew Wood, and agreed to—"That Section 5 of Recommendation 22 be as follows, viz.:—'(5) Pathology, including morbid anatomy.'"

Moved by Dr. Andrew Wood, seconded by Dr. Rolleston—"That Section 6 of Recommendation 22 be as follows, viz:—'(6) Medicine, with medical anatomy, clinical medicine, and therapeutics.'"

Mr. Simon objected to tacking therapeutics on to medicine in opposition to surgery in this way.

Dr. Andrew Wood explained as his idea of general therapeutics, that it accompanied medicine, whether taught systematically or generally. Materia medica, pharmacy, and therapeutics were taught together at an early period of medical study, within the student's first two years, at a time when he knew nothing whatever about diseases; and requisitions had been sent in from different places desiring the division of the subjects, so as to bring the materia medica and pharmacy into the earlier part of the teaching, to form a basis, reserving therapeutics for the later period. Sir Robert Christison had himself suggested the same thing. However, he had no objection to put medicine first, surgery next, and then therapeutics; but they ought not to put the cart before the horse.

Mr. Simon asked if the purpose would not be sufficiently answered by omitting "therapeutics" here. It was unnecessary to put it under a separate head.

Mr. Turner said it must come in somewhere.

Dr. Rolleston pointed out that by multiplying these headings they were at the same time multiplying the number of lecturers and lecturers' fees, while it would be much better if they were all swept away.

An amendment was moved by Mr. Simon, and seconded by Dr. Storrar—"That Section 6 be 'Medicine, with medical anatomy and clinical medicine.'"

The amendment was negatived.

The original motion was then put to the vote and carried.

To the next division, "Surgery, with surgical anatomy and clinical surgery," Mr. Simon proposed the addition of "surgical therapeutics."

Sir William Gull urged that the principles of therapeutics would be taught to students in their medical course. Mr. Simon would lead the world to believe there were special therapeutics for the surgeon.

Dr. Thomson was of opinion they should confine themselves to the subjects of study, and not go so much into the details of examinations. Anatomy surely included both medical and surgical anatomy. With Mr. Simon he was quite of opinion that physiology included all that belonged to physiology, and for the simple purpose of laying down subjects of study anatomy might equally be taken to include every part of anatomy.

Mr. Macnamara said there certainly was such a subject as surgical therapeutics, for he had both taught and lectured on it. He would propose putting it under a separate head to cover everything.

Sir James Paget agreed with Dr. Pitman. They were not now deciding finally once for all what was to be the course of education in the schools, but their recommendations would be submitted to the different bodies, and canvassed, and agreed to or not by them as the case might be. Those gentlemen would be quite as capable of deciding as the Council, and they could not be too general in the terms they used. What they might think best to recommend should be conveyed in as wide and general terms as possible for the consideration of the different bodies.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Section 7 of Recommendation 22 be as follows, viz.:—'(7) Surgery, with surgical anatomy and clinical surgery.'"

Moved by Mr. Simon, seconded by Dr. Rolleston—"That 'surgical therapeutics' be added to the foregoing resolution."

The motion was negatived.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That No. 8 of Recommendation 22 be as follows, viz.:—'(8) Midwifery.'"

Mr. Simon again protested against the use of capricious

titles, which would be understood by nobody. He would also have been glad of an interpretation of the next resolution.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That No. 9 of Recommendation 22 be as follows, viz.:—'(9) Forensic Medicine.'" "Chemistry" should include a knowledge of the principles of chemistry, and of those details of the science which bear on the study of medicine.

The intervening Recommendations were allowed to stand as at present.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendations 23 to 35 be as follows, viz.:—

23. That the Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.

24. That a certificate be required by each licensing body from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph; and that he is thoroughly informed in every necessary part of the subject. (Minutes of General Medical Council for July 2, 1868, vol. vi., p. 233.)

25. That such a certificate should only be received by any licensing body from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (perhaps eight or ten on an average weekly) as may be found, after due inquiry in the first instance, confirmed by authentic returns, or inspection from time to time, to be sufficient for this purpose at each place. (Minutes of General Council for July 2, 1868, vol. vi., p. 236.)

Mr. Turner thought it should be explained what was meant by "recognised vaccine stations"; but probably Dr. Pitman, who so well understood this subject, would draft a form of words to meet that objection, so that the Committee might proceed.

Chapter V.—Professional Examination.

26. That it is desirable that the different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the Register shall have been tested in all the subjects of professional education which the Council has determined to be essential, viz.:—(1) Chemistry, including chemical physics, meaning thereby heat, light, and electricity; (2) Anatomy; (3) Physiology; (4) Materia Medica and Pharmacy; (5) Pathology, including morbid anatomy; (6) Medicine, with medical anatomy, clinical medicine, and therapeutics; (7) Surgery, with surgical anatomy and clinical surgery; (8) Midwifery; (9) Forensic Medicine. "Chemistry" should include a knowledge of the principles of chemistry, and those details of science which bear on the study of medicine.

27. That there be in future three professional examinations.

28. That the professional examinations be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. That the examinations, and the subjects included in each, be such, and in such order, as may insure, as far as possible, a due continuity and sequence of study. (Minutes, vol. xiv., p. 143.)

29. That it is desirable that an examination in the earlier subjects of professional study should *take place* before the end of the first year of professional study. (Minutes, vol. xiv., p. 143.)

30. That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.

31. That not less than two examiners shall take part in every oral and clinical examination.

32. That the questions to be answered in writing should be submitted to the whole body of examiners for consideration, and (if desirable) revision, before being proposed to the candidates.

33. That the written answers should be submitted to more than one of the examiners.

Upon the next motion—"That excellence in one or more subjects should not be allowed to compensate for failure in others,"—

Mr. Listee (without moving an amendment) said, even if students were released from botany, zoology, and so on, chemistry should be insisted upon, for nothing could be done without it. In the present condition of medical educational reform it might be hoped they had got beyond any such question; still, if candidates showed no evidence of preliminary instruction in that subject at all, it would be scarcely right to pass them.

Mr. Macnamara suggested that a man might come up and answer so well in chemistry that it would be impossible to send him back and yet fail in his anatomy; and he should not be thrown back without giving him credit for the studies in which he had excelled. On the other hand, the exhibition of a thorough knowledge in one of the subjects should not be held sufficient to pass him, and he should be made to pass a proper examination in the subjects he had failed in. The point required a little elucidation.

Dr. Andrew Wood explained that the resolution meant this:—Supposing a man were examined in chemistry, anatomy, and physiology, with say a minimum of fifty marks on each subject, and he got fifty in anatomy, sixty or seventy in physiology, and but twenty in chemistry, he would not be passed then and there, in consequence of the excellence of his knowledge in the first two subjects, in the face of his utter failure in the other. It was not right to tell a man he was plucked for one subject only, and to let him come up in that again, but if he was plucked at all he must again pass the whole examination.

Dr. Rolleston said the examinations were such that many of them could not be worked up for at one time, and if students were not allowed to come up with a minimum knowledge of them, they would have to be coached by grinders in special subjects, missing that training which would be involved in their taking up multifarious studies. In the case of the body he represented, men were plucked for failure in botany, in which examination had to be made under their statutes. These examinations were not a bit too hard for men who would have to undertake the responsibilities and difficulties of medical life.

The motion was then carried, and also—"That the professional examinations be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified. That returns from the licensing bodies in Schedule (A) be made annually, on January 1, and in the subjoined form, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively; and that the Registrar forward a sufficient number of forms, with a notice for their being returned in due time."

Table of Return of Professional Examinations and their Results.

Licensing bodies.	Degrees and diplomas.	No. of examinations to be passed.	1st ex.		2nd ex.		Final ex.	
			No. rejected.	No. passed.	No. rejected.	No. passed.	No. rejected.	No. passed.

It was then moved by Dr. Andrew Wood, and seconded by Sir James Paget—"That Recommendation 37 be as follows, viz.:—'That it is not desirable that any university of the United Kingdom should confer any degree in Medicine or surgery, whether that of Bachelor, Doctor, or Master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed the examinations equivalent to those required for a degree in Arts.'"

After a few remarks by Dr. Thomson, Mr. Simon, and Sir William Gull,

On the motion of Dr. Apjohn, the further consideration of this Recommendation was adjourned till to-morrow.

The Council then resumed, and adjourned.

Twelfth Day—Wednesday, May 23.

After the Minutes of the previous meeting had been read and confirmed, the Council went into committee on the adjourned consideration of the Report of the Committee on Recommendations.

Dr. Apjohn, in seconding Recommendation 38 (moved by Dr. Wood, as Chairman of the Committee)—"That it is not desirable that any university of the United Kingdom should confer any degree in Medicine or Surgery, whether that of Bachelor, Doctor, or Master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed the examinations equivalent to those required for a degree in Arts,"—said some years ago the practice of conferring full medical degrees upon students who had no education in arts was exceedingly prevalent. It was a scandalous practice, and in Ireland it was notorious that a large number of students were passed in that way, and in time obtained their full medical degrees. This had been now prevented by the action of the Medical Council,

and it was one of their best works. Indeed, he considered that the conferring of degrees by universities upon men who had not graduated in arts was illegal, and it was very probable their charters did not give them power to do so. Possibly some of the universities in Scotland possessed that power, and, as he must express great esteem and admiration for many of them, especially the University of Edinburgh, he should be glad to know which of them possessed the power. Clearly the universities could not legally confer degrees, except on the conditions imposed by their charters. He was strongly in favour of the resolution, considering it absolutely necessary in order to sustain the reputation of the medical profession.

Mr. Lister thought it would be very unwise for the Council to issue recommendations which had no chance of being carried into effect. There was no probability of this one being acted on in the Scotch universities, for instance. They would not be at all likely to insist upon their students graduating in arts, or to demand anything corresponding to it. The proposition, in fact, was altogether *ultra vires* the function of the Medical Council, which was simply now determining what the preliminary qualification of candidates should be; and to go beyond that, and insist upon universities, because they professed to give a higher degree or title to a man, also doing something more than would insure his proficiency being properly tested, would be out of their province. He should therefore vote against the resolution.

Dr. Aquilla Smith was also adverse to it on similar grounds. He had often expressed the opinion that no degree should be conferred by any university without stipulating for a good education in arts, but the Council would be only bringing itself into discredit by promulgating recommendations which were not likely to be complied with.

Dr. Storrar said the question had been discussed at length in the early history of the Council, and he might occupy half an hour in going through the different views then expressed on the subject, which had resulted in their arriving at the determination to settle a case for the opinion of counsel upon it. That case and opinion were recorded in the second volume of the Minutes, p. 237. Both were rather long, but they had effectually settled the whole question by deciding that the Council had no right whatever to express any opinion except upon the simple competency of a man to practise. It was the most conclusive opinion that could be given, and it was signed by Sir Roundell Palmer (the present Lord Selborne), Mr. Selwyn, and Mr. Vaughan Hawkins. In the case of the University of London, which the speaker represented, they had never found it desirable to demand a degree in arts in any way from candidates, though they had found it necessary to require some qualification in arts and sciences, so that their degree was to that extent a compound of the arts and science degree. Probably the two examinations taken together would not be found to be below the arts degree of other Universities.

Sir Dominic Corrigan objected that the resolution gave no information about the authority intended to be prescribed; it simply pointed to an examination which should be equivalent to some other examination. What would be the authority to decide in the case of a student coming from Edinburgh or Glasgow, or anywhere else, whether the examination he had passed was equivalent to those required for a degree in arts or not? There was no provision made for that, and the resolution was therefore unintelligible. Dr. Apjohn had alluded to the scandal of men from Ireland crossing the water and taking a Scotch degree, which they brought back to Ireland; and he thought it was a great scandal he should have done so. He could instance the cases of Dr. Stokes and himself, who had both obtained their degrees in Scotland; and he would ask Dr. Apjohn whether that had been a scandal to the Irish people or not.

Mr. Simon, adverting to the *ultra vires* suggestion, said their legal *vis* was only exercised under the authority of the Privy Council. No doubt whenever they issued recommendations which could not be actually enforced they were in strictness acting *ultra vires;* and a good deal of what they had been lately doing was open to that observation; but in point of the moral force which it was their intention to exercise, they had not gone in principle one inch beyond their authority. To what purposes should the Council address itself? Surely not merely to influencing the lower qualifications. If this were a question of a coercive qualification, the Council might very properly restrict itself to its duty of saying who should be allowed to enter the profession; but, as regarded its persuasive power, it was justified in doing its utmost to raise the status of the profession, alike with regard to the mass, so to speak, and to the aristocracy. If the object aimed at had been to let no higher qualification be given to young men than to the extent to which they might show evidence, not merely of professional promise, but of higher general and scientific education, the recommendation would have been an extremely good one, because the higher qualifications should no doubt be given to men of a certain age as the reward of work already done, and then they need not trouble themselves about details of Greek, astronomy, and so on; or, if given to younger men, it should be on the distinct footing of their attainments at that time, showing that they were men of promise, and the sort of men that the licensing bodies who conferred distinction on them would consider proper to be made teachers. As it stood, the resolution was a mistake. It would not be advisable to omit altogether from their plan that they desired to promote a higher standard of education in those whom they might expect to become teachers in the medical profession. It would not do to apply that principle only to universities, but it must apply to all the bodies if it were to be recognised at all. He would therefore move the following amendment to the resolution (seconded by Dr. Pyle):—"That, in the opinion of the Council, it would be desirable, as a general rule, that none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of higher general (as well as higher professional) education, unless such persons be of at least twenty years' standing in the profession."

Mr. Macnamara said they were not proposing a new resolution, but one which had been adopted for years past, and to expunge it now from their recommendations would be a retrograde step. He hoped the Council would pause before removing this well-considered resolution.

Dr. Andrew Wood had heard a great deal about their *vires*, but by the *virus* of the Council they had been enabled to so inoculate the various bodies with the desire to improve and raise the standard of their educational tests, that they had never been obliged to go to the Privy Council for power to use their *vires*, and it would be a very retrogressive step now to say that no higher education should be required to obtain a degree than that necessary in order to get a licence out-of-doors. There was no other way by which degrees and doctors could be maintained in their proper position, and if the universities could be induced by them to raise their standard of education they would have done a good work.

Sir Dominic Corrigan thought Dr. Andrew Wood had been unfortunate in his contrast of the words *virus* and *vires*, and equally unhappy in applying the *virus* by saying that the Council had inoculated the licensing bodies with it, for he had immediately contradicted himself by saying they had not the power.

Dr. Andrew Wood had said they had never been called on to exercise it.

Sir Dominic Corrigan said the Council could not exercise a power it did not possess. Three or four years ago he had challenged Dr. Andrew Wood—as he now did again, probably for the last time—to come forward and put a notice on the Privy Council books for the purpose of exercising this supposed power.

Mr. Simon's amendment was then temporarily withdrawn.

Sir William Gull moved as an amendment to the original resolution (seconded by Dr. Rolleston)—"That Recommendation 38 be as follows:—'That it is not desirable that any university of the United Kingdom should confer any degree in Medicine or Surgery, whether that of Bachelor, Doctor, or Master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed, after due course of education, examinations such as are *bonâ fide* academically equivalent to those required for a degree in Arts.'" The object of this was to lay down that no man deserved a degree who could not earn the title M.A. after his name.

Dr. Rolleston said one of their great objects was to prevent the sale of degrees as in Germany; he did not wish to be understood as at all referring either to Scotland or Ireland. In order to raise the standard of pass-men, it was necessary they should get hold of class-men such as were recognised by the fellowships of the colleges. A regulation of this kind would also do much to prevent the jealousy which was sometimes created by a competent practitioner being suddenly eclipsed in his district by the arrival of some new-comer who was

enabled to put up a brass plate (symbolical possibly of the brass within), parading his M.D.

Mr. LISTER said if the object was, as stated by Mr. Rolleston, to prevent the sale of degrees, the resolution was quite unnecessary, for no bogus degrees were now sold by licensing bodies—at least, so far as Scotland was concerned; and if its object was, as stated by Sir William Gull, to secure a higher standard of education for the degrees, then it was equally unnecessary, for it was well known that, especially since the Licensing Acts were passed, the Scotch universities had insisted upon examinations in mechanics, botany, and zoology—subjects which were not required by the licensing boards.

Sir DOMINIC CORRIGAN said what was before unintelligible as proposed by Dr. Apjohn had become doubly so as amended by Sir William Gull. What "*bonâ fide* academically equivalent" meant he did not know. He was reminded by Dr. Rolleston's illustration of the M.D. coming with his degree and cutting out the established practitioner, of an incident which happened in a town in Ireland where he was at one time practising. Two rival shoemakers, Denny O'Gorman and Denny McGuire, were also practising there at the same time. The road to Paris was then open, and McGuire went over. On his return, like Dr. Rolleston's M.D., he put up a big brass plate with "Denny McGuire, from Paris," on it; but the other, not to be beaten, put a piece of plain board over his shop, and painted on it "Denny O'Gorman, that never was in Paris." (Laughter.) Of course, Denny O'Gorman got the whole custom of the place, the brass plate notwithstanding; and he thought the M.D.'s brass plate would not be more successful. The public did not pay much attention to where a man got his degree.

Sir WILLIAM GULL's amendment was then put and carried.

Sir DOMINIC CORRIGAN required that the names and numbers of those who voted for and against the motion, and of those who declined to vote, be taken down.

The result was as follows:—*Majority* (9)—Dr. Rolleston, Dr. Pyle, Dr. Haldane, Dr. Andrew Wood, Dr. Fleming, Mr. Macnamara, Dr. Apjohn, Sir W. Gull, Dr. Hudson. *Minority* (7)—Dr. Humphry, Dr. Storrar, Dr. Thomson, Dr. Smith, Dr. Leet, Sir Dominic Corrigan, Mr. Lister. *Did not vote* (8)—The President, Dr. Pitman, Sir James Paget, Mr. Bradford, Mr. Turner, Dr. Quain, Mr. Simon, Mr. Teale.

The amendment was then put as a substantive motion and carried.

Mr. SIMON's resolution, which had been previously withdrawn, was then proposed as a rider to the foregoing recommendation.

Mr. TURNER objected to it as a rider; and

Sir DOMINIC CORRIGAN asked whether it had not been withdrawn an hour previously.

The PRESIDENT said it was understood that Mr. Simon should be allowed the opportunity of proposing it again.

Sir JAMES PAGET, in objecting to Mr. Simon's proposition, said the difference between the preliminary examination for the membership of the College of Surgeons, and that for a fellowship, was not greater than an average lad could compass in twelve months, or a sharp one in three; in fact, six months would be quite sufficient for learning all the Greek, mechanics, and chemistry required as additional subjects after passing the examination for membership. An additional year, at all events, of ordinary school-work would constitute the whole difference between passing the preliminary examination for membership, and that for a fellowship; and they were now proposing to put against that year's schooling, twenty years' practice by a man in his profession. Though he had as great respect for art teaching as for any other real knowledge, he thought that the acquirement of so slight a difference as might be called for for this purpose—a little more Greek, a little more physics, and a little more chemistry—should not be rewarded by excusing a man from two years of professional study, much less of twenty.

Dr. HUMPHRY said their great object should be to promote higher education not only for students, but for members of the profession, and they should hold out every encouragement to those who possessed the lower honours to mount to the higher; while this proposal would put an impassable barrier in their way. Every member of the College of Surgeons should have the road left free to him to pass on to the higher grades without any further obstacle as to preliminary knowledge. It would be a most unfortunate thing to place this in the way; for although that higher preliminary education was desirable in the earlier period of a man's life, and before he commenced his professional education, yet it was valueless, and worse than valueless, if imposed on him at a later period. He hoped the Council would pause before throwing what would be in many instances an impassable barrier in the way of a large number of the members of their profession.

Sir WILLIAM GULL was of opinion that whatever qualifications figured after a man's name should have a real value, and be evidence that the man possessed higher attainments. Instead of saying that because a man had been simply in practice for twenty years he should be permitted to become a fellow, it should rather be a reason for bowling him out of his fellowship.

Sir WILLIAM GULL's amendment on Mr. Simon's motion was then put as a substantive motion and carried, as follows (seconded by Dr. ROLLESTON):—"That Recommendation 39 be as follows:—'That, in the opinion of the Council, it would be desirable, as a general rule, that none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of higher professional attainments.'"

Dr. ANDREW WOOD proposed—"That it is desirable that in the examination on the subjects of physics, chemistry, and materia medica, the licensing bodies should limit and define by schedule the area of examination."

Mr. SIMON suggested that physiology should be added.

Mr. TEALE would insert after "materia medica" the words, "and on other subjects as far as may be practicable."

Dr. ANDREW WOOD explained that the object was to relieve the students from unnecessary studies. There were, for example so many books on materia medica that a student who did not know better frequently tried to master a great many useless things, and on that account the body he represented had so far restricted the area of examination."

Sir JAMES PAGET said that men might be safely trusted to learn a great many of the subjects after they had obtained their diplomas, and he would prefer not to stipulate that a man should learn all that was in the great books on physiology, for instance, for it would be simply impossible that he could do so. If no limitation were accorded, most conscientious students would wade through the whole subject, and thereby throw away a good deal of valuable time. Physiology, therefore, was one of the subjects which should be most exactly defined.

Mr. SIMON proposed that no subject should be particularised in the clause, but that it should be left to the licensing bodies to limit and define them by schedule.

Mr. TURNER said that Recommendation 32, already passed, related to the subject. If one examiner was exceeding the proper limits his brother examiners would point it out to him, so that they had already provided a safeguard. It was very inexpedient indeed that in conducting examinations students should be asked questions on matters still in doubt, or that purely theoretical questions should be put to students in ordinary pass examinations, although in honours examinations questions of that kind were necessary in order to draw out men's higher capabilities. That, in fact, was the distinction between the two classes of examinations, and for the former, beyond matters of fact and practice connected with his profession, knowledge which might be characterised by the common expression—"the current matters of the day"—would be sufficient.

It was then moved by Dr. ANDREW WOOD, and seconded by Sir JAMES PAGET—"That Recommendation 40 be as follows:—'That it be recommended that, in the examination on the subjects of chemistry, chemical physics, physiology, and materia medica, and, so far as practicable, other subjects of examination, the licensing bodies should limit and define by schedule the extent of examination.'"

Amendment moved by Dr. THOMSON, and seconded by Dr. HALDANE—"That Recommendation 40 be as follows:—'That it is desirable that, in the examinations on several of the subjects of the curriculum—such, for example, as chemistry, including chemical physics and materia medica—the licensing bodies should limit and define by schedule the extent of examination.'"

The amendment was carried, and was then put as a substantive motion; whereupon the following amendment was moved by Mr. SIMON, and seconded by Sir JAMES PAGET—"That it is desirable that, in the examinations on several of the subjects of the curriculum—such, for example, as chemistry, including chemical physics, *physiology*, and materia medica—the licensing bodies should limit and define by schedule the extent of examination."

This amendment was carried, and, being put as a substantive motion, was agreed to.

Moved by Dr. Andrew Wood, seconded by Dr. Humphry, and agreed to—"That Recommendations 41 and 42 be as follows:—'41. That it be recommended that in no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated (Minutes of General Council for July 16, 1874, vol. xi., p. 60).' '42. That it is desirable that observations with the microscope should form part of the examination of candidates for a licence (Minutes of General Council for July 16, 1874, vol. xi., p. 60).'"

Dr. Andrew Wood then proposed—"That every candidate for the final professional examination be required to give evidence that he has had practical experience in charge of patients, during six months, in hospital or elsewhere, under the supervision of a competent medical practitioner," with the addition of the word "dispensary," which had been considered desirable by the Committee for the convenience of students where no hospital was accessible, and to provide for cases of apprenticeship.

Sir Dominic Corrigan asked who was to define whether the practitioners were competent. This resolution would impose on students what must in some cases be an impossibility; because in Dublin students were not allowed to take charge of hospital patients, and if anyone in charge of a dispensary allowed his place to be filled by a substitute he would certainly be dismissed. In other cases, too, payments were required which young men might not be in a position to make. Then "elsewhere" was a most extraordinary place.

Dr. Andrew Wood said it was meant for the convenience of apprentices.

Sir Dominic Corrigan moved, and Dr. Aquilla Smith seconded, that it was inexpedient to pass the resolution.

Mr. Macnamara, from his own experience, confirmed what Sir Dominic Corrigan had said. A man for so acting would be dismissed under a sealed order, which would prevent his holding a public appointment in future.

Sir James Paget proposed that a certificate should be accepted that a student had had the necessary experience as an assistant.

Sir Dominic Corrigan said there would be no difficulty in a student getting such a certificate from some unprincipled practitioner.

Mr. Macnamara suggested that "as dresser in a hospital" would be an improvement.

Dr. Aquilla Smith objected to "assistant" as being an encouragement to the unqualified class, which was becoming so large in England.

Sir William Gull thought the resolution as now proposed would be very dangerous, as they would be practically putting unqualified men in charge of patients. A man should be, no doubt, well acquainted with his profession before getting his licence to practise, but at the same time they must be careful not to give the public ground for saying that they were giving over patients to the charge of young men before they were fitted to try their hands on them.

Mr. Simon suggested "under proper direction" instead of "supervision," which would still make the student instrumental, but deprive him of responsible charge.

Dr. Rolleston protested against "in charge" as leading to serious difficulties. All they wanted to insure was professional relations with patients under treatment.

Mr. Simon objected to making students mere lookers-on.

Dr. Andrew Wood moved, and Mr. Turner seconded—"That Recommendation 43 be as follows:—'That it be recommended that candidates for the final professional examination be required to give evidence that they have had opportunities of practical study with care of patients as pupil, assistant, clinical clerk, or dresser in hospital, dispensary, or elsewhere.'"

Sir Dominic Corrigan moved, and Dr. Aquilla Smith seconded, an amendment—"That it is inexpedient that this motion should be adopted."

This amendment was negatived.

Sir William Gull moved, and Dr. Rolleston seconded, the second amendment—"That Recommendation 43 be as follows:—'That candidates for the final professional examination be required to give evidence of practical experience in the treatment of diseases in one or other of the following capacities—of assistant, clinical assistant, or dresser.'"

This amendment was negatived.

The original motion was then put to the vote and carried.

Dr. Andrew Wood moved, and Sir James Paget seconded—"That Recommendation 44 be as follows:—'That it is desirable that, in examinations in anatomy, candidates should understand that they may be called upon to perform actual dissections, and that candidates in examinations in surgery should understand that they may be called upon to perform one or more operations on the dead subject. (Minutes of General Council for June 22, 1875, vol. xii., page 54).'"

Mr. Macnamara thought this a very lukewarm suggestion to come from the Council; it was perfectly absurd to recommend the performance of operations in surgery by men who were to become surgeons. Dissection and examination on the dead subject were insisted on in Ireland from every candidate, and they found no difficulty about it. If it was necessary for candidates to be so tested they should be told so plainly, and not given to understand it.

Mr. Simon would introduce "as far as practicable."

Dr. Rolleston thought sufficient dead bodies could not be obtained for dissection in every case, and they must not exact impossibilities. A good examiner could always find out, without putting a candidate to the actual test, whether he was a competent surgeon or not, and it was inadvisable to put a yoke on the licensing bodies which they would be unable to bear.

Sir William Gull quite agreed with Mr. Macnamara.

Sir Dominic Corrigan could not see why that which was always done in Ireland could not be done in England and Scotland. As to Dr. Rolleston's objection that enough dead bodies could not be obtained, he would ask how many examinations could be conducted on a single dead body. Again, the University of Oxford had turned out just one medical graduate last year. Surely they could have got enough dead bodies to examine him on!

Dr. Rolleston said Sir Dominic Corrigan might multiply his one by eleven.

Sir Dominic Corrigan was quoting from the Report. Clearly, Oxford University could not compare its experience with that of the three great bodies in Ireland.

After a few remarks from Dr. Rolleston,

Dr. Thomson objected to any change. Candidates were often so agitated at these times that they could not be asked to perform operations. It would be better to insure that some amount of dissection had been practised in the course of study. Personally, whenever he suspected that the dissection test was necessary he applied it; and that could always be done.

Amendment, moved by Mr. Macnamara, and seconded by Sir William Gull—"That Recommendation 44 be as follows:—'That it is desirable that, in examinations in anatomy, candidates should be called upon to perform actual dissections, and that candidates in examinations in surgery should be called upon to perform one or more operations on the dead subject. (Minutes of General Council for June 22, 1875, vol. xii., p. 54.)'"

The amendment was negatived.

The original motion was then put to the vote and carried.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That the Council now resume."

Dr. Andrew Wood thereupon brought up the complete Recommendations of the General Medical Council on Education and Examination, as agreed to by the Council in committee.

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendations 1 to 3 be adopted."

Moved by Dr. Storrar, seconded by Mr. Turner, and agreed to—"That No. 3 of Recommendation 4 be as follows:—'Geometry, first two books of Euclid, or the subjects thereof.'"

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That the Standing Orders be suspended till the consideration of the whole Report has been completed."

Moved by Dr. Andrew Wood, and seconded by Sir James Paget—"That Recommendation 4 be adopted."

Mr. Lister proposed that elementary mechanics of solids and fluids be made compulsory; but be followed by a notice that an elementary knowledge of the subjects only would be required. That would be no hardship on the students, for it would be better for them even to "cram" (though that was always objectionable) than to be entirely ignorant of them. Dr. Rolleston had alluded to the German universities, and he believed they all exacted that knowledge. He would move as

an amendment (which was seconded by Mr. Simon)—"That, in Recommendation 4, 'Natural Philosophy, meaning thereby mechanics, hydrostatics, and pneumatics,' be transferred from the optional to the necessary subjects, and that this subject be introduced after 'Latin,' as No. 5, followed by the words, 'an elementary knowledge of these subjects will alone be required.'"

Dr. Rolleston said by making these subjects compulsory they would either have to pluck a very large proportion of men, or ask very few questions in them.

The amendment was carried; but on being put as a substantive motion, the division upon it was equal.

Second amendment, moved by Dr. Andrew Wood, and seconded by Dr. Rolleston—"That, in Recommendation 4, the optional subjects be as follows: 'And in one of the following optional subjects, viz., Greek, French, German, Elementary Mechanics of solids and fluids, meaning thereby mechanics, hydrostatics, and pneumatics."

This amendment was carried, and, being put as a substantive motion, was agreed to.

The remaining clauses of the Recommendations were then proposed and accepted, with a few slight alterations, as follows:—

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendations 5 to 24 be adopted."

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendation 25 be as follows:—'That such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.'"

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendations 26 to 28 be adopted."

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That after Recommendation 28 the following be inserted as Recommendation 29:—'29. That the first divisions of the examinations shall include the following subjects:—(1) Chemistry and Chemical Physics; (2) Anatomy; (3) Physiology; (4) Materia Medica and Pharmacy. That the second division shall include the following subjects:—(1) Pathology, including morbid anatomy; (2) Medicine, including medical anatomy, clinical medicine, and therapeutics; (3) Surgery, including surgical anatomy and clinical surgery; (4) Midwifery; (5) Forensic Medicine.'"

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That Recommendations 30 to 44 be adopted."

Moved by Dr. Andrew Wood, seconded by Sir James Paget, and agreed to—"That the Report of the Committee on Recommendations, as agreed to by the Council in committee, be, with the foregoing amendments, now received, adopted, and entered in the Minutes, as the 'Recommendations of the General Medical Council on Education and Examination.'"

The Council then, in order to insure the completion of the remaining business, agreed to meet on Thursday, May 24, at one o'clock; and adjourned.

Thirteenth Day—Thursday, May 24.

After the Minutes of the previous meeting had been read and confirmed,

The Secretary read the Report of the Finance Committee, which showed that the income of the Council during 1876 had been £6286 6s. 9d., exceeding the expenditure by a sum of £374 7s. 7d.

Dr. Quain, in moving its adoption, said it had been proposed to present their late Registrar, Dr. Hawkins, with an honorarium of 200 guineas on his retirement. He had acted most efficiently for eighteen years, having resigned more lucrative appointments to become their Registrar at a time when they required a man of his high position and character. Since his appointment he had received no increase of salary.

Dr. Pitman, in seconding the reception of the Report, said the small compliment they proposed to pay Dr. Hawkins had met with the approbation of all the members of the Committee.

Dr. Aquilla Smith reluctantly felt compelled, as a matter of duty, to move that the proposed presentation be not adopted, though fully recognising the value of Dr. Hawkins's services. The Council were trustees of the £29,000 now in their hands, and they had no power to disburse any portion of it in the manner proposed.

Sir Dominic Corrigan, in seconding the objection, said Government had in other cases instituted proceedings for the recovery of sums so illegally paid. He would suggest that the proposal be made the subject of an independent motion, when members would be at liberty to support it.

The amendment, that this paragraph of the Report of the Finance Committee be not adopted, was negatived.

A second amendment, moved by Dr. Wood, and seconded by Dr. Pyle, that the paragraph be adopted by "the general wish of the Council," in place of the words "the wish of every member of the Council," was carried, and the Report was then received, and directed to be entered on the Minutes.

The Report of the Pharmacopœia Committee was also adopted.

Read—The following resolution passed by the members of the North of England Branch of the British Medical Association at the spring meeting, held at South Shields on April 27, 1877, and forwarded by the Honorary Secretary, George Hare Philipson, M.D., for the consideration of the General Medical Council at its next meeting:—"That it is the duty of the General Medical Council to prosecute unqualified medical practitioners."

Dr. Storrar moved (seconded by Dr. Haldane and carried)—"That the attention of the North of England Branch of the British Medical Association be drawn to Minute 3 of the Proceedings of the General Medical Council of August 3, 1859, to Minute 5 of August 4, 1859 (Minutes, vol. i., pp. 30, 25), and to Section (C) of the Report of the Medical Acts Committee, May 17, 1877, adopted by the Council (Minutes, vol. xiv., p. 122), copies of which the Registrar is requested to transmit, and to inform them that, after mature deliberation, the Council sees no cause to alter the determination then arrived at."

Sir Dominic Corrigan agreed with Dr. Storrar that the Council could not undertake the office of public prosecutors involving an expenditure which they would not be justified in incurring. He must, however, speak most strongly against the system now spreading through the country of advertising for unqualified assistants, who were men unable to pass the necessary examinations. Of course the motive of practitioners in employing them was to obtain assistants who could not become their rivals. It was the duty of the Council to draw the attention of the Local Government Board to the terrible abuse that in England unqualified men were employed in dispensaries and put in charge of the lives of the public. Really the proceedings of the Council in this matter forcibly reminded him of Dickens's Mrs. Jellaby in "Bleak House," with her remarkable impulse, while neglecting her husband, her children, and the poor around her, to indulge in telescopic philanthropy on the banks of the Niger. They had bestowed anxious care on insuring the employment of qualified assistants abroad, but had done nothing in the matter at home. In Ireland the most perfect system of medical relief existed, so that the poorest man or woman in the country was assured of the same qualified attendance as the rich; while in England existed the monstrous abuse that men in charge of a dispensary district might employ unqualified assistants to act. He proposed that they should communicate with the Local Government Board, so as to throw the responsibility off their own shoulders, and would therefore move—"That while the Council, as expressed in the preceding resolution, cannot undertake the duty of prosecuting unqualified practitioners, they nevertheless think it their duty to draw the attention of the Local Government Board of England to a practice, which it would appear exists in England, of practitioners in charge of medical relief districts employing unqualified assistants, tending to the detriment of the public, and other evils; and they would suggest to the Local Government Board of England the consideration of the rule in Ireland, that no medical officer in charge of any dispensary district is permitted to have a substitute to perform his duties unless for a limited time, and unless such substitute is fully qualified to the satisfaction of the Dispensary Board, and with the sanction of the Local Government Board."

Dr. Aquilla Smith, in seconding the motion, pointed out the magnitude of the evil from the fact that the last Census (1871) showed that there were no less than 3116 assistants and medical students, aged twenty and upwards, then acting in England.

Mr. Turner said these students were under competent supervision, and were not solely responsible, and that the steps the Council had already taken would greatly facilitate

the prosecution of persons who engaged unqualified assistants. It would be sufficient if copies of their Minutes on the subject, and of the resolution come to by the Council, were forwarded to the Branch Association.

Mr. Simon spoke in praise of the Irish system, and in reprobation of the English or any other which permitted the employment of unqualified assistants under the Local Government Board.

Dr. Andrew Wood inquired what Sir Dominic Corrigan meant by the words "fully qualified."

Dr. Fleming suggested "legally qualified."

Sir William Gull thought they could hardly now do justice to this large subject. Wherever a man employed an assistant he was responsible for his acts. They had no proper information on which they could act.

Sir Dominic Corrigan said every medical journal contained advertisements for unqualified assistants from persons in charge of medical relief districts, and accounts of prosecutions arising out of them which were allowed to drop. So urgent was the subject that it should not be passed by.

The motion was put and negatived—six for, and eight against.

Sir William Gull added that it should go forth to the public that they were quite in favour of Sir Dominic Corrigan's motion, but considered it should be dealt with at a more favourable opportunity.

It was then moved by Sir James Paget, and seconded by Sir William Gull, that the following amended Conjoint Scheme for England be received and entered on the Minutes:—

Amended Scheme for an Examining Board for England, as accepted by the Conference of the Representatives of all the Medical Authorities in England, and submitted to the consideration of those Authorities, May 1, 1877.

Recommended.

I. That a Board of Examiners be appointed in this division of the United Kingdom by the co-operation of all the medical authorities in England—that is to say, the Royal College of Physicians of London, the Royal College of Surgeons of England, the Society of Apothecaries of London, and the Universities of Oxford, Cambridge, Durham, and London,—it being understood that, liberty being left to such co-operating medical authorities to confer, as they think proper, their honorary distinctions and degrees, each of them will abstain, so far as allowed by law, from the exercise of its independent privilege of giving admission to the Medical Register.

"Section I. Note *a*. Hereby it is intended to secure that none of the qualifications granted by any of the co-operating authorities shall be conferred on any person who shall not have been examined and approved by this Board."

II. That the Board be constituted of examiners, nominated by a committee hereinafter called "The Committee of Reference," and appointed by the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries, in such manner as they shall severally think fit.

III. That examiners be appointed to conduct examinations on the following subjects:—1. Anatomy; 2. Physiology; 3. Chemistry; 4. Materia Medica; 5. Medical Botany; 6. Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine, or on such subjects as may be hereafter required. Questions on Forensic Medicine are to be included among those asked by the examiners on Chemistry, Medicine, Surgery, and Midwifery.

IV. That the appointments of examiners be apportioned according to a plan to be agreed upon by the three hereinbefore-named medical authorities.

V. That the examiners be nominated and appointed annually; that no examiner hold office for more than five successive years; that no examiner who has continued in office for that period be eligible for re-election until after the expiration of one year; and that no member of the Committee of Reference be eligible for nomination as an examiner.

VI. That the Committee of Reference consist of two representatives from each of the universities and medical corporations of England.

VII. That one-fourth of the Committee of Reference go out of office annually, but that the retiring members be eligible for reappointment, and that the proportionate number of members appointed severally by the co-operating medical authorities be always maintained.

VIII.—That the duties of the Committee of Reference be generally as follows:—1. To nominate the examiners for appointment by the three hereinbefore-named medical authorities. 2. To nominate on each occasion double the number of persons required to be appointed as examiners. 3. To arrange and superintend all matters relating to the examinations, in accordance with regulations approved by the co-operating medical authorities, or the majority of them. 4. To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities.

IX. That, except as hereinafter provided, there be two or more examinations on professional subjects, and that the fees of candidates be not less than thirty guineas, to be paid in two or more payments.

X. That every candidate who shall have passed the final examination conducted by the Board shall, subject to the by-laws of each licensing body and to the provisions hereinafter contained, be entitled to receive the licence of the Royal College of Physicians of London, the diploma of Member of Royal College of Surgeons of England, the licence of the Society of Apothecaries.

XI. That every member of an English university who shall have passed such an examination or examinations at his university as shall comprise the subjects of the primary examination or examinations conducted by the Board, and who shall have completed not less than four years of medical study, according to the regulations required by his university, be eligible for admission to the final examination; that every candidate so admitted to examination be required to pay a fee of five guineas; and that every such candidate who shall have passed such final examination shall, on the further payment of not less than twenty-five guineas, and subject to the by-laws of each licensing body, be entitled to receive the licence of the Royal College of Physicians of London, the diploma of Member of the Royal College of Surgeons of England, and the licence of the Society of Apothecaries.

"Sections X. and XI. Note *b*. Provided that if women be admitted to examination by the Conjoint Board they shall not, on passing, be entitled to become licentiates or members of any of the co-operating authorities without the special permission of such authority."

XII. That any or either of the co-operating medical authorities shall be at liberty to withdraw from this Scheme, and the Joint Examining Board to be constituted hereunder, at any time after five years from the first day of October, 1877, upon giving to each of the other co-operating medical authorities one year's previous notice in writing, dating from the first day of October in that year, of their intention so to do, and that, at the expiration of the time limited by such notice, the medical authority giving the same shall be released from all obligation to conform to the terms of this Scheme or any rules or regulations which may hereafter be made for giving effect to it. James Paget, Chairman of the Conference.

May 1, 1877.

Sir William Gull was glad the Conjoint Scheme had reached this stage, though, no doubt, as Sir James Paget had said, the subject would require further looking into. It might now be left for the bodies themselves to consider, the Council pledging itself no farther than to the principle of the Scheme.

Sir James Paget said the College of Surgeons were very anxious that women who should pass the examinations should not thereby be enabled to become members of the College, which right, as their Act now stood, they could certainly claim. On the other hand, the University of London had passed a resolution to admit women, and the special permission of each authority had therefore been provided for. They would all be bound by the Scheme to concur in the examination, but they would have the right to refuse women the licences or degrees they themselves granted.

Dr. Thomson asked what relation there was between the proposed nomination of the Board of Examiners and their actual appointment.

Dr. Quain pointed out that the Scheme provided not for the appointment by the bodies, but by their co-operation.

Mr. Lister felt strongly that it would have been much better in the interests of the public if the three corporations could have seen their way to effecting the conjunction without including the universities. Such a scheme could certainly never be carried out in Scotland, and uniformity was very desirable. To ask the Scotch universities to give up their present system, and, while refraining from granting licences, only to give honours degrees like the University of London, without reference to anything else, would be to inflict the severest blow on education in the British Islands. Oxford, Cambridge, and Durham were so little concerned with actual medical education, that it seemed almost out of place for them to be called upon to act as examiners on a conjoint board. There was, on the one hand, a great advantage in having a university examination to give a sort of higher culture or ornamental education; but, on the other, they had a very real function to perform in securing what was necessary for the medical profession. If the University of London had occupied the same position as the Scotch universities, they would surely never have consented to make their licence dependent on another examination confessedly inferior to their own. Again, the introduction of the admission of women question might lead to the matter not being matured for another year, which it should be before the Council was asked to sanction it.

Mr. Simon, as a member of one of the corporations included in the Scheme, must protest against the commiseration expressed at their having joined with the universities, inasmuch as he believed it was very much for their advantage they should do so.

As Mr. Macnamara would be closely cross-examined on their proceedings on his return to Ireland, he must request some information upon the proposed action in the question of the admission of women; and whether the other subjects pointed to for examination were to be in addition to those set down.

Sir James Paget said the College of Surgeons would certainly not take part in any scheme which would give to women on passing the examination the right to claim membership. If, however, the University of London should determine that women were to be admitted, some form of words must be adopted by which union could be effected and the two bodies reconciled. No doubt the question of women would be settled before anything was required to be done. With regard to the list of subjects for examination, that of course would have to be reconsidered.

Dr. Andrew Wood had always been of opinion that the Conjoint Scheme was an experiment; still, as the English bodies had now determined to make that experiment, he would wish them good speed. He lamented that the more comprehensive scheme for providing better practitioners and higher medical education, by the co-operation of the English medical bodies, the Scotch colleges and facultics, and the universities of the two countries, in granting a degree which would have been higher than that given by the conjoincd boards, had not been tried. Possibly the Scheme might have the effect of lowering the degrees in the universities, but he still hoped that when they met next year the thing would have been done.

Dr. Humphry did not see any reason to apprehend that the combination would have the effect of lowering the standard of the degrees given by the universities, because henceforth every man taking a degree at Oxford, Cambridge, Durham, or London would, in addition, have passed the primary examination required by this Board; so that instead of the university degrees being likely to be lowered by this proposed Scheme, they would be raised to the extent of the additional test. Then with regard to the point of raising the standard of general practitioners, it had been thought right, since the passing of the Medical Act, that the universities should take part in determining what should be the education of the medical practitioners of the country, and the present proposal was in conformity with that idea, with the object that they should take a more immediate part in it. It was not that the universities had forced themselves on the corporations or medical bodies of England; on the contrary, the plan was originally framed by the colleges of physicians and surgeons, and the share of the universities in the work had been limited to the modification to a certain extent of the proposals made to them. He fully recognised that it was an exceedingly good thing for the universities to take part in this Scheme, for besides bringing them more closely in contact with the general professional education of England, it would give them the opportunity of raising even higher their standard of education.

Dr. Pitman said that seven years ago the Council sent round a circular to all the bodies in the country pressing on their notice that there should be a conjoint examination for each of the three kingdoms. Immediately on receipt of that circular the College of Physicians conferred with the universities for the purpose of carrying out some scheme, and one was after the lapse of two years submitted to the Council, which passed upon it a resolution—"That the Council approve of, and sanction, the Conjoint Scheme of Examination submitted by the Royal Colleges of Physicians and Surgeons of England, to which the Universities of Oxford, Cambridge, and Durham have given their adhesion. The Council desire at the same time that means may be found by the University of London and the Apothecaries' Society to enable them to join in the Scheme so as to make it complete for England." Those bodies then went to Parliament for an Act for the purpose of enabling them to comply with the desire of the Council, and now when they came for the sanction of the Council to their Scheme they were met with questions as to whether some other mode of co-operation would not be an improvement on it. What the Council wished had been done, and it was poor thanks for seven years' labour to hesitate now about accepting it.

The President, in the absence of Dr. Rolleston (who represented the University of Oxford), believed that gentlemen had entered into the Scheme believing it was the wish of the Council to see it carried out, and that it would be for the public advantage. It was the general wish that all the bodies should be united if a union was to take place at all.

The motion by Sir James Paget (seconded by Sir William Gull) was then put, and carried *nem. con.*, as follows:—"That the sanction of the General Medical Council be given to the union of the Universities of Oxford, Cambridge, Durham, and London, and of the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London, for the purpose of co-operating on the basis of the amended Scheme herewith presented, in conducting the examinations required for qualifications to be registered under the Medical Act."

Dr. Quain required that the names and numbers of those who voted for the motion, and of those who did not vote, be taken down.

The result was as follows:—*For* (18)—Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Humphry, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Fleming, Mr. Turner, Dr. Thomson, Mr. Macnamara, Dr. Leet, Dr. Apjohn, Dr. Quain, Sir William Gull, Mr. Simon, Mr. Teale, Dr. Hudson. *Did not vote* (5)—The President, Dr. Andrew Wood, Dr. Aquilla Smith, Sir Dominic Corrigan, Mr. Lister. *Absent* (1)—Dr. Rolleston.

Sir William Gull hoped that before their next meeting some information would have been obtained of the steps taken for extending the Conjoint Scheme to Scotland and Ireland.

The Council then went into committee for the consideration of the following Report:—

REPORT OF THE MEDICAL ACTS COMMITTEE.

(*F.*)—*Proposals of the Obstetrical Society with regard to Women acting as Midwives in England.*

1. The last subject on which the Committee has to report, as referred for such purpose by the Council, is the subject of certain proposals which the Obstetrical Society has submitted to her Majesty's Government, and on which the Lord President has requested the advice of the Medical Council, as to imposing special conditions on women who desire to act in England as professed midwives.

2. The proposals of the Obstetrical Society, regarded in their general intention, may apparently be defined as having these two essential aims: first, *that means under legal sanction should be provided for giving credentials of qualification to competent midwives;* and secondly, *that the lives of women in labour should, as far as practicable, be protected from the incompetent.*

3. It appears to the Committee that these aims are such as must commend themselves to all reasonable persons who are acquainted with the wants of popular life in England; and that the Obstetrical Society has done well in submitting to her Majesty's Government representations which, as coming from that Society, cannot fail to be of influence, in favour of objects so important.

4. It was perhaps hardly necessary that the Obstetrical Society, in advocating those objects, should present so detailed a scheme of the provisions which it would propose for attaining them; and the Committee is most anxious not to seem in any degree to disparage the aims of the Society when it reports, as it now must report, with regard to the proposed details, that they, in the opinion of the Committee, require reconsideration.

5. Particularly the Committee would observe that, in its opinion, not even a permissive, much less an obligatory, general law for the examination, registration, and regulation of midwives in England could, with any prospects of success, found itself on such very imperfect local arrangements as are proposed in the present scheme. If the question were one of voluntary local associations to give certificates of merit to midwives, such might require no stronger local machinery than those which the present scheme proposes; but the intention being what it is, and requiring to be well secured under legal sanctions, the nature of the case would, in the opinion of the Committee, require that the local administration of the law should be assigned (in sufficiently large jurisdictions) to strongly constituted lay authorities, each appointing a medical board for the medical purposes of the law, and having a public office where the business of the registration could be carried on, and having funds at its disposal for such necessary expenses as the registration fees of midwives would probably not cover. The consideration of the scheme in that point of view is evidently not for the Medical Council, but for those who advise her Majesty's Government on matters of local administration; and it is therefore only in order to illustrate the meaning of the above remarks that the Committee would refer to the local authorities—courts of quarter-session and the like—which are found necessary for working the respective laws concerning lunatic asylums, food adulteration, etc.

6. In a different point of view, the Committee would bring under notice of the Council that the penal provision which the Obstetrical Society proposes for enactment would in two respects be an exception to the spirit of the present law concerning unqualified medical practice for gain: first, as proposing in respect of midwives that the mere act of the unqualified practice should be a misdemeanour; and, secondly, as reserving liberty to male persons to do what the law would forbid female persons to do. The Committee is not prepared to say that no sufficient reasons can be urged for the proposed exceptional legislation; but as readers who might regard the proposals in their merely legal relations would perhaps here be struck with the appearance of anomaly, the Committee would suggest that, if the general scheme is hereafter reconsidered by the Society, this part of the proposals, if it is to be maintained, should be supported by adequate arguments.

7. The Committee does not feel itself required to report on the details which Sections 18-24 of the scheme propose for the examination and regulation of midwives; but having regard to the great public importance of a matter which it finds not mentioned in those sections, the Committee has to observe that, in its opinion, the rules would be insufficient, both as to the knowledge and as to the conduct of midwives, if they did not, under both heads, expressly refer to the ways in which puerperal and other fevers are spread, and to the faults by which persons in attendance on lying-in women have often carried deadly infections from house to house.

8. In some parts of the proposed scheme the Obstetrical Society seems to the Committee to contemplate that the General Medical Council should stand in administrative relations to the scheme; but the Committee is not aware of any reasons for which this connexion would be desirable, and is of opinion that the Council, with its present organisation and resources, could not lightly agree to have any such administrative responsibility imposed on it. The Committee does not clearly see that, if county registers of certified midwives were kept under the proper local authorities, adequate reasons would be found to require, or even to justify, the further cost of a central registration; nor does the Committee suppose that, if the law made due provision for the required local organisation and action, much (if any) room would remain, in so simple a matter, for supervision or other action by a central administrative authority. Doubtless, so far as it may be found necessary to submit the working of the law to the supervision and control of the central Government, the Medical Council would be called upon to advise the Government on any questions of an educational and disciplinary kind wherein general rules may have to be issued; but, in the opinion of the Committee, it would not be expedient that the Council should accept any more detailed responsibility than this with regard to the midwives of England.

9. In conclusion, it appears to the Committee that, subject to the above remarks, the Council may properly express an opinion in favour of legislation for such objects as were described in the second paragraph of this Report; but whether, if the objects are to be aimed at by legislation, the legislation should be obligatory or merely permissive in its relation to the local authorities, is a question which the Committee has not felt itself

required to consider. Any proposed legislation would probably be shaped by the Local Government Board; and that Board, if undertaking a Bill, would no doubt be glad, as regards its details, to confer with the representatives of the Obstetrical Society. The Committee has reason to believe that legislation in regard of midwives would, in the present session of Parliament, be impossible. And if such be the case, the postponement may, in the Committee's opinion, have two advantages—first, that the proposals of the Obstetrical Society may in some respects be amended on reconsideration; and secondly, that legislation regarding midwives will perhaps be easier for those who undertake it, when the licensing bodies of the medical profession shall have settled questions, which they now have open, with regard to women who desire to be on the Medical Register with qualifications higher than that of midwives.

JOHN SIMON, Chairman of the Committee.

Moved by Mr. SIMON, and seconded by Sir WILLIAM GULL—"That Section (F) of the Report of the Medical Acts Committee be adopted."

Dr. ANDREW WOOD could not agree with the whole of this Report, and thought its consideration should be adjourned, as there was no great urgency attending it; and before they gave an answer to the Government upon it, they should consult the licensing bodies. Many of its points seemed questionable, and he would therefore move an amendment (seconded by Dr. AQUILLA SMITH)—"That it seems expedient that the Council delay communicating to the Government at present any definite decision regarding it, and that the Report of the Committee, along with copies of the suggestions of the Obstetrical Society, be forwarded to the licensing bodies, with the request that they would consider the subject and forward to the Executive Committee their observations upon it on or before January 1, 1878; and that this resolution be forwarded to the Government." If there was to be legislation on the subject, it should be imperial legislation; for if the women in England required protection, so did those in Scotland and Ireland. The object of the Medical Act was not to benefit the medical profession, but the public, in providing men qualified, by having passed examinations, to practise; and if they were to encourage midwives to act to any extent, they were bound to enable the public to know exactly who were qualified and who were not. In fact, the last paragraph of the Report threw a wet blanket on the whole affair; for if there was to be no legislation upon the subject until the moot question with regard to the admission of women to the medical profession had been settled, nothing would be done upon it for many a long day.

Dr. AQUILLA SMITH said something very similar to the propositions in the Report had been systematically done in Ireland for the last fifty years by the College of Surgeons providing certified midwives for the wants of the people.

Mr. SIMON, in reply to Dr. Andrew Wood's objection that if there was no immediate prospect of legislation this session nothing need be done in the shape of communication with the Government on the question, would urge its advisability in order that legislation might take place next session.

Sir DOMINIC CORRIGAN pointed out that the Report, in recommending that credentials should be given, and that the lives of women should be protected, ignored the fact that both these requirements were already provided for in Ireland. A partial statement of the truth was as objectionable as a misstatement.

Mr. MACNAMARA referred to the report of Dr. Sinclair, Professor of Midwifery in Dublin University, which stated that 294 certificated midwives had been appointed to the army. Other appointments had since been made, raising the total to 311 qualified women, who had acted in so competent a manner that her Majesty had been pleased to become patroness of the institution.

Sir JAMES PAGET said there were many difficulties in the matter which the licensing bodies would be wholly unable to answer from their own knowledge, and which the Obstetrical Society was the only body which would be likely to have practical experience in. It was hardly advisable in England to imitate the Irish custom of establishing a central examination for midwives. There might be poor persons of sufficiently competent education throughout the country who need not be brought up to London; but at the same time they should be under supervision. He was not disposed to go farther than to make a strong representation to Government of the desirability that midwives should be registered, leaving the control of them to the Council. As Dr. Wood had well expressed, the spirit of the Medical Act was to enable people to know who were competent persons to take charge of life, and midwives had that responsibility as much as anyone else. Before enlarging the duties and expenses of the Council they should have full information on the subject.

Dr. PITMAN considered it scarcely creditable to the Council to refer to other bodies when asked by the Lord President for advice, and there were points in the Report which could be advised upon without pledging themselves to any definite opinions.

Sir WILLIAM GULL said the subject was a much more difficult one than it looked. There was a dangerous tendency to centralisation, and it was very questionable whether the Council could carry out an imitation of the Irish system for England. All these women could not possibly be brought up to London for examination, nor could a central registration for them be very well established.

Sir DOMINIC CORRIGAN, looking round the table, was unable to see any member who could be said really to know anything whatever about midwifery. ("Hear, hear," from Dr. Wood.)

Sir WILLIAM GULL begged to say he had had five years' lying-in practice, and had also attended 400 women, whose names and circumstances were duly registered.

Sir DOMINIC CORRIGAN said then Sir William Gull was the only midwife present. (Laughter.) However, the information on the subject of such a man as Professor Sinclair would outweigh all that could be furnished by the whole Council put together.

Mr. SIMON, though he could have answered all the questions which had been raised on the Report, would not, as the mouthpiece of the Committee, and at so late a period of the session, press on the Council the adoption of the Report.

Sir WILLIAM GULL would be sorry if the matter were allowed to drop without some step being taken for securing future legislation on the subject.

Dr. Andrew Wood's amendment was then put and negatived.

Dr. ANDREW WOOD required that the names and numbers of those who voted for and against the motion, and those who did not vote, be taken down.

The result was as follows:—*Majority* (11)—Dr. Pitman, Sir James Paget, Dr. Humphry, Dr. Pyle, Dr. Storrar, Mr. Turner, Dr. Thomson, Mr. Macnamara, Dr. Leet, Sir William Gull, Mr. Simon. *Minority* (9)—Dr. Haldane, Dr. Andrew Wood, Dr. Fleming, Dr. Aquilla Smith, Dr. Apjohn, Mr. Teale, Mr. Lister, Dr. Hudson. *Did not vote*—The President. *Absent*—Mr. Bradford, Dr. Rolleston, Dr. Quain.

Mr. SIMON then withdrew the original motion, and moved in substitution for it (seconded by Sir WILLIAM GULL, and agreed to)—"That the Council, without assenting in all details to the scheme of the Obstetrical Society, is of opinion, with the Society, that it would be desirable to provide by legislation for the following two objects:—First, that means under legal sanction should be provided for giving credentials of qualification to competent midwives; and, secondly, that the lives of women in labour should, so far as practicable, be protected from the incompetent." As their object was to bring the Obstetrical Society into communication upon the details of the question with the Local Government Board, he would now move (seconded by Dr. STORRAR)—"That the above resolution be transmitted to the Lord President of her Majesty's Privy Council, and that it be suggested to his Grace to consider whether it might be of advantage that the proposals of the Obstetrical Society, together with a copy of the present resolution, should be communicated by his Grace to the Local Government Board."

Mr. TURNER said the Council must be careful not to make it appear that they had expressed any opinion on the proposal of the Obstetrical Society. They had merely given an opinion that they thought legislation was advisable, and had sent in a table of recommendations drawn up in a precise mathematical form which they had not approved or even discussed.

Mr. SIMON said their object was to secure strong local organisation. The question was not merely one of poor-law relief, but of the local government of the country.

The PRESIDENT reminded the Council that in 1873 they were as nearly equally divided on the subject as to-day, and that they then authorised communication with obstetrical bodies in addition to existing licensing bodies.

Amendment moved by Mr. TURNER, and seconded by Sir JAMES PAGET—"That the above resolution be communicated to the Lord President of her Majesty's Privy Council."

The amendment was carried, and, being put as a substantive motion, was agreed to.

The Council then resumed.

The following letter was then read and entered on the Minutes:—

37, Dorset-square, May 10, 1877.

Sir,—At the annual general meeting of the Physiological Society held this evening, I was directed to communicate to you, for the information of

the General Medical Council, the following facts relating to the working of the "Cruelty to Animals Act, 1876."

Numerous applications have been made by members of this Society for permission to conduct physiological or medical researches. The applications have been supported in each case by certificates signed in accordance with the Act.

In some cases the applications have been refused; in others the certificate has been indefinitely suspended, without cause assigned.

The administration of the Act has seriously embarrassed real physiological inquiry; and it bids fair to render impossible various investigations which have direct and important bearing on the saving of human life.

I beg leave to express, on the part of this Society, the hope that the Council will take such action in the matter as may to them appear expedient. (Signed) GERALD A. YEO.

The President of the Medical Council.

Mr. SIMON said that in nine cases (without mentioning names) similar complaints had been made to him by men who were incapable of an abuse of vivisection. It was said when the Act was passed, no interference was intended with the legitimate pursuit of science, and that was the sentiment of the Royal Commission on the subject. Experimental vivisection was absolutely necessary in many pathological inquiries, the prosecution of which had been encouraged by grants from Government and from the British Medical Association. Teachers in large schools of science and Fellows of the Royal Society had alike had to complain. Any spirit of mutiny to legislation was to be deplored in any class of the community, but laws were sometimes so unjustly worked as to produce that effect. What part was the Council to take in the matter? He had at first thought the Home Secretary should be at once communicated with, but that Minister was between two fires, for there had been a strong feeling excited among the public against vivisection; and the Council—it being impossible they should pass by such a complaint as had been made to them by the British Physiological Society—should pursue the middle course expressed by the following resolution.

After some remarks to the same effect by Sir WILLIAM GULL, it was moved by Mr. SIMON, seconded by Dr. FLEMING, and agreed to—"That the Council learns with regret that the Cruelty to Animals Act of last session, as hitherto administered, is complained of by several highly meritorious cultivators of physiology and pathology in this country as seriously impeding them in their legitimate studies. That the further consideration of this subject be remitted to the Executive Committee to take cognisance of the further operation of the Act, and, if complaints continue, and in the opinion of the Council are well founded, to bring them under the notice of the Home Secretary, with such suggestions as may be suitable under the circumstances."

Mr. MACNAMARA, having in the meantime telegraphed to Dublin, read answers he had received, to the effect that a report for a Conjoint Scheme was under the consideration of both colleges there.

It was then moved by Mr. LISTER—"That it is undesirable that any teaching or licensing body should insist on the student taking more than one course of lectures on any one subject." This provision would prove very valuable to students, as the practice of the different bodies varied. It was unnecessary to give many illustrations, but taking two of the most important licentiateships (those of the Colleges of Surgeons and Physicians), students were required to take two winter courses of anatomy, two of physiology, two on the principles and practice of medicine, two winter and two summer sessions on the practice of surgery, and so on. It was a great injustice to students to compel them to take two successive courses on any subject; and in many cases it would be much more profitable to them to occupy their time otherwise than by attending systematic courses of lectures at all. They were often demoralising both to teachers and students, and certificates of attendance were given very loosely. Some eminent physicians thought formal lectures in clinical medicine undesirable, and as they considered bedside instruction better, they gave their certificates in that way. There need be no fear of the student not taking advantage of the lectures if he thought they would benefit him. In the future, examinations would become so searching and thorough that they might trust to the students' own industry, instead of dragooning them into lectures.

Mr. TEALE, in seconding the resolution, spoke to the same effect.

Mr. MACNAMARA thought there was a good deal to be said on each side, and they ought to hesitate before interfering with the regulations adopted by the licensing bodies. The subject ought not to be hastily disposed of.

Sir WILLIAM GULL was of opinion that the licensing bodies and students might be left to their own discretion in the matter. He would be sorry to see partial legislation on the subject.

Amendment, moved by Mr. SIMON, and seconded by Dr. APJOHN—"That it is undesirable that any teaching or licensing body should insist on the student attending more than once the same course of lectures on any one subject."

The amendment was negatived.

The original motion was then put to the vote and carried.

On the motion of Dr. ANDREW WOOD, the standing orders were suspended till the business of the Council was completed.

Mr. LISTER then moved—"That in the opinion of the General Medical Council it is desirable that any change which may be made in the Medical Act should include a provision that no person be admitted to registration under the Medical Act who does not possess a qualification or qualifications in both medicine and surgery." He did not think that the College of Physicians should give a spurious qualification in surgery, and *vice versâ*.

Dr. PITMAN said the College of Physicians granted no spurious qualification in surgery.

Sir DOMINIC CORRIGAN called attention to the fact that on July 14, 1874 (vol. xi. of the Minutes), he proposed a resolution which would have prevented a man holding only one of the qualifications being allowed to practise, but it was kicked out by the Council, and he was glad to see it now revived by Mr. Lister.

Dr. ANDREW WOOD said so large a question ought not to be dealt with *brevi manu*.

Mr. TURNER said before doing so they ought to have authoritative information before them how the medical degrees of the various universities would be affected.

Mr. LISTER consented to withdraw his motion.

Dr. ANDREW WOOD proposed that the table showing the Results of Professional Examinations in 1876 (see next page) be received and transmitted to the licensing bodies.

Dr. ANDREW WOOD then said that the next matter—the application of Mr. Henry Comyn—was a kind of riddle which had better be postponed.

It was then resolved—"That the following statistics and tables by Dr. Smith, Dr. Farr, and Dr. Robertson be received and entered in the Minutes:—

OBSERVATIONS ON STATISTICS, AND SUGGESTIONS RESPECTING "THE SUPPLY OF MEDICAL MEN," IN THE PRESIDENT'S ADDRESS DELIVERED AT THE MEETING OF THE MEDICAL COUNCIL ON MAY 24, 1876—(Minutes, vol. xiii., p. 8).

By Dr. Aquilla Smith.

The statistics furnished by Dr. William Farr, Superintendent of Statistics in the General Register Office, on which the President founded some of his suggestions for the consideration of the Medical Council, include two distinct subjects of inquiry.

First. Dr. Farr says "that in the army there is a surgeon to every 202 men," and that "in the army forty-nine per 10,000 are required," or one to 204.

Dr. Farr proceeds to say, "It has become a matter of public concern, that it is difficult to supply the vacancies in the army medical staff with competent practitioners."

This "difficulty" did not exist in 1874 or 1875, for in the returns furnished by the Army Medical Department to the Medical Council, it appears that on August 10, 1874, seventeen "candidates for commissions in the Medical Department of the Army" "succeeded in obtaining appointments," and five "succeeded in examination, but not in obtaining appointments, there being only seventeen vacancies." (Minutes for 1875, p. 51.)

On February 15, 1875, eight obtained appointments, and two succeeded in examination. (*Ibid.*, p. 53.)

On August 9, 1875, fifteen obtained appointments, and six succeeded in examination. (Minutes for 1876, p. 134.)

The result is, that in less than eighteen months forty obtained appointments, and thirteen succeeded in examination, but did not obtain appointments, because there were no vacancies for "competent practitioners."

On the same day that the President delivered his address it was moved—"That a committee be appointed to take into consideration the recent Warrant relating to the Army Medical Service." And the Council resolved—"That it does not come within the province of the Council to take into consideration the recent Warrant for the Army Medical Service." (Minutes for 1876, p. 130.)

The second subject of inquiry stated in Dr. Farr's letter to the President is—"One thing is certain, that the medical attendance for the people of England was extremely defective in 1851, and that it is still more defective in 1876. The danger is that it may grow quite inaccessible to vast numbers of the people."

This inquiry comes within the province of the Medical Council, and requires close investigation on account of the respect due to statements coming from Dr. Farr, and the danger apprehended by him of "medical attendance for the people of England" becoming defective.

Dr. Farr seems to have made his calculations regarding "the people of England" only, while the equally important information as to Scotland and Ireland was obtained by the President directly from Mr. Dundas in Scotland, and from Dr. Burke, the present Registrar-General for Ireland.

I have no means of testing, or of instituting, a comparison with Dr. Farr's statement that "the proportion of medical men was in 1851 9·7 to every 10,000 living," because there was no authorised register of qualified practitioners until the year 1860, when the first Medical Register was published by the Medical Council.

Table showing Results of Professional Examinations for Degrees, Diplomas, and Licences granted in 1876 *by the Bodies in Schedule (A) of the Medical Act.*

Licensing Bodies.	Degrees and Diplomas.	No. of Examinations to be passed.	First Examination.		Second Examination.		Final Examination.	
			No. rejected.	No. passed.	No. rejected.	No. passed.	No. rejected.	No. passed.
Royal College of Physicians of London	Licence	2	8	15	...	...	16	90
	Membership	3	...	...	...	...	3	25
Royal College of Surgeons of England	Membership	2	224	469	...	...	138	408
	Licence in Midwifery	1	...	...	...	...	...	...
	Fellowship	2	42	38	...	...	17	27
Society of Apothecaries of London	Licence	2	68	191	...	...	31	253
University of Oxford	M.B.	2	2	9	...	...	...	7
	M.D.	Essay	...	...	...	...	...	1
University of Cambridge	M.B.	3	13	36	9	14	6(a)	16(a)
	M.D.	1	...	...	...	...	...	7
	M.C.	1	...	...	...	...	...	1
University of Durham	L.M.	2	...	...	...	...	...	...
	M.B.	1	...	...	...	...	...	...
	M.D.	Essay	...	...	...	...	...	1
	M.C.	2	...	...	...	...	...	...
			Preliminary	Scientific.	1st M.B.	1st M.B.	2nd M.B.	2nd M.B.
University of London	M.B.	3	81	97	25(b)	51(c)	11	23
	M.D.	1	...	...	...	...	6	11
	B.S.	1	...	...	...	...	2	7
	M.S.	1	...	...	...	...	...	1
Royal College of Physicians of Edinburgh	Licence	2	3	10	...	...	66	114
Royal College of Surgeons of Edinburgh	Licence	2	7	16	...	...	7	47
Faculty of Physicians and Surgeons, Glasgow	Licence	2	37	30	...	...	20	41
Royal College of Physicians and Royal College of Surgeons of Edinburgh	Licence in Medicine and Surgery	2	38	78	...	...	53	85
Royal College of Physicians of Edinburgh and Faculty of Physicians and Surgeons of Glasgow	Licence in Medicine and Surgery	2	2	4	...	...	13	22
University of Edinburgh	M.B. ... ... / M.B. and M.C.	3	87	149	55	103	10	88(d)
	M.D.	Thesis	...	...	...	...	4	19(e)
University of Aberdeen	M.B.	...	...	...	...	...	...	...
	M.D.	By promotion	...	...	...	...	...	20
	M.B. and M.C.	3	30	71	24	64	10	65(f)
University of Glasgow	M.B. and M.C.	3	46	72	35	50	11	57(g)
	M.D.	2	...	2	...	...	2	3(h)
	M.D.	Thesis	...	...	...	...	3	22
University of St. Andrews	M.B.	3	...	...	...	...	...	1
	M.D.	1	...	...	...	...	2	10
	M.C.	...	...	...	...	...	...	1
King and Queen's College of Physicians in Ireland	Licence in Medicine	2	3	2	...	...	22	108
	Licence in Midwifery	1	...	...	...	...	3	99
Royal College of Surgeons in Ireland	Licence	3	71	95	25	97	12	97
	Licence in Midwifery	1	...	...	...	...	1	20
	Fellowship	3	...	12	...	12	1	12
Apothecaries' Hall, Dublin	Licence	2	11	22	...	...	7	22
							Deg. M.B.	Deg. M.B.
University of Dublin	M.B.	2	*Vide* foot-note(i)		...	...	...	49
	M.C.	3	...	...	...	...	...	21
	M.D.	Thesis	...	...	...	...	...	...
Queen's University in Ireland	M.D.	3	74	112	50	65	33	53
	M.C.	1	...	...	...	...	29	47(k)

As bearing on this question, it appears that of the medical practitioners in the United Kingdom before the passing of the Medical Act in 1858, 16,081 were registered before the close of the year 1859; and, in addition, 1895 of the same class were entered on the Register at the close of the year 1876, making a total of 17,976. The total number in the Register for the year 1876 is 22,200.

Another important fact is that the number of practitioners entered in the Register in the year 1876 (998) is more than double the number entered in 1859 (409) or 1860 (423), and the average for eighteen years is 739·7.

I am not aware that there is any fear of a deficiency of medical attendance in Scotland or in Ireland, for I have ascertained that in two populous counties in Ireland—viz., Down and Tipperary—the population of registered practitioners in 1871 to the population in that year was: in Down 1 to 2905, and in Tipperary 1 to 2519. The mean proportion in the two counties is 1 to 2728; while in England, according to Dr. Farr, the proportion is "1 to every 1276 of the population."

I cannot agree with Dr. Farr that medical attendance "may grow quite inaccessible to vast numbers of the people," as long as the vast multitude of persons who are acting as unqualified assistants or practising in England on their own account are tolerated. And here I may remark that one of the questions suggested by the President for the consideration of the Council is—"Are the poorer classes especially attended by unregistered practitioners?"

Dr. Farr having stated that "the proportion of medical men was in 1851 9·7 to 10,000 living, 8·3 in 1861, and only 7·8 in 1871," it becomes a matter of great importance to inquire into his statement.

Taking the total population of the United Kingdom in 1871, and the average annual increase in the preceding twenty years, the total population in 1876 was 32,653,184. The 22,200 practitioners, in 1876, would furnish 1 to every 1470·8 of the population, or 6·79 to every 10,000, which is not much less than the proportion of 7·8 in 1871, stated by Dr. Farr.

Dr. Farr having apparently made his calculation respecting "the medical attendance for the people of England," I find that the annual average increase of the population in England and Wales for the twenty years, 1851 to 1871, is 239,232.

The average number of practitioners registered in England and Wales in each year for eighteen years (1859 to 1876) is 452, which would supply 1 practitioner for every 529 of the annual increase of the population, or 18·9 for every 10,000.

Again, the average number registered in five years (1872 to 1876) is 565, which is in the proportion of 1 to 423, or 23·6 to every 10,000.

And finally, in 1876, there were registered 597, which is 1 to 407, or 24·5 to every 10,000 of the annual increase of the population.

May 10, 1877. AQUILLA SMITH.

STATISTICS AND TABLES.

By Dr. W. Farr, F.R.S.

General Register Office, Somerset House, May 16, 1877.

Sir,—You have been good enough to send me Dr. Aquilla Smith's

(a) *Third* is not, strictly speaking, the *final* examination, because every candidate has, subsequently to the third examination, to write a thesis and keep an "Act," in which he is subjected to more or less of oral examination.

(b) Of these, 4 were among the candidates who proposed to go through the examination with the exclusion of Physiology, and 3 were among those who, having previously passed the examination with the exclusion of Physiology, presented themselves to be examined in Physiology only.

(c) Of these, 7 availed themselves of the option of reserving their examination in Physiology for a future year, and 7 who had previously exercised the same option passed in Physiology only.

(d) Of these, 1 took M.D., 78 took M.B. and C.M., 6 M.B. alone, and 3 did not graduate.

(e) There were 23 candidates for the degree of M.D. Of these, 19 passed and 4 were remitted in consequence of their Theses not having been considered of sufficient merit.

(f) Of these, 61 took M.B. and C.M., 1 M.B. alone, 2 took M.D. and C.M., and 1 did not graduate. One other (now of age) took M.B. and C.M.

(g) Of these, 49 took M.B. and C.M., 8 M.B. alone.

(h) Of these, 1 took M.D. and C.M., 2 M.D. alone.

(i) Half M.B. Examinations:—Anatomy (Descriptive), of 41 candidates, 10 were rejected, and 31 passed; Chemistry, of 65 candidates, 11 were rejected, and 54 passed; Botany, of 56 candidates, 11 were rejected, and 45 passed; Materia Medica, of 48 candidates, 11 were rejected, and 37 passed; Physics, of 42 candidates, 10 were rejected, and 32 passed.

(k) One of these Masters in Surgery passed the examination in October, 1876, but as he was not present at the public meeting in October, the degree was not conferred until January, 1877.

"Observations and Suggestions respecting the Supply of Medical Men," in the President's Address, delivered at the meeting of the Medical Council on the 24th of May, 1876, and to direct my attention to his criticisms.

In my report on the mortality and health of England and Wales for the past ten years (1861-1870) I drew some conclusions showing the importance of medicine, and the necessity of cultivating it, in its bearings on public health. And you say, in your important address, that at the beginning of the year I called your attention to a statement which is subjoined, and on which Dr. Aquilla Smith comments. [The Statement and Tables follow this letter.]

It is probable that Dr. Aquilla Smith and I differ less about these essential facts than he imagines. For instance, when I say that "in the army there is a surgeon to every 202 men," he does not dispute that fact; and under the circumstances he will probably not deny that "in the army 49 per 10,000 are required"; or he might, wishing to make the figures more exact, say 50. With the supply of "vacancies in the army" I have no concern, as I did not "proceed to say" anything on that subject. But Dr. Aquilla Smith shows that in 1874 and 1875 the Army Medical Department evinced no disposition to reduce any part of the numbers on its staff as superfluous.

In proceeding to determine the proportion of medical men to the civil population in England and Wales, I took the numbers returned as physicians, surgeons, and apothecaries at the censuses; and, further, to get the maximum numbers qualified in any way to practise, added the numbers returned as assistants and medical students over the age of twenty.

The results were, as shown in my statement, that to 10,000 of the population in the three census years 1851, 1861, 1871, the numbers were 9·7, 8·3, 7·8.

Dr. Aquilla Smith does not dispute this. The civil population, instead of having 49 to 10,000, as in the army, has not one-sixth part of that number. Then it must be recollected that physicians and surgeons who have retired are generally included in the census numbers.

While the standard of medical examinations has been raised from time to time, the number of qualified practitioners has declined in the United Kingdom, as is shown in the annexed table compiled from the English census, and from the returns supplied to you from the Registrars-General of Scotland and Ireland.

Thus the table shows that in the United Kingdom the proportion of physicians, surgeons, and apothecaries at the three decennial censuses was 7·2, 6·4, 6·0. In 1851 there was 1 practitioner to 1386 inhabitants; in 1871 there was 1 to 1672 inhabitants.(l)

In England the proportion of medical practitioners was larger than in the United Kingdom, but the decline was more rapid. In 1851 there was 1 to 1180; in 1871 only 1 to 1552 inhabitants. It is well known at this office that a considerable number of people die without the attendance of qualified medical men; thousands of cases of zymotic and acute disease are only treated during part of their course by qualified practitioners; and hundreds of thousands of the sick, in my belief, are treated by quacks, ignorant midwives, unqualified assistants, and chemists and druggists.

It is worthy of note that while the number of qualified practitioners decreased, the number of chemists and druggists rose from 7816 in 1841, to 15,540 in 1871; and it is quite certain that this number—many of them respectable men, though not passed in pharmacy, now exceeding the number of physicians and surgeons in practice—do not live by mere retail or sale of drugs. What one would desire in the interest of the public health is that, besides paupers, the whole population should have easy access to medical persons and midwives possessed of as much medical, surgical, obstetrical, and hygienical skill as would qualify them, in the opinion of the Medical Council, to practise their art with advantage.

Dr. Aquilla Smith has misunderstood me in one paragraph. "I cannot agree," he says, "with Dr. Farr that medical attendance may grow quite inaccessible to vast numbers of the people, so long as the vast multitudes of persons who are acting as *unqualified assistants*, or practising in England on their own account, are tolerated." It must be evident from the context that I did not mean by "medical attendance" the attendance of unqualified assistants.

Dr. Aquilla Smith says that of the medical practitioners in the United Kingdom 17,976 were entered on the Medical Register at the close of the year 1876: then he has "recently ascertained" that the total number "in the Register for the year 1876 is 22,200." He can probably explain the discrepancy by further inquiry, and at the same time deduct the numbers stated in the list to be residing in the colonies, in India, and elsewhere out of the United Kingdom. But, taking these crude numbers, as the estimated population of 1876 was 33,093,439, there is only one qualified practitioner to 1491 people.

Dr. Aquilla Smith says, "The average number registered in the five years 1872-6 is 565," and if they enter at the age of about twenty-five that will sustain a body of 20,340; which is not very different from the previous numbers. But it is quite certain that the whole of the men who are placed on the Register will not practise all their lifetime in the United Kingdom. And I cannot accept the paragraph referring to Tipperary as proving anything, unless it be that, on Dr. Aquilla Smith's authority, the famous county has only one medical man to 2519 inhabitants.

Taking medical attendance to mean, as I did, the attendance of persons who have undergone a practical but not a high-flown examination, I must persist in the statement which you quote in your excellent address: "One thing is certain, that the medical attendance on the people of England was extremely defective in 1851, and that it is still more defective in 1876. The danger is, that it may grow quite inaccessible to vast numbers of the people." (Signed) W. Farr.

To Dr. Acland, M.D., F.R.S., D.C.L., President of the Medical Council.

Statement, with Tables.

Physicians, Surgeons, and Apothecaries enumerated at three Censuses in the United Kingdom (exclusive of Medical Assistants so returned, Medical Students, and Unqualified Practitioners).

Number of Physicians and Surgeons returned—

	1851.	1861.	1871.
United Kingdom	19,767	18,642	18,844
England and Wales	15,241	14,415	14,684
Scotland	2,087	1,870	1,760
Ireland	2,439	2,357	2,420

(l) This is exclusive of unqualified assistants and medical students, the Irish returns for which are unsatisfactory. Besides that circumstance, unqualified assistants should not, in strictness, be counted.

Estimated Population in the Middle of the Years—

	1851.	1861.	1871.
United Kingdom ...	... 27,393,337	28,977,133	31,545,741
England and Wales...	... 17,982,849	20,119,314	22,782,812
Scotland	... 2,893,015	3,069,404	3,367,922
Ireland	... 6,514,473	5,788,415	5,395,007

Proportion of Physicians and Surgeons to 10,000 of Population—

	1851.	1861.	1871.
United Kingdom	7.2	6·4	6·0
England and Wales... ...	8·5	7·2	6·4
Scotland	7·2	6·1	5·2
Ireland	3·7	4·1	4·5

Average Number of Persons to One Medical man—

	1851.	1861.	1871.
United Kingdom	1,383	1,554	1,672
England and Wales... ...	1,180	1,396	1,552

Table of the Numbers of Medical Men, and of Chemists and Druggists in England and Wales, returned at the last four Censuses.—(Males.)

	1841.	1851.	1861.	1871.
Physicians, surgeons, assistants, and medical students, aged 20 years and upwards	15,721	17,469	16,691	17,800
Physicians and surgeons ...	...	15,241	14,415	14,684
Assistants and medical students aged 20 years and upwards	...	*2,228	2,276	3,116
Estimated population of both sexes in the middle of the years	15,929,492	17,982,849	20,119,314	22,782,812
Proportion of physicians, surgeons, assistants, and medical students aged 20 years and upwards to 10,000 of population	9·9	9·7	8·3	7·8
Chemists and druggists aged 20 years and upwards...	7,816	10,846	12,638	15,540
Proportion of chemists and druggists aged 20 years and upwards to 10,000 of population	4·9	6·0	6·3	6·8

* Including other medical men.

The following are extracts from the chapter to which your attention was especially called by me in 1876 (see Supplement to 35th Annual Report of the Registrar-General, pp. lxxix.-lxxxii.):—

Descartes.—*Discours de la Méthode* . . . S'il est possible de trouver quelque moyen qui rende communément les homme plus sages et plus habiles qu'ils n'ont été jusques ici, je crois que c'est dans la médecine qu'on doit le chercher."

"If the county and municipal authorities pay such salaries as will command the services of the ablest men in the profession, the expenditure will be amply repaid by the results, for when there is a demand, hygiene will be taught as efficiently as surgery in the schools, and State medicine will be a branch of medical examination in the universities and colleges. With the divisions now existing, it is natural to expect that State medicine—public hygiene—will be advantageously cultivated by men who devote their whole time to its practice."

"The people in this country probably get a better supply of medical attendance than the people of any other country. But it is still imperfect. Some die in illnesses without medical aid; and in parts of the country even medical certificates of the cause of death are not given in all cases, because the deceased has been seen in his last sickness by no qualified medical practitioner. The Poor Law provides medical relief for paupers, but the classes above them trust to quacks, or do not call in aid for fear of medical bills at a time when the head of the family may be earning nothing. This difficulty would be best met by clubs, or by their paying their medical attendant a certain sum quarterly. In the army there is *one* surgeon to every 202 men; in the general population, *one* medical practitioner to every 1276 men, women, and children living.(m)

"Soldiers require more surgeons than civilians; but the latter have evidently an insufficient medical staff. The addition of health officers to its numbers is, therefore, on every ground desirable."

STATISTICS AND TABLES.

By Dr. Robertson.

28, Albany-street, Edinburgh, May 15, 1877.

My dear Professor Turner,—To attempt, from census data, to contrast the numbers of medical practitioners in 1851 with those in 1871, is, I am convinced, quite in vain. When there was no Medical Act, any man might style himself a medical practitioner, a physician, or surgeon, or anything else denoting his readiness to undertake the healing art. But in 1861 the Medical Act had come into operation, and it had become a little risky to use false titles. At this time, too, the profession had been largely recruited by the "ugly rush" of men who obtained licences expressly to save themselves from the disqualifications which would have overtaken them had they waited for a few

(m) The Army List of 1875 contains, exclusive of medical officers on half-pay, the names of 1 director-general, 11 surgeons-general, 33 deputy surgeons-general, 447 surgeons-major, and 442 surgeons (including 3 apothecaries); in all 934 medical officers. The strength of the army, officers and men, at home and abroad was 188,379 in 1873. At the Census of 1871, the physicians and surgeons enumerated were 14,684; assistants and medical students over twenty years of age, 3116; making in the aggregate 17,800; the population enumerated was 22,712,266. The proportion of medical men to population has declined since 1851, when it was 9·7 per 10,000 living, to 8·3 in 1861, and to 7·8 in 1871. In the army the proportion of medical men is 49 to 10,000.

months. It must be remembered, too, that in 1861 there were still among the living no small number of foreign graduates, whose privileges were reserved by the Medical Act, and among whom death has since been very busy.

In short, I desire to express my opinion that we have no sufficient data for estimating (even very rudely) the numbers of licensed practitioners who resided in any division of the kingdom in 1851; and that we can explain the apparent falling off in the supply of doctors in 1861 and 1871, without supposing that the profession is becoming less attractive.

Perhaps the little memorandum which I enclose, and which gives all details that I can extract from the Scottish census, may interest you a little. It points to the same general conclusions as Dr. Farr has arrived at from his analysis of the English figures; but that the supply of doctors will ever be less than the demand in Scotland I take leave to doubt. Observe, too, that in Scotland, "druggist," "chemist," and "apothecary," are all convertible terms, and do not indicate the possession of a legal qualification for practice.

To attempt, by means of the Medical Register, to ascertain the distribution of the members of the medical profession would be a very hopeless business. The best mode of obtaining an approximation to the state of the supply per 10,000 in each division of the kingdom would, I think, be to take Churchill's "Directory," look up the number of men practising during any year in Scotland, England, or Ireland, multiply that number by 10,000, and then divide by the estimated population at the middle of the year. For example, on roughly counting the list for Scotland, in Churchill's "Directory" for 1875, I find 1902 practitioners. The estimated population equals 3,495,214. Then $\frac{19020000}{3495214}$ gives 5·4 to every 10,000 inhabitants, or 1 to every 1838 inhabitants.

Professor Turner. (Signed) WILLIAM ROBERTSON, M.D.

From Scottish Census, 1851:—

Physicians and Surgeons	3,010(n)
Chemists and surgical instrument makers	1,225
Population, 2,888,742.	

Hence there were 10·4 medical or surgical licentiates to every 10,000 of population, or about 1 practitioner to every 959 inhabitants.

From Scottish Census, 1861:—
Physicians, 1114; Surgeons, 756; or in all, 1870.

Medical students, assistants...	1,199
Dentists	189
Druggists, apothecaries	1,449
Cupper, rubber	6
Chiropodist	1
Professor of hydropathy	1
Patent medicine vendors, herb doctors	16
Population, 3,062,294	

Hence there were 6·1 medical or surgical licentiates to every 10,000 of population, or about 1 practitioner to every 1638 inhabitants.

From Scottish Census, 1871:—

Physicians and surgeons	1,760
Accoucheur	1
Medical students, assistants...	1,180
Dentists	243
Druggists, apothecary...	1,949
Mesmerists, bone-setters, etc.	37
Population, 3,360,018.	

Hence there were 5·2 medical or surgical practitioners to every 10,000 of population, or about 1 practitioner to every 1909 inhabitants.

N.B.—In the above statement I have excluded from enumeration all *female* practitioners.

May 16, 1877.

My dear Professor Turner,—I rather think that in writing to you yesterday I expressed my opinion that the Medical Register gives no satisfactory information as to the numbers of qualified men residing in Britain.

To make this plain, I must allude to a passage in the Report which you sent me. I find it there assumed that the total number in the Register for the year 1876 is 22,200. This is, I have no doubt, quite correct; but in the after portion of the Report it is virtually assumed that in 1876 these 22,200 were all practising among the population of the United Kingdom.

Now, there is great fallacy in this assumption. Many dead men have their names for months and years regularly published in the Register; many more reside in foreign countries; many have retired from practice; many give as their address, at the time of their registration, such a vague direction as "Edinburgh," and when they afterwards acquire a settled residence, or leave the country, neglect to desire the Registrars to make the requisite change in their annual publications. The consequence is that from the Medical Register no true account of the numbers of our resident practitioners can be obtained; and I know very well that if such an account is required it can be got from Churchill's "Medical Directories" only.

Just think for a moment of the large number of registered practitioners who must be resident in our colonies or in foreign countries; of the number who are with their regiments in India and elsewhere; of the number in the Royal Navy, and in our mercantile marine; of the number who have retired from practice; and you will see what large deduction must be made from the reporter's 22,200. I say nothing about the dead men, many of whom are constantly to be found in the Medical Register. (Signed) WILLIAM ROBERTSON, M.D.

Professor Turner.

Moved by Dr. ANDREW WOOD, seconded by Dr. STORRAR, and agreed to—"That the communication from the Apothecaries' Society of London be referred to the Executive Committee."

The appointments of members of the Council made since last session were then directed to be recorded.

It was then moved by Dr. ANDREW WOOD, seconded by Dr. AQUILLA SMITH, and agreed to—"That the following answers from the University of London to the Series of Questions (A) (Minutes, vol. xiv., pp. 23-24) proposed by the Executive Committee, be received and entered in the Minutes:—

May 15, 1877.

Sir,—In reply to the inquiries contained in your Circular of July, 1876, I have to point out to you that, considering the stringency of the examinational tests imposed by the University of London, and the increase in the number of candidates who enter for its degrees, the proportion of rejections at its professional examinations can scarcely be regarded as larger than might be reasonably expected, the average proportion of failures at the first M.B. examination being less than one-third, and still smaller at the second M.B. The rejections do not take place specially in any one department of the examination, most of the rejected candidates being below the passing mark in several subjects.

For some time after the preliminary scientific examination was first instituted, its requirements were not sufficiently understood, and the proportion of rejections was very large, sometimes nearly two-thirds. Special classes for preparing candidates for this examination have now been formed, however, at most of the principal medical schools; the number of candidates for it, which was formerly under 100, has nearly doubled; and not only the number but the proportion of successful candidates has largely increased, the number passed in 1875 being 107 out of 185. This increase, which shows a much better state of preparation in general scientific knowledge, is now telling on the number of candidates presenting themselves at the professional examinations; and the gratifying result of the first M.B. examination of 1876, at which fifty passed out of sixty-eight, encourages the expectation that the bulk of the candidates who succeed in the preliminary scientific examination will prepare themselves effectually for the first M.B.

The Senate, therefore, feeling every reason to be satisfied with their present system, do not propose to make any other alteration than such as may render the examination test still more complete.

In regard to the standard of preliminary education, it is only necessary for me to point out that no one can be admitted as a candidate for the medical degrees of this University who has not passed its matriculation examination, which examination is considered by the Senate as an adequate test of his general acquirements. (Signed) WILLIAM B. CARPENTER.

The Registrar of the General Medical Council.

The sittings of the Council then terminated with the following votes of thanks:—

Moved by Dr. AQUILLA SMITH, seconded by Dr. HALDANE, and agreed to—"That the cordial thanks of this Council are eminently due, and are hereby tendered, to Dr. Andrew Wood, for his services as chairman of the Business Committee during the present session of the Council."

Moved by Dr. AQUILLA SMITH, seconded by Dr. ANDREW WOOD, and agreed to—"That the thanks of the Council are due, and are hereby tendered, to the Treasurers, Dr. Quain and Dr. Pitman, for their services."

Moved by Dr. AQUILLA SMITH, seconded by Dr. ANDREW WOOD, and carried by acclamation—"That the thanks of the Council are hereby cordially tendered to Dr. Acland, the President, for his efficient services during the present session of the Medical Council."

SECRETION OF GASTRIC JUICE AND OF HEPATIC SUGAR.—At a recent meeting of the Biological Society (*Gaz. des Hôp.*, May 15), Prof. Claude Bernard stated that he is engaged upon a series of experiments on gastric juice. It is completely demonstrated that this is acid, as indeed is shown by litmus paper. But whence comes this acidity? Does it come from the blood? Prof. Bernard does not believe that it does, and regards it as a product ulterior to the secretion of the gastric juice. If we take the stomach of a dog or rabbit, and wash it well, we no longer find acid on its surface; but this is not long in making its appearance, and if we apply a little carbonate of soda the acid reaction appears in full force. If we place the membrane of the stomach in alcohol, and wash it well in this, and then in water, the acid reaction will nevertheless reappear. From this Prof. Bernard concludes that our tissues preserve their properties after death as during life. Some physiologists have sought to separate these things, and have gone so far as to pretend that sugar appears in the liver only after death, being, in fact, a cadaveric change. This is not admissible; but what is true is that the sugar increases in the liver after death, because there remains there that which was formed during life, to which is added what has been formed after death. The action of life or death has nothing to do with these phenomena. Thus, if we open an animal, expose its liver, and isolate by a ligature a portion of the liver from the rest of the economy—*i.e.*, we interrupt the circulation,—in this separated portion of the liver the sugar, which may have been 1 or 2 per 1000, in ten minutes or so increases to from 5 to 10 per 1000. The gastric juice continues to form in the stomach after death, just as sugar does in the liver, for the phenomena are purely chemical. The properties of the organised tissues are, then, physico-chemical properties, subjected to general chemical laws; they exist after death as well as during life, and are consequently independent of life itself.

(n) This number includes 923 persons who were enumerated in 1851 under the heading "Other medical men." There is thus no real—but only an apparent—discrepancy between the above number and the 2087 given for Scotland in Dr. Farr's table, inasmuch as this 3010 is the sum of 2087 and 923.

ORIGINAL COMMUNICATIONS.

TWO CASES OF

FEVER WITH HYPERPYREXIA.

By C. HANDFIELD JONES, M.B., Cantab., F.R.S.,
Physician to St. Mary's Hospital.

(*Concluded from page* 570.)

THE last agent we have to consider, which is effective in causing hyperpyrexia, is death. That this is a paralysis of nervous force will not be denied. Though nerves and nervous centres remain excitable for a varying time after the circulation has definitively ceased, yet their force is continually waning, and must be so from the moment that death has occurred, and often for some time previous. It is surely very remarkable, that when all controlling nerve-force has more or less completely ceased to operate, active chemical heat-generating change should go on and even increase, though the supply of the chief agent in that change—oxygen—is cut off. Protoplasm is no doubt the fuel which yields the heat, but why does it burn faster than it did before if death has not removed some controlling agency? Dr. Dowler's observations on rise of temperature after death from yellow fever are very noteworthy. In a case where the highest temperature during life in the axilla had been 104°, ten minutes after death it was 109° in the same situation; fifteen minutes later it was 113° in an incision in the thigh; in twenty minutes the liver gave 112°, in one hundred minutes the heart marked 109°, and the thigh in the former incision 109°. In three hours after the removal of all the viscera a new incision in the thigh gave 110° (*vide* Carpenter's "Physiology," page 562). It is difficult to believe that in this instance, or in similar ones, the rise in temperature is due to rigor mortis, as this change can hardly be supposed to have occurred so soon. Besides, the rise was much greater than that produced by muscular contraction.(a) Even admitting that the muscles might be heated so much by rigor mortis, this would not account for the high temperatures of the liver and the axilla.

Thus, then, whether we look to clinical observation in the human subject of the effects of injuries, of fever poisons, of excessive external heat, of bodily exhaustion, and of death, or to laboratory experiments on animals, we get a very notable consensus to the proposition—that agencies which damage the nervous system are prone to induce hyperpyrexia. It seems also undeniable that the nervous system is the only one the mechanical injury of which has this effect.

The view, therefore, which until better instructed I abide by, is that there exists a nerve-centre, or set of nerve-centres, situated in the upper part of the cervical cord, or in its vicinity, which in health control the development of heat, probably by lessening the combustion of protoplasm; but which, under the influence of certain poisons, or heat, or exhaustion, or direct or remote injury, lose this faculty; and that this loss is the essence of fever. At the same time I believe it is quite possible that some poisons may by a direct action on protoplasm increase combustion and raise temperature, though not to the same extent as when the control of the centre is lost. This view is almost the same as that taken by Virchow (*vide* "Handbuch der Pathologic und Therapie," page 37), only that by using the expressions "ein abnormes Spannung verhaltniss, welches durch die Fieber erregende Ursache hervorgerufen ist und in den Natürlichen Bahnen keine Lösung findet," and "in dem Maasse als die Kraft der Moderationscentren gebunden ist," he seems to imply that the loss of regulating power results from an active morbid state, and not from a direct paralysis. The argument from analogy is not to be pressed too much, but it is worth observing that just as we know over-action of the heart's muscle to be restrained by its inhibitory nerves, so we may reasonably believe the combustion of protoplasm to be moderated by other nerves. Paralysis of nerve-force in each case conditiouates excessive action. And these two paralyses very often go together.

The malady in this second case was no doubt typhoid fever, though the abdominal symptoms were less marked than usual. Especially it is rather remarkable that diarrhœa, in spite of the high temperature and the intestinal lesion, should have been absent, while in the case of rheumatic fever (Case 1) it was so copious. The remarks made under the latter as to the mode of production of the hyperpyrexia are equally applicable to this, only (*mutato mutando*) the cause of typhoid must be substituted for that of rheumatic fever as the agent paralysing the temperature-centres. In the second patient the effect of salicylic acid was certainly very noteworthy. It reduced the temperature very much more than the iced bath had done, bringing it down, in fact, to normal for a time. It was given chiefly in sets of six hourly doses, with intervals between the sets. The soda salt seemed as efficacious as the acid, or nearly so, and was much easier of administration. The fall of temperature produced by the drug was not permanent—it could hardly be expected to be so,—but it continued for a good many hours, and by a repetition of the remedy the pyrexia was kept under, and never again attained a formidable height. About the fourth or fifth week of the fever, quinine in small doses (two-grains) ter die, with an occasional ten-grain dose when the temperature rose to 104°, seems to have answered well, and replaced the salicylic acid advantageously. Dr. Clifford Allbutt's experience is to the same effect—that quinine is often very valuable towards the close of the fever. The general condition was not improved by the salicylic acid correspondingly with the temperature, and there was much delirium even when the temperature was normal. It must be admitted that in both these cases the cooling regimen by iced baths was far from being completely carried out according to Brand's directions. This, I fear, is hardly possible unless our supply of efficient nurses is much increased. Besides, when a remedy which is not easy of administration is not of evident advantage, one cannot insist strongly on its continuance. Salicylic acid is, on the other hand, a very valuable antipyretic, and seems to me more suited to the early period of fever than quinine is. It is of course also much easier of administration than iced baths or packs. Probably, however, the two means may be employed advantageously in conjunction.

The occurrence of copious diarrhœa in Case 1 is an interesting phenomenon, as showing that excessive heat, whether acting *ab intra* or *ab extra*, may produce the same result. The copious sweating was probably caused in the same way—both, in fact, depending on vasal and capillary paralysis. As heat is known to be a mode of motion, it is not unlikely that nerve-force is so also, though, unlike heat, it is capable of being produced only in a specially organised tissue. If this be so it is quite conceivable that the more common and powerful mode of motion might be inconsistent with the other, so that a nerve unduly heated would lose more or less its faculty of conveying nerve-force, and this long before any organic change was produced in its neurine. This effect will be most marked when the tissues are everywhere permeated by overheated blood; but that it may also be produced by the operation of external heat on the cutaneous nerves seems tolerably certain, from the languor and debility both of motor and intellectual centres experienced in hot weather before there is any increase in the temperature of the body.

Though in the foregoing pages I have represented Dr. Sanderson as an opponent of the neuro-pathological view of fever, I am glad to show, by the subjoined extract from a communication he has kindly made to me, that he does not by any means totally reject the view I maintain. He says—"I think you will find that your view is very little different from the conception I have found myself driven to by the facts. I say that the febrile state has its seat and origin in the tissues, but I leave the question open how the tissues themselves are influenced. My main point is that the tissues in their living substance possess the power of regulating their own chemical processes, and consequently their own temperature. To this power resident in the living substance I refer (page 3 of Part iii.) as the 'schutzendes Etwas,' the existence of which we cannot get rid of, the power of which we cannot ignore. That 'Etwas' is of course the nervous system, but the mechanism by which its influence is exercised in restraining temperature is *not* the circulation; and that is the point which it was my main purpose to prove. On that point I am at issue with all who hold Virchow's doctrine, and on that point I am certain that I am right."

(a) Fick and Dybkowsky found the rise of temperature in rigor mortis only 0·05° to 0·07°.

THE ROYAL NAVY.—Sir Alexander Armstrong, the Director-General of the Medical Department, has given notice that an examination of candidates for commissions in the Medical Service of the Royal Navy will be held at the University of London on August 13.

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Medical Times and Gazette.

SATURDAY, JUNE 2, 1877.

THE GENERAL MEDICAL COUNCIL.

We are very glad to be able to state that the General Medical Council did succeed in getting through—or perhaps it would be more strictly correct to say, in getting for a time rid of—the work before them on Thursday last week, and in closing the longest session on record. They first considered and adopted the Reports of the Finance and Pharmacopœia Committees. The first of the two was satisfactory in one respect, at any rate, for it showed that while in the year 1875 the expenditure of the Council had exceeded the income by over £800, in the year 1876 income had exceeded expenditure by nearly £400. The great diminution in expenditure, compared with that of 1875, was due to the fact that there were no visitations of examinations in 1876; and the sum saved by having no fees to pay to visitors and no reports of visitors to print amounted to more than £900; and there will be no expenses under these heads in 1877, we suppose. But the amount of fees paid to the Council in 1876 exceeded that paid in 1875 by £300, and the cost of printing again increased by £173. In 1877 the expenses under both these headings will be in excess again, as the session has been so long; and the increase of the cost of printing is a very serious matter: in 1874 it was a little over £500, while in 1876 it had mounted up to more than £1160.

The next subject before the Council on the Thursday was the "further consideration" of a resolution of the North of England Branch of the British Medical Association—"That it is the duty of the General Medical Council to prosecute unqualified medical practitioners"; and in reply to this the Council passed a resolution directing attention to their former decision, in 1859, on the subject, and stating that they saw no cause to alter the determination then arrived at. Sir James Paget presented the Amended Conjoint Scheme for an Examining Board for England, with which our readers have been made acquainted, and which has been finally accepted by all the medical authorities concerned; and after some discussion a resolution was passed sanctioning the union of the bodies "for the purpose of co-operating on the basis of the Amended Scheme presented in conducting the examinations required for qualifications to be registered under the Medical Act."

Another section of the Report of the Medical Acts Committee, dealing with the "Proposals of the Obstetrical Society with regard to Women acting as Midwives," was received, considered, and ordered to be entered in the Minutes. Some time was spent over it, but Mr. Simon, the chairman of the Committee, said he would not press its adoption on the Council at so late a period in the session; and it was resolved—"That the Council, without assenting in all details to the scheme of the Obstetrical Society, is of opinion, with the Society, that it would be desirable to provide by legislation for the following two objects: First, that means under legal sanction should be provided for giving credentials of qualification to competent midwives; and, secondly, that the lives of women in labour should, so far as practicable, be protected from the incompetent"; and it was further decided—"That the above resolution be communicated to the Lord President of her Majesty's Privy Council."

A letter was received from Dr. Gerald Yeo, on behalf of the Physiological Society, directing attention to the fact that the Secretary of State had, in several instances, refused applications from members of the Society for permission to conduct physiological or medical researches by means of experiments on animals. Mr. Simon stated that in nine cases similar complaints had been made to him by men who were incapable of an abuse of vivisection. He remarked that it was said, when the Act was passed, no interference was intended with the legitimate pursuit of science, and that was clearly the sentiment of the Royal Commission on the subject; but teachers in large schools of science, and Fellows of the Royal Society, had alike had to complain. It was agreed—"That the Council learn with regret that the Cruelty to Animals Act of last session, as hitherto administered, is complained of by several highly meritorious cultivators of physiology and pathology in this country, as seriously impeding them in their legitimate studies"; and "That the further consideration of this subject be remitted to the Executive Committee to take cognisance of the further operation of the Act, and, if complaints continue, and in the opinion of the Committee are well founded, to bring them under the notice of the Home Secretary, with such suggestions as may be suitable under the circumstances." Mr. Lister and Mr. Teale moved—"That it is undesirable that any teaching or licensing body should insist on the student taking more than one course of lectures on any one subject." They urged that it is a great injustice to students to compel them to take two successive courses of lectures on any subject; that in many cases it would be much more profitable to them to occupy their time in other ways than in attending systematic courses at all; and that there need be no fear of the student not taking advantage of the lectures if he thought they would benefit him. Sir William Gull said that in his opinion the licensing bodies and students might be left to their own discretion in the matter. An attempt was made to alter the words of the motion following "student" to "attending more than once the same course of lectures on any one subject"; but this was negatived, and the original motion was carried.

A table of "Results of Professional Examinations for Degrees, Diplomas, and Licences granted in 1876" was received, entered in the Minutes, and ordered to be transmitted to the licensing bodies. Some important statistics and tables from Dr. Aquilla Smith, Dr. Farr, and Dr. Robertson, of Edinburgh, referring to and commenting on observations respecting "the supply of medical men" in the President's address of 1876, were also received, and directed to be entered

in the Minutes, and will be found in our report of the proceedings of the Council. A communication from Mr. Henry Comyn, which was spoken of as "a kind of riddle," was referred to the Executive Committee; as was also a communication from the Apothecaries' Society of London. Some formal votes were passed, and then the Council adjourned till next session.

It is really by no means easy, with the best will in the world towards the Council, and the most sincere wish to credit them with every bit of solid work really done by them, to sum up the gains of this the longest session they have held. They discussed the Report of the Medical Acts Amendment Committee, came to definite resolutions on most of the subjects dealt with in it, and had an interview with the Lord President of the Privy Council about some of them; but the discussion of one of the most important—that regarding the education and examination of midwives—was in effect postponed to another session. They devoted a day to the consideration and settlement of various applications concerning the re-admission of names to, or the erasure of names from, the Register. And an immense amount of time was spent over Dr. Humphry's Report, and the Report on the "Recommendations" of the Council, especially on the latter. A few additions to, and alterations in, the "Recommendations" were made, which are of real value and importance; but it is impossible to admit that their value is so great as to at all justify the amount of time spent over them. We shall publish the paper of "Recommendations" as finally agreed to, and will then take the opportunity of summarising the changes made, and of commenting upon them. The Council expressed their regret at the way in which the Cruelty to Animals Act (1876) has so far been administered, and authorised the Executive to remonstrate with the Home Secretary on the subject, should they see fit so to do; and this may, perhaps, be of some service. But we cannot see that anything has really been done towards securing that all would-be medical practitioners shall have received a fairly good general education before entering on their professional studies; and the great questions of the efficiency of the present modes of professional teaching, and of the causes of the number of rejections that take place at the professional examinations, were never really gone into; nor were the opinions of the licensing bodies, gathered at the expense of so much labour, on the latter subject taken into consideration; while the papers on the question whether or not the supply of medical men is decreasing were simply entered in the Minutes. Professor Humphry's motion, "That it is desirable that an examination in the earlier subjects of professional study shall *take place* before the end of the first year of professional study," was carried, and may have some effect in inducing students to work well and steadily throughout their first year; but it is a very mild "recommendation," and it must be a matter of regret that the Council could not agree to "recommend" either Mr. Simon's stronger proposal that such an examination "*should be passed*" before the end of the first year, or Dr. Rolleston's motion that *more than one opportunity* of passing in the earlier subjects should be afforded to students before the end of the first year. We must hope, however, that Professor Humphry's motion, mentioned above, and the recommendation that there shall be *three* professional examinations (out of which the former naturally grew), will in some degree help to insure more successful professional education.

The recommendation that the area of examination in certain subjects shall be defined and limited, ought also, if the licensing bodies act on it, to materially assist the student in taking care to get up his subjects thoroughly. But the history of this recommendation explains with striking clearness how so much time was consumed in considering the "Recommendations." It was at first not proposed to include physiology among the subjects in which the extent of examination should be limited and defined; but, after discussion, the resolution on the subject was made to include it. An "amendment" omitting physiology was then put and carried; and on being put as a substantive motion, another amendment, again embracing physiology, was proposed, carried, and agreed to as a substantive motion: the result being directly the opposite of the first vote.

The motion of Professor Humphry, seconded by Sir James Paget, for a visitation of the medical schools, was not successful; but the opinion that it would be a good thing, could it be managed, was so widely felt, we think, in the Council, that we suspect we shall hear of it again.

THE MADRAS FAMINE.

When we felt it to be our duty, a fortnight ago, to attempt to draw attention to the terrible results of Sir Richard Temple's experiments on the Madras famine, the latest account we had seen of the sufferings of our fellow-subjects in the famine-stricken districts was to the date April 6; but the *Times* has since published, on the 24th inst., letters from its correspondent, dated Bellary, April 21, and Madras, April 28, and the reports are anything but satisfactory. Writing from Bellary, the *Times'* correspondent says—"The famine officers with whom I have spoken are generally agreed that acute distress is much on the increase; that the number of weakly and emaciated creatures applying for work or relief is increasing; and that the next two months will be a very critical period in the management of the famine." "At one of the town poor-relief houses, the other day, I saw some 800 of these poor wretches assembled at the gates . . . . and there was hardly one of the 800 who did not seem to have been severely pinched for food. If I go into the wards of the Civil Service Hospital there is the same thing over again. Nearly all the in-patients are in various forms of suffering due to starvation; and within the last month the number of this class has been fast increasing. All the information I can glean points to the same conclusion—that among the lower stratum of the labouring classes there is great suffering and mortality, and that things in this respect are likely to be worse before they mend." And, writing at the later date from Madras, he speaks of the "one pound of grain per diem for each labourer scale of relief," and says—"It is true that this system of relief has been so far modified that now a special allowance is given for the support of children who are too young to work, but everything I hear and see tends to show that this minimum famine wage was too low, and altogether below the requirements of the people." It is satisfactory to find that the deportation part of the new famine policy has, at least in some parts, been given up. The *Times'* correspondent states, in his Bellary letter—"An attempt has been made here to induce the able-bodied people of this district to migrate to the Eastern Coast Canal at Nellore, about 200 miles away, but with very little success. Many thousands have been discharged from the road-gangs here, and they have been offered service in Nellore, but few will accept the offer. . . . I am glad to hear that the Government does not any longer insist on the discharge from works of those who decline to leave their districts." And, again, in his letter from Madras he says—"The present famine policy, so far as I understand it, seems to take for granted that the people connected with the culture of the soil are only too ready to 'sponge' on the benevolence of the State, and that they should be hustled and bullied as if they were a race of hereditary paupers, instead of the victims of a great national calamity." In the early days of the famine, he remarks, work was given to all who applied for it, and fair subsistence wages were allowed. "When Sir R. Temple came down a new policy was enforced.

The working gangs were sifted, and all those who appeared in good form, or who wore decent clothes or ornaments, were sent adrift, and the usual wages of a coolie were reduced by 25 per cent. of the ordinary minimum wages. Again, the new policy insists, as a test of an able-bodied man's poverty, that he shall migrate to another district to obtain work. It says to him, in fact, 'We will give you work if you will leave your village and friends, and travel a distance of 200 miles to a strange district, and a strange climate, where the people speak a different language, and eat a different food; and if you don't care to accept this offer, we can do nothing more for you.'" The coolie replies, in effect, "I am ready to work, but you send me and my family away just when, should rain fall, I shall be wanted here; and if I leave, my house will be destroyed, and I shall have no one to support me when the famine is at an end." And, as a fact, the *Times*' correspondent says, "this system of transferring labour from one district to another has been practically a failure. The people prefer to sit at home quietly waiting for death, rather than abandon their homes and all that makes life dear to them. Practically, the only effect of the hustling policy is to weaken the physical powers of the people, and to render them less able to stand the strain they have to bear." But the writer does not say that at Madras this part of the policy has been abandoned.

Surely it is high time that Sir Richard Temple and the Government in India should have the courage to acknowledge the dire failure of the new famine policy; or that the Government at home should interfere. Sir Richard Temple is conspicuous for unwearied capacity for labour and for great powers of organisation, and there is no doubt that these have been of great service in improving the organisation for the relief of the famine, especially in outlying and remote districts; but his policy of limitation of relief will gain him no new laurels. He showed rare and most praiseworthy frankness and courage in defending his new policy against Dr. Cornish's strictures, instead of standing on his official dignity and position: will he not now have the courage to own that his theories and "opinions," on which the new policy, which sins against his own and all former experience, was based, were wrong, even though they were "not scientific"? We must hope, at any rate, for the sake of information for the future, if not of rescue in the present, that some of our statesmen out of office may be induced to demand a full inquiry into the policy of the Central Indian Government in dealing with the Madras famine.

THE WEEK.

TOPICS OF THE DAY.

THERE is every reason to believe that the Act for the "Better Protection of Infant Life," which was passed four years ago, to remedy the evils arising from baby-farming, has practically become totally inoperative. During its existence not more than a dozen houses for the reception of nurse-children have been registered under its provision at the offices of the Metropolitan Board of Works, in whom the power of granting licences for the metropolis is vested. The result of a searching inquiry made by Mr. James Neighbour, the sanitary officer of the St. Luke's district, shows that in the whole of that district there is not one licensed house, while the unlicensed ones are numerous. These are mostly kept by widows and single women residing in one room, who take to nurse as many as from one to four infants. The space is invariably inadequate to the healthy growth of the infants, the food given is unsuitable, opiates are largely administered, and the infant death-rate is correspondingly high. In the face of such a state of things, it may fairly be asked—Who is responsible for the proper working of the Act in question? A few prosecutions and penalties would surely suffice to demonstrate that the law in this respect must not be broken with impunity.

An inquiry was opened at Birmingham, last week, before Mr. J. T. Harrison, C.E., the Local Government Board Inspector, as to the advisability of forming a united drainage district for the purposes of sewerage for Birmingham and the surrounding districts, or any part thereof. The Corporation have mapped out a district round Birmingham for the scheme, which includes Wednesbury, Walsall, Handsworth, Bilston, and Wolverhampton. They propose a system of intercepted sewers, to be constructed at the expense of the districts from which the sewage is taken. The object sought to be attained is to secure as perfect a system as possible, and to cleanse the river Tame, which has begun to be seriously polluted by the largely increasing amount of sewage which is being drained into it at the present time. The Corporation have already spent £137,000 on works at Saltby, but they find that nothing effectual can be done without the co-operation of other districts beyond Birmingham, whence a great deal of the contamination comes. The scheme is opposed by the Improvement Commissioners, the Rural Sanitary Authority of West Bromwich, and others, and Mr. Harrison will hear evidence from all parties before communicating his opinion to the Local Government Board.

It is stated that, amongst other reforms which the Shah of Persia has introduced into his kingdom since his visit to this country is the establishment of a Council of Health, which entertains the idea of instituting a sort of sanitary service all over the dominion. The importance of this step cannot be estimated too highly, for Persia enjoys the distinction of serving as one of the nearest stages for the periodical cholera invasion from India; but, unfortunately, after the fashion of the East, the Council apparently does little else but meet and talk, and all action is deprecated on the ground that it will be time enough to interfere when the occasion arises. Notwithstanding the sterility in practical measures, the Persians have begun to publish mortality statistics for Teheran, which in accuracy are decidedly superior to those of Constantinople. The information is obtained by means of the licensed and sworn dead-washers, who, as in all Persian towns, have the sole right to perform the ritualistic washing of corpses. These statistics take no account of Jews, Gebers, and Armenians in Teheran. From the results collected, it appears that diphtheria has existed for two years in Persia, and has lately shown itself in unexpected severity; in Shiraz the disease has become almost endemic. With slight variations in intensity it has prevailed the whole year through, and has already cut off nearly all the children. The devastation caused by small-pox in Persia is terrible; vaccination is almost unknown, and is considered a sin. In Ispahan, since December last, 760 persons have been attacked, of whom only thirty recovered, and none of them have escaped without blindness or the loss of one or other of their limbs. In Astrabad, on the Caspian Sea, fifty persons are at the present time dying daily of small-pox.

The first case under the new Rivers' Pollution Act was heard before Judge Stonor, at the Godalming County Court, last week. The action was brought by Mr. Eastwood, the tenant of the Gosden estate, at Bramley, Surrey, to restrain the defendant, Mr. Farrer, a tanner, of Gosden Common, from putting tan into the river, by which the due flow of the river was prevented. The case for the plaintiff, as supported by his evidence, was that the defendant accumulated an immense heap of tan on his premises close to the river Wey. This was gradually washed into the river, filled up its bed, and polluted the stream by turning its water black. For the defence, it was contended that no evidence had been given to show that the due course of the stream had been interfered with, and it was pointed out that the Act expressly stated that "innocuous discoloration" of the stream was not pollution. A variety of fish caught in the stream were shown, and evidence was

given to the effect that the properties of the tan were tonic and otherwise good. The Judge held that the case had not been proved in conformity with the Act, and found for the defendant.

The Sanitary Committee of the Town Council of Southport has set an excellent example, which it is to be hoped will be largely followed, by the erection of an iron hospital for fever patients on a plot of land two miles away from the Town Hall. The following is a description of the building :—Brick foundations are laid to support the framework of the walls and floors, and there are proper drains laid down for carrying away the refuse and the water from gutters and down-pipes. The sides, ends, divisions, and roof of the building consist of a framework of timber, covered on the outside with galvanised corrugated iron sheets, and on the inside with tongued and grooved boarding, moulds, and skirting, varnished and painted. Archimedean screw ventilators are fixed in the ridge of the roofs where requisite. The design of the arrangement of the plan is in accordance with the suggestions of the Medical Officer of Health, Dr. H. H. Vernon, and the establishment can be put in full working order at a moment's notice, as gas and water are both laid on. There are two hospitals, each divided into two wards, affording accommodation for twenty-four beds, and allowing 1700 cubic feet of air-space to each patient when the beds are full. It is to be hoped that this idea of temporary iron fever hospitals will be taken up by other sanitary authorities who are casting about for a means of isolating contagious diseases in their several districts.

Several of the local authorities in the Thames Valley having asked for an extension of time to consider Colonel Cox's report and draft provisional order for the formation of a combined district, the Local Government Board replied by telegraph on Tuesday morning to the effect that they could not grant the application, as the provisional order must be made this week. It is intended, we believe, to ask the Local Government Board to receive a deputation from those authorities who are opposed to the combination. The Government are apparently determined to hasten the appointment of the Joint Board, who are required to carry out the necessary sewerage works for the Lower Thames Valley District within two years from September 29 next. This determination can hardly be called arbitrary, seeing that already much valuable time has been wasted in quarrelling over the preliminary arrangements.

The friends of Dr. Sparks, who are many, will be glad to hear that he has succeeded in acquiring the grade of "Officier de Santé," having passed a brilliant examination at Marseilles. Owing to the present stringent regulations of the French Government, it is not so easy for foreign medical practitioners to acquire the right to practise in France as formerly. To pass the examinations in the University of Paris requires a certain specific course of study, which is not in the power of everyone to go through. Hence arises the necessity for passing the examination for the grade of "Officier de Santé," which permits of practice in one department only.

THE CASE OF DR. MOFFAT.

The profession generally will have received with much satisfaction the intelligence that Dr. Moffat had been fully acquitted of the charge brought against him. The details have been so fully published that it will not be necessary for us to recapitulate them. Suffice it to say that after an ample inquiry Dr. Moffat's innocence was most clearly established; and, as a mark of the respect in which he is held at Hawarden, it was immediately determined to give him a public reception on his return there from London. Much enthusiasm was exhibited upon Dr. Moffat's arrival at his residence; and all classes appear to have endeavoured by their hearty welcome to express their sense of the injustice of the allegations which had been made against his honour and professional integrity. The case for the prosecution broke down most completely, we are glad to know, and failed entirely to throw the slightest stain on the professional status of an old and most deserving practitioner. But Dr. Moffat's expenses have been unusually heavy; and we are pleased to hear that an effort is being made to raise a fund to help him. An influential meeting of medical men was held on May 28, in the Chester Infirmary Library, when, among other things, it was resolved —"That this meeting form themselves into a committee to use their best endeavours to raise a fund, to be called 'The Moffat Defence Fund,'" to assist in defraying the heavy legal expenses of the late lawsuit, and that Dr. McEwen be requested to act as treasurer and hon. secretary." Dr. Moffat has borne an irreproachable character throughout the many years he has been in practice, and we heartily commend his case to the liberality and kind-heartedness of the profession.

STATUE OF SIR JAMES SIMPSON.

On Saturday afternoon last a statue which has been erected in West Princes-street-gardens, Edinburgh, to the memory of the late Professor Sir James Simpson was unveiled by Lady Galloway, in presence of the Lord High Commissioner, the Lord Provost, magistrates, members of the Town Council, and a large assemblage of people. Dr. Alexander Wood, chairman of the Memorial Committee, formally handed over the statue to the Lord Provost as representing the city. His lordship in appropriate terms acknowledged the compliment. The statue, which is of bronze, represents Sir James in a sitting posture, and is a striking likeness. Mr. Brodie is the sculptor.

COLLEGIATE ELECTIONS.

The Fellows of the Royal College of Surgeons of England resident in the United Kingdom will this day receive official notice that the annual meeting for the election of three Fellows into the Council of the College will be held on Thursday, July 5. These vacancies are caused by the death of Sir William Fergusson, Bart., and by the retirement in the prescribed order of Messrs. J. E. Erichsen and John Gay, who, however, offer themselves for re-election. At the moment of going to press we hear that two members of the Board of Examiners of the College—viz., Mr. W. S. Savory, F.R.S. (the Chairman), and Mr. Timothy Holmes—will be brought forward, with Mr. William Adams. We hear also of a provincial candidate seeking the office. We shall refer to the subject again.

Collegiate Lectures.—Professor Robert Brudenell Carter, F.R.C.S., will commence his course of lectures in the theatre of the Royal College of Surgeons on the 6th inst., "On Defects of Vision which are Remediable by Optical Appliances"; and will be succeeded on the 20th inst. by Professor Benjamin Thompson Lowne, F.R.C.S., who will deliver a course of lectures on Teratology.

Disease at Yunnan.—In an account published by Mr. A. Davenport of the recent Yunnan Mission, he states that the ancient cities of Yunnan-fu and Ta-li-fu have since the Tai-ping rebellion and invasion been cursed with an endemic disease resembling the plague. It is there called the "symptom" disease, in consequence of the critical enlargements of the lymphatic glands at the arm-pits. Sometimes it attacks one side only of a street. It first kills animals, and then the population if they have not been wise enough to profit by the warning. The treatment consists in supplying the patient with a jar full of water to drink, and leaving him by himself in a state of stupor, only rousing him once a day by poking him with a long pole through the window. But, notwithstanding this "treatment," the natives say that this and other similar novel diseases have caused as great a loss of life amongst the population as the rebellion itself. This mode of studying "the natural history of disease" does not seem to benefit either patients, possible patients, or medical science.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 24th inst., viz. :

Allen, Morgan Henry Lawrence, L.S.A., St. John's-wood, student of St. Mary's Hospital.
Batchelor, George Arthur, Bancroft-road, E., of the London Hospital.
Barker, Frederick Rowland, Aldershot, of St. Thomas's Hospital.
Battams, James Scott, Stony Stratford, of St. Mary's Hospital.
Brown, Francis Wheeler, L.S.A., Hackney, of the London Hospital.
Cantlie, James, M.B. Aber., Keithmore, Banffshire, of the Charing-cross Hospital.
Carlyon, Thomas Baxter, L.S.A., Falmouth, of St. Bartholomew's Hospital.
Davy, David Henry, Wanstead, Essex, of the London Hospital.
Eliot, George, L.S.A., Limpsfield, Redhill, of the Westminster Hospital.
Ewen, Harry Walter, L.S.A., Manchester, of Guy's Hospital.
Friend, Herbert Edward, St. Stephen's-crescent, W., of St. George's Hospital.
Haynes, Percy Octavius, Evesham, Worcestershire, of Guy's Hospital.
Howard, Benjamin, M.D. New York, of New York.
Hunter, Christian Bernard, Grafton-street, of University College Hospital.
Ivens, Arthur Somers, Eydon, near Banbury, of St. Bartholomew's Hospital.
Jefferson, William Dixon, Northallerton, Yorkshire, of King's College Hospital.
May, Albert Edward, Clifton-gardens, W., of St. Mary's Hospital.
McReddie, George Dougal, L.M.&S. Calcutta, Calcutta, of the Westminster Hospital.
Owen, Charles James Rayley, L.S.A., Cleveland-gardens, W., of St. Mary's Hospital.
Phillips, Sidney Philip, Queen's-gardens, W., of University College Hospital.
Sherburn, John, M.B. Edin., Howden, Yorkshire, of the Edinburgh School.
Wilson, Arthur Franks, Loddington, Leicestershire, of Guy's Hospital.

Four gentlemen passed in Surgery, and when qualified in Medicine will be admitted Members of the College; and seven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following analysis of the above examinations may, perhaps, be interesting to some of our readers:—Of the eighty-eight candidates examined, twenty-four were rejected, and nine having acquitted themselves satisfactorily in Surgery will be admitted Members of the College when qualified in Medicine. As showing the value of the "L.S.A.," twenty-two candidates were in possession of that degree; there were four holding the "L.R.C.P. Edin.," two the "M.B. Edin.," and two the "L.R.C.P. Lond." The following institutions were represented by one each:—M.D. and M.B. Aber., M.B. Oxon., M.B. Toronto, L.M.&S. Calcutta, and M.D. New York. Of the eighty-eight candidates, sixty-four were from metropolitan schools, seventeen from provincial, and seven attended both provincial and metropolitan hospitals.

At the half-yearly primary examination of candidates for the Fellowship of the College, which was commenced on Friday last, the 25th ult., sixty-two candidates presented themselves. Of these fifteen were Members of the College, the dates of whose diplomas as such ranged from November, 1861, to April last, inclusive, whilst forty-three had passed the primary examination for the diploma of Membership; the remainder had not passed any examination.

The following were the questions in Anatomy and Physiology submitted to them at the written examination, when they were required to answer all four, viz. :—1. The head being divided in the middle line, give, in their order, the parts found in dissecting, from within outwards to the surface, the region bounded by the horizontal plate of the ethmoid and body of the sphenoid above, the palate below, the posterior border of the internal pterygoid plate behind, and the nasal duct in front. 2. Describe the first four cervical nerves, giving the exact course, relations, and distribution of their branches. 3. What are the principal features which distinguish the skeleton of man from that of the higher primates? 4. Describe the various changes through which the male and female generative organs pass in their transition from the rudimentary to the complete stage.

The following Members of the College passed the primary examination on the 28th ult., and when eligible will be admitted to the pass examination, viz. :—

Boulter, Harold Baxter, L.R.C.P. Lond., student of St. Bartholomew's Hospital, diploma of Membership dated July 27, 1874.
Brayn, Richard, L.R.C.P. Lond. and L.S.A., of King's College Hospital, November 18, 1873.
Dent, Clinton Thomas, B.A. Cantab., of St. George's Hospital, January 27, 1875.
Manders, Horace, of St. Mary's Hospital, November 16, 1875.
Ottley, Walter, M.B. Lond. and L.S.A., student of University College Hospital, diploma of Membership dated July 24, 1872.

The following gentlemen, *not* Members of the College, also passed the examination :—

Brown, John, student of the Aberdeen and Edinburgh Schools.
Kerr, James King, of the Belfast School.
Yeo, Gerald Francis, of the Dublin, Paris, Berlin, and Vienna Schools.

Eight candidates were rejected.

The following gentlemen having undergone the primary examination on the 29th ult. for the diploma of Fellow of the College, will be admitted to the final when eligible, viz. :—

Battle, William Henry, student of St. Thomas's Hospital.
Baddeley, Charles Edward, of King's College Hospital.
Bennett, William Charles Storer, of the Middlesex Hospital.
Bowman, Henry Ernest, of King's College Hospital.
Close, Percy, of King's College Hospital.
Davies, Morgan, of the London Hospital.
Gill, Richard, of St. Bartholomew's Hospital.
Harvey, Alfred, of the Birmingham School.
Hearnden, William Frank, of Guy's Hospital.
Margerison, Richard, B.A. Cantab., of St. George's Hospital.
Morley, Edward John, of Guy's Hospital.
Ogle, Charles John, of St. Bartholomew's Hospital.
Ransohoff, Joseph, M.D. Ohio, diploma of Membership of the College dated April 24, 1877.
Sylvester, George Holden, of St. Bartholomew's Hospital.
Whithead, Hayward Reader, of the Charing-cross Hospital.

Eight candidates were referred. The following gentlemen passed on the 30th ult., viz. :—

Coates, George, B.A. Oxon., student of St. Bartholomew's Hospital.
Collier, Mark Percell Mayo, of St. Thomas's Hospital.
Gresswell, Dan Astley, B.A. Oxon., of St. Bartholomew's Hospital.
Haslam, William Frederick, of St. Thomas's Hospital.
Matthews, Valentine, of King's College Hospital.
Money, Angel, of University College Hospital.
Prickett, Marmaduke, M.A. Cantab., of St. Bartholomew's Hospital.
Pughe, Fideliesin Wilim Owen, of the Liverpool School.
Wadham, Frederick, of St. George's Hospital.
Webb, William Wilfrid, of the Charing-cross Hospital.

Twelve candidates having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 24 :—

Baker, Thomas, Cosham, Hants.
Cæsar, Julius, East London Hospital for Children, Shadwell.
Cuming, Charles Henry, Oakley-square.
Elmslie, William Wallace, Seafield Villas, West Brighton.
Hockridge, Thomas Granville, Golbourne-road, Westbourne-park.
Koyaji, Beranji Nasarvanji, 1, Gower-place, W.C.
Smith, Thomas Frederick Hugh, 82, Wimpole-street.

The following gentlemen also on the same day passed their primary professional examinations :—

Barrow, Lancelot Andrews, St. Bartholomew's Hospital.
Bunting, Robert Obadiah, Guy's Hospital.
Smith, Edward Last, Charing-cross Hospital.
Williams, Hugh Harris, Guy's Hospital,
Williams, Miles Melbourne, Manchester Infirmary.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BENNETT, HUGHES, M.D., M.R.C.P.—Physician to the Out-patients at the Hospital for Epilepsy and Paralysis, Regent's-park, N.W.

CLOWES, J. S., M.R.C.S.—Assistant House-Surgeon to the Metropolitan Free Hospital.

FERRIER, DAVID, M.D., F.R.S., F.R.C.P.—Physician to the Out-patients at the Hospital for Epilepsy and Paralysis, Regent's-park, N.W.

HOVELL, T. MARK, M.R.C.S. Eng.—House-Surgeon to the London Hospital, *vice* W. Boyton Johnson, resigned.

NICOLL, T. VERE, M.R.C.S.—House-Surgeon to the Metropolitan Free Hospital.

WEBBER, F.R.C.S., L.R.C.P. Lond.—Honorary Surgeon to the Westminster General Dispensary, Soho.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon William George Ridings has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of the 3rd ult.

BIRTHS.

CABLE.—On May 24, at Royal-hill, Greenwich, the wife of G. H. Cable M.R.C.S.E., of a son.

JONES.—On May 24, at 19, Chapel-street, Belgrave-square, the wife of Thomas Ridge Jones, M.D., of a daughter.

PHIBBS.—On May 24, at 59, Boundary-road, N.W., the wife of Robert Featherstone Phibbs, L.R.C.P. Edin., M.R.C.S., of a son.

RANKING.—On May 27, at Mount Ephraim-road, Tunbridge Wells, the wife of John E. Ranking, M.A., M.B., of a son.

RIDGE.—On May 25, at Carlton House, Enfield, Middlesex, the wife of J. James Ridge, M.D., B.S. Lond., of a son.

SIMPSON.—On May 19, at Ropergate-terrace, Pontefract, Yorks, the wife of Walter S. Simpson, L.R.C.P. Edin., M.R.C.S. Eng., of a son.

MARRIAGES.

BIRT—CAMPBELL.—On May 24, at St. George's Church, Worcester, George Birt, M.B., second son of Thomas Birt, M.D., of Leamington, to Mary Elizabeth, only child of Robert Lyons Campbell, M.D., Stourbridge.

POIGNAND—DRY.—On May 24, at St. Dubritius Parish Church, Whitechurch, Herefordshire, Malcolm Poignand, M.B., second son of J. R. Poignand, Esq., of La Chasse. St. Helier's, Jersey, to Mary Emma Ann, eldest daughter of the Rev. W. Dry, of Whitechurch Rectory.

RABAGLIATI—MCLAREN.—On May 25, at Newington House, Edinburgh, Andrea Honyman Rabagliati, M.A., M.D., of Bradford, to Helen Priscilla, youngest daughter of Duncan McLaren, M.P.

SEATON—AVES.—On May 29, at St. Mark's, Kennington, Robert Winslow, youngest son of Joseph Seaton, M.D., of Halliford House, Sunbury, to Mary, eldest daughter of Edward Leopold Aves, Esq., of Croom's-hill, Greenwich.

WEDD—MAY.—On May 24, at Maldon, Edward Arthur Wedd, of White Hall, Great Wakering, Essex, to Katherine, third daughter of George Parker May, M.D., of West House, Maldon.

DEATHS.

DALDY, THOMAS MEE, M.D., at 41, Finsbury-square, on May 26, aged 65.

DUDGEON, SARAH JESSIE, youngest daughter of John Dudgeon, M.D., of Pekin, at Livingstone Villa, Denistown, Glasgow, on May 16, aged 3½ years.

FINNIMORE, THOMAS ARTHUR, M.R.C.S., at Curepipe, Mauritius, on April 4.

HEFFERNAN, EDITH MARY, daughter of Surgeon-General N. Heffernan, M.B., at Brooks Lodge, Cheltenham, on May 17, aged 20.

HUNT, HENRY, M.D., F.R.C.P. (formerly of Dartmouth), at 3, Brook-street, Hanover-square, London, on May 25, aged 75.

JONES, EDMUND, M.D., J.P., at Mountcraig, near Ross, Herefordshire, on May 23, aged 63.

MILLER, JAMES ARMIT, L.R.C.S. Edin., Fleet-Surgeon R.N., at Beverleys, Spring-grove, on May 27, in his 67th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CARNARVONSHIRE AND ANGLESEA INFIRMARY, BANGOR.—House-Surgeon. Candidates must be registered to practise in medicine and surgery, and acquainted with the Welsh language. Applications, with testimonials, to the Secretary, on or before June 14.

CITY OF LONDON LYING-IN HOSPITAL, CITY-ROAD.—Consulting-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, stating qualifications, etc., to the Secretary, on or before June 19.

EAST RIDING ASYLUM, BEVERLEY.—Assistant Medical Officer. Candidates must be under thirty years of age, unmarried, and have at least one registered qualification. Applications, with testimonials, to the Medical Superintendent, not later than June 23.

NORTH LONDON CONSUMPTION HOSPITAL, LONDON AND HAMPSTEAD.—Physician. Candidates must be Doctors of Medicine, and Fellows or Members of the Royal College of Physicians. Applications, with testimonials, to the Secretary, 216, Tottenham-court-road, W., on or before June 7.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Candidates must have double qualifications. Applications, with testimonials, to the Secretary, on or before June 11.

PROVIDENT SURGICAL APPLIANCE SOCIETY, 37, GREAT ORMOND-STREET, LONDON, W.C.—Assistant-Surgeon. Candidates must be M.R.C.S. Applications, stating age, qualifications, etc., with testimonials, to the Secretary, on or before June 11.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of London, Edinburgh, or Dublin, and be possessed of a medical qualification. Applications to the Chairman of the Medical Committee, at the Hospital, on or before June 11.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Ashby-de-la-Zouch Union.—Mr. C. J. B. Johnson has resigned the Fourth District; area 6861; population 7163; salary £60 per annum.

Bath Union.—The Workhouse and First District are vacant by the death of Mr. F. Hanham; area 617; population 14,420; salary £44 per annum. Workhouse, salary £150 per annum.

Bolton Union.—Mr. James Stewart, Resident Assistant Medical Officer at the Workhouse, has resigned; salary £150 per annum.

Hastings Union.—Mr. C. L. Cunningham has resigned the Third District; area 10,293; population 4281; salary £115 per annum.

Norwich Union.—Mr. Robert Edward Gibson, Medical Officer for the Workhouse, is deceased; salary £120 per annum.

APPOINTMENTS.

Alderbury Union.—Mr. Benjamin Chaston Gowring, M.R.C.S. Eng., and L.S.A., to the Fourth District.

Aston Union.—Mr. Robert Vandeleur Kelly, L.R.C.P., L.R.C.S. and L.M. Edin., and L.M. Eng., to the Castle Bromwich District.

Bicester Union.—Mr. William James Bond, M.B. Glasg., M.R.C.S. Edin., and Licentiate in Midwifery, to the Piddington District.

Carnarvon Union.—Mr. William Jones Williams, L.F.P.&S. Glasg., L.R.C.P. Edin., to the Workhouse.

Ludlow Union.—Mr. Robert Dunstan, M.R.C.S. Eng., and L.S.A. Lond., to the Stokesay District.

St. Olave's Union.—Dr. James Northcote Vinen, M.D. Edin., and L.S.A., appointed Analyst for the St. Olave's District for one year; salary £50.

Central London District Sick Asylum.—Mr. Charles McCann, M.R.C.S. Eng. and L.S.A. Lond., to the Highgate Asylum.

Rutland (County of).—Dr. William Lindsay Emmerson, M.D., appointed Analyst for the County of Rutland; salary £10 and fees.

Strand Union.—Mr. Charles Henry Piesse (Royal School of Mines), to the Strand District for one year; salary £100.

Sussex (County of).—Mr. Edward Henry Moore, appointed Analyst for the Western Division; remuneration by fees.

THE LATE SIR WILLIAM FERGUSSON, BART.—Many of our readers may be interested in knowing that the library, large collection of surgical instruments, etc., of the late Sir William Fergusson will be sold at his late residence in George-street, Hanover-square, on Wednesday next and two following days.

AN APPEAL.—Miss Gent, the daughter of a medical man who practised for many years at Stony Stratford, has been bedridden for the last five years, suffering from incurable disease. Previous to her illness she was able to supplement a small yearly income by the sale of fancy work. She cannot do this now, and her weakness increases. She appeals to the profession for assistance. References kindly permitted to Dr. Slack, Lyzwick Hall, Keswick; the Rev. H. Fisher, Incumbent of St. Luke's; and the Rev. T. E. Franklyn, Vicar of St. John's, Leamington. Subscriptions will be thankfully received and acknowledged by Dr. James Thompson, Avenue House, Leamington.

HERTFORD INFIRMARY.—Earl Cowper has most generously made a present to the Infirmary of the freehold of the site on which the institution is built. In doing so, his lordship stated that the institution was so useful that he was glad to be able to give it this assistance. The Infirmary has hitherto been held on a lease for ninety-nine years, of which nearly half has expired; and this noble gift of Lord Cowper comes most opportunely, since the Governors are about to expend a large sum of money in improving the building. The Chairman (Robert Smith, Esq.) has also most liberally undertaken to build a chapel for the benefit of the patients, at his own expense.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

W. H. Kesteven.—Shall appear as soon as possible.

H. B. Runnalls.—We are sorry that the information asked for cannot be supplied.

T. H. A.—There is no English work on the subject, though some in French. Try June or November.

E. Cooper.—Tabarié has, we think, published a monograph on the subject.

A Beer Drinker.—The tax upon beer produced in 1875 for the whole of the German Empire £2,367,873, as against £2,353,174 in 1874, and £2,055,837 in 1873. The "Moffett Liquor Law" of Virginia came into operation in April last.

Zenas.—According to Mr. George Smith, of Coalville, Leicester, there are 60,000 children connected with our canal-boats population.

Augustus F.—The origin of the Royal Society is traced to about the year 1645, when, on the suggestion of Mr. Theodore Hook, a native of the Palatinate, a number of persons resident in London, who took an interest in what was called the new or experimental philosophy, began to meet together once a week, sometimes at the lodgings of one of their number, Dr. Jonathan Goddard, a physician, in Wood-street, sometimes at apartments in Cheapside, and sometimes in Gresham College or its neighbourhood. Such is the account given by Dr. Birch on the authority of Dr. John Wallis, who was himself a member of the association thus formed.

Victor.—Yes; we believe one of the lecturers of the medical school in connexion with the Glasgow Infirmary has taken out a licence for himself under the recent Act on Vivisection, and that, in consequence, the anti-vivisectionists applied to the directors of the institution on the matter, but they declined to interfere, and the former have now addressed a circular to all the subscribers to the Infirmary, calling their attention to the wickedness of the charity to which they are contributing their money.

Caius.—Celsus was the first writer, if not the first physician, by whom the pathological condition now called diabetes was recognised. But Celsus did not name the disease which he was the first to describe. The name by which it has since been distinguished it received in Aretæus's time.

THE PLUMSTEAD-COMMON QUESTION.

We learn, in reference to Plumstead-common, that the negotiations between the Metropolitan Board and War Office, for a partition of the ground between the public and the military, are slowly advancing. It is understood that, in any arrangement which may be arrived at, the Slade ravine, which bisects the Common, will be retained for the use of the troops.

QUESTIONABLE BUTTER.

It seems, from a statement which the Bureau of Statistics at Washington has lately published, that considerable supplies of "oleomargarine" or "butterine" are imported into this country and France from New York. During the seven months ending March 31, 3,549,629 lbs., of the value of $481,747, were shipped, of which 991,329 lbs. were consigned to Great Britain, and 2,352,250 lbs. to France.

COMMUNICATIONS have been received from—

Dr. RUSSELL, Birmingham; Dr. DRUITT, London; Mr. B. DENTON, London; Dr. IRVING DE LISLE, Napier, New Zealand; Dr. OCTAVIUS STUROES, London; Mr. G. R. ROMANES, London; Mr. F. LANKESTER, London; Mr. ALFRED C. POPE, London; THE REGISTRAR OF THE APOTHECARIES' HALL, London; Messrs. WATERLOW and SON, London; Dr. CARTER, Liverpool; Dr. JAMES THOMPSON, Leamington; Mr. JAMES DIXON, Dorking; Mr. W. REEVES, London; "TOYMA," Diss; Dr. J. W. MOORE, Dublin; Dr. J. M. BRUCE, London; Dr. E. SPARKS, Mentone; Dr. H. W. KESTEVEN, London; Mr. W. ODELL, Hertford; Dr. EDIS, London; THE SECRETARY OF THE OBSTETRICAL SOCIETY, London; THE SECRETARY OF THE ROYAL INSTITUTION, London: Mr. J. W. HULKE, London; Dr. PATRICK BLACK, London; Mr. T. M. STONE, London; Mr. JOHN CHATTO, London; Dr. BARLOW, London.

BOOKS AND PAMPHLETS RECEIVED—

J. Bailey Denton, F.G.S., M. Inst. C.E., Sanitary Engineering—Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S., Medicinal Plants, part 21—Dr. Boudant, Les Eaux Minérales du Mont-Dore—Armand Desprès, La Chirurgie Journalière—Edward Sergeant, Report on the Health of Bolton during the Year 1876.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—La Province Médicale—Leisure Hour—Sunday at Home—Home Chronicler—Wilmington Daily Review—Centralblatt für Gynäkologie—Indian Medical Gazette—American Practitioner—New York Druggists' Advertiser—Western Review of Science and Industry—Students' Journal and Hospital Gazette—National Anti-Compulsory Vaccination Reporter—Toronto Sanitary Journal—Hardwicke's Science Gossip—Monthly Microscopical Journal.

APPOINTMENTS FOR THE WEEK.

June 2. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Mr. C. T. Newton, "On the Recent Discoveries at Mycenæ."

4. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

5. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. James Dewar, "On the Chemical Philosophy of Sir Humphry Davy."

6. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

OBSTETRICAL SOCIETY, 8 p.m. Specimens. Dr. John Williams, "On the Pathology and Treatment of Membranous Dysmenorrhœa." And other Communications.

ROYAL MICROSCOPICAL SOCIETY, 8 p.m. Rev. J. Delsaulx, "On the Thermo-dynamic Origin of the Brownian Motion."

7. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

ROYAL INSTITUTION, 3 p.m. Mr. E. Dannreuther, "On Liszt." (With Pianoforte Illustrations.)

8. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

ROYAL INSTITUTION (Weekly Evening Meeting, 8 p.m.), 9 p.m. Prof. Tyndall, "On Putrefactive and Infective Organisms from a Physical Point of View."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 26, 1877.

BIRTHS.

Births of Boys, 1099; Girls, 1059; Total, 2158.
Average of 10 corresponding years 1867-76, 2124·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	771	621	1392
Average of the ten years 1867-76	667·9	615·0	1282·9
Average corrected to increased population ...	...	...	1373
Deaths of people aged 80 and upwards ...	...	...	37

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	4	3	1	6	...	—	2	2
North	751729	39	13	7	...	8	1	6	2	2
Central ...	334369	1	9	...	...	2	...	1	...	1
East	639111	5	24	5	1	10	...	2	1	3
South	967692	20	6	6	1	8	...	7	2	5
Total	3254260	69	56	21	3	34	1	16	7	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·006 in.
Mean temperature	49·1°
Highest point of thermometer	67·6°
Lowest point of thermometer	40·9°
Mean dew-point temperature	41·2°
General direction of wind	N.N.E.
Whole amount of rain in the week	0·23 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 26, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending May 26.	Deaths Registered during the week ending May 26.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2158	1392	67·6	40·9	49·1	9·50	0·23	0·58
Brighton	102264	43·4	47	30	61·9	41·3	48·3	9·06	0·34	0·86
Portsmouth ...	127144	28·3	75	42	...	...	...	...	...	...
Norwich	84023	11·2	48	42	63·8	39·2	47·9	8·83	0·46	1·17
Plymouth	72911	52·3	36	30	62·5	40·5	49·1	9·50	0·07	0·18
Bristol	202950	45·6	111	84	67·1	33·5	48·5	9·17	0·01	0·03
Wolverhampton ...	73389	21·6	57	27	59·3	36·4	44·8	7·12	0·01	0·03
Birmingham ...	377436	44·9	290	163	...	...	...	...	...	...
Leicester	117461	36·7	85	42	66·0	39·5	48·1	8·95	0·02	0·05
Nottingham ...	95025	47·6	73	47	62·0	39·0	46·7	8·17	0·15	0·38
Liverpool	527083	101·2	335	272	61·0	38·6	47·7	8·72	0·16	0·41
Manchester ...	359213	83·7	202	208	66·0	40·5	49·2	9·55	0·00	0·00
Salford	141184	27·3	99	95	63·5	36·1	47·1	8·39	0·02	0·05
Oldham	89796	19·2	51	49	...	...	...	...	...	...
Bradford	179315	24·8	116	79	60·0	37·1	45·8	7·67	0·11	0·28
Leeds	298189	13·8	216	157	62·0	38·0	46·5	8·06	0·19	0·48
Sheffield	282130	14·4	209	162	63·0	37·0	46·5	8·06	0·03	0·08
Hull	140002	38·5	115	60	64·0	36·0	46·9	8·28	0·07	0·18
Sunderland ...	110382	33·4	103	44	64·0	40·0	47·7	8·72	0·13	0·33
Newcastle-on-Tyne	142231	26·5	119	55	...	...	...	...	...	...
Edinburgh	218729	52·2	122	97	64·0	38·5	48·7	9·28	0·08	0·20
Glasgow	555933	92·1	437	223	60·0	38·7	51·0	10·56	...	...
Dublin	314666	31·3	204	147	67·0	32·8	50·2	10·11	0·02	0·05
Total of 23 Towns in United Kingdm	8144940	38·3	5338	3647	67·6	32·8	47·9	8·83	0·12	0·30

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·01 in. The highest reading was 30·10 in. on Friday, and the lowest 29·69 in. at the beginning of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE CLINICAL ASPECTS OF CHOREA,

AS AFFORDING A KEY TO ITS PATHOLOGY.(a)

By OCTAVIUS STURGES, M.D., F.R.C.P.,
Physician to the Westminster Hospital; Assistant-Physician to the Hospital for Sick Children.

Lecture III.

LAWS OF ORIGIN AND DEVELOPMENT—TREATMENT.

GENTLEMEN,—In endeavouring to justify that hypothesis of chorea which was put forward at the end of my last lecture—the hypothesis, namely, which seeks to construct a pathology for the affection out of the elements already existing in the individuals who become the subjects of it,—I shall address myself to these three topics. First, to point out the intimate resemblance between chorea and such disorders as we are all agreed to call functional; secondly, to consider those features of chorea in which it may be thought to differ from ordinary functional disturbance; and, thirdly, to show, by reference to those essential characters of chorea which have been already discussed, that the proposed hypothesis *works*—that things are as they should be, supposing the theory to be true.

I need not dwell further upon the fact that chorea belongs especially to the restless age and the emotional sex. It will be conceded, perhaps, on all hands that the characteristics of women and children obviously predispose them to suffer in this way rather than men. It is the immediate *cause* of the disorder, you will say, that is to be made out; its mode of distribution is sufficiently plain. Passing this, therefore, I would repeat what I said at the beginning—viz., that the affection may be invoked almost at pleasure, a very slight impression from without sufficing to produce *temporarily* in a shy child that form of restlessness which is in fact chorea. And not only so, but as we ascend in age and encounter greater mental and muscular stability, *the same kind* of impression, only of greater severity, will still produce a similar result. Similar, yet not the same; it is no longer, as with the child, a general movement of the limbs, but tends to limit itself to the face and head and arms, these being, as we have seen, the muscles of readiest response.

Now, this emotional restlessness (for I would not seem to anticipate your assent by calling it temporary chorea) is not to be seen in perfection amongst grown people, except under extraordinary circumstances; yet it is often accurately counterfeited for our amusement. Chorea is to be seen on the stage, just as hysteria is, but the names do not suggest themselves, because the display of emotion is in just proportion to the cause which excites it. When young women of a humble class are receiving with ill-concealed satisfaction the addresses of their lovers, their emotion overflows in chorea. Audrey is choreic with Touchstone. Even less inducement will produce a limited limb-movement which is essentially of the same kind. Among young people of the educated classes, especially young girls, there is the movement of the hand in animated conversation, fumbling a chain or a locket. The action is not unbecoming, and it seems ungracious to speak of it in this relation; yet it is in fact chorea, purposeless so far as muscular movement is concerned, increasing and decreasing with the movement of the mind,—a purely mental expression, rising sometimes to very grave disorder. Observe, too, that this movement is at first one-sided. Although independent of embolism or thrombosis, it is *hemi-chorea*. Yet, if the conversation become warm, it will spread to the other side. A male habit of a kindred kind is the crumbling of one's bread at dinner, unilateral as a rule, yet becoming two-sided on occasion—as with Sydney Smith when dining next the Archbishop of Canterbury.

Or, take again the orator, and observe that while his discourse moves him, so in its turn the muscular movement stimulates the mind the more. It is commonly known and taught by elocutionists that the speaker may keep his words within due moderation by resolving before to keep his hands quiet, clasped together or resting on the desk before him. The mind is so fettered to the body that the command of either insures the due order of both. It is quite true that the gestures of the orator may be so orderly, graceful, and apposite as to resemble chorea only as being a muscular over-movement. This is so because declamation has been taught and studied. The arms, which *must* move somehow, are trained to move in a particular fashion. But see the same speaker with his arms behind him. Hands thus concealed, or thought to be concealed, are commonly affected by a true chorea, which differs in no respect that I could discover in watching them from the chorea of childhood.

The influence of the mind over muscular expression is seen further when muscular acts have to be executed under observation, as performing experiments or tricks before an audience, where a certain assurance of success is necessary, which is by no means secured by knowing that the experiment or trick can be done in private with perfect ease. The same sort of experience is familiar to many as applicable to articulation. It is expressed by various metaphors—"The tongue sticks to the mouth," "The man is afraid of the sound of his own voice." It is to be remarked here how the inward misgiving is itself the cause of the failure; how, too, so soon as the hand or the voice begins to fail, ever so little, it fails altogether. The muscular disorder, once started, is certain to spread: it is never barren or unproductive. The fluent speaker falters, and soon breaks down; the accomplished billiard-player misses a stroke or two, and thereupon loses his accustomed dexterity for the rest of the game. The over-movement of growing-up girls at what is called "the awkward age" is a further instance in point. The emotion produced by being observed is ever ready to express itself in ungainly attitudes. In spite of governess and dancing-master, and with no muscular defect, there is a want of repose, because the mental control is imperfect. The children have not the strength to sit still. Lastly, the intimate union of mind and muscle may be seen in the more or less choreic action of the latter when the movements of the two are not in full accord. There is the smile where no joy is felt which is often painfully choreic. There is even the tone of pretended sympathy or congratulation which often betrays itself in the same way.

Now, this emotional over-movement finds its chief subjects and fullest illustration in children. As general muscular movement is their main expression of mind, so general muscular disorder is their main expression of mental emotion. In the composed stability of later life, however, it is no longer disordered *movement* that we see, but disordered muscular *attitude;* some fixed expression or posture of face or limbs mentally produced, and which very soon becomes impressed and indelible. The sexual preference now no longer prevails, or rather it is reversed. Men more than women (probably from greater mental engrossment and less regard for appearance) easily acquire a particular position of certain muscles; these become habitually contracted or relaxed, so that the individual seems to be always frowning or smiling or grimacing. By a slight modification of the same law, he may fall into a monotonous and soon unconscious practice of muscular act; humming as he walks, or carrying the arm or the head in a particular fashion. Thus disordered movement, which is never very far from youth, is replaced by settled grimace, which is never very far from middle age. True to the natural habit of the two periods, movement is disordered in the one, attitude deformed in the other.

If the habit of the child were a habit of stillness, moving its limbs only when and so far as it used them, any shock that suspended their proper exercise might stop their action altogether, as it, in fact, does with the adult, who, upon mental excitement, as we have seen, gets not chorea, but temporary paralysis. With the existence of childish mobility, however, a similar shock does not abolish movement, but only disturbs such order as it had.

I find, then, a law in operation among the people who become the victims of chorea which would almost suggest to my mind that liability. I find them habitually restless and disturbed by slight causes in a particular way. I observe that their over-movement is purposeless in itself, easily aggravated, affecting the body rather than the face, and the arms more than the legs. I notice that upon excitement this over-movement spreads from limb to limb in a certain order, and that it eventually overflows in mental emotion. Under proper restraint (which those that have charge of children seem careful to exercise), I perceive that this restless movement is both the cause and the consequence of pleasurable sensation. Nevertheless, from observing how easily it grows, how the weakest

(a) Delivered at the Hospital for Sick Children, Great Ormond-street, March, 1877.

yield to it most, and how it increases upon indulgence, I can well foresee that upon any extra strain it might readily issue in a distressing restlessness altogether beyond control.

It is true that the diseases we evolve out of anterior considerations are not remarkable for their accuracy to nature, and that an inevitable proneness to indulge in this habit has disfigured medicine in all ages. Nevertheless, supposing our acquaintance with men and women to be what it is, and that we had been but recently introduced to little children so as to have learnt something of their language and customs and modes of thought, but nothing of their diseases, I think we might predict that some affection like chorea should be amongst the products of their over-activity, keen perception, and imperfect self-control.

But, it will be said, admitting the phenomena of chorea to be in some respects analogous with those to be seen in emotion (for if this much be not conceded the whole contention fails), yet still the difference is wide between the temporary choreic movement induced by shyness and the persistent agitation of chorea. I proceed, therefore, in the second place, to consider those features of the disorder in which it may seem to differ from any mere functional derangement.

The most obvious objections to the view I would support are these three:—1. Chorea, as a rule, does not exhibit mental emotion, be its cause what it may. 2. Chorea both persists and increases; it does not subside, like the emotional over-movement with which you compare it, so soon as its cause is withdrawn. 3. It is not a disorder of voluntary muscle only, but often of the heart, and sometimes of other organs also.

Now, it must be admitted that the emotional exaltation which is at the origin of fright-chorea is not continued throughout. The muscular disturbance not only outlasts the mental, but often increases after this latter has disappeared. Yet this is true to the pattern of ordinary emotion in childhood, where, habitually, muscular action of some kind or other comes to the relief —that is, to the replacement—of the mental agitation. Either over-movement of limb or actual spasm (*e.g.*, the powerful convulsion of sobbing) disperses the fit of joy or of sorrow. We have here a veritable transmutation which may be complete or partial. With little children it is complete, but with growth the mental element gets less and less transformed. Older children are apt to have hysteria along with chorea, while the chorea of young women is sometimes eventually lost sight of in hysteria pure and simple. Precisely the same thing occurs in the proper physiological response to mental impression. Between the strong man and the weak child there are, as we have seen, all varieties in the nature of this response. Yet *there is always muscular expression of some kind*, whether by attitude or movement. There is the relaxed attitude of despair, while the mind dwells upon calamity; the sorrow, too deep for tears, finding no outlet and no relief; and there is the passionate outburst of sobs and wringing of the hands in which the child's grief is wholly expended.

But it is asked, Why should emotion thus transmuted into movement continue so long, habitually growing worse, and sometimes becoming permanent? It may be answered that muscular disorder once established (and, still more, *once observed upon*) is sure to abide and spread; it is its nature so to do. Differently, however, with different persons. In the case of men (or of most men), the disturbance is at once met by the combined force of personal will and old-established habit. The individual draws more largely than usual upon his self-control; he recovers himself by an effort, and is only observed to be more constrained and careful in attitude or more mobile in feature. Men, it is true, are not made choreic except temporarily and upon the first surprise. Nevertheless, strong mental shock (no stronger, however, comparatively, than that to which the young child in its feebleness and half knowledge is always exposed) produces an effect which is not transitory, but indefinitely prolonged. There is little muscular agitation, truly, but there is a change in muscular carriage and attitude. The whole frame becomes slower of response, the head is bowed, it is noticed that he is not the same man, that he has suddenly aged. Yet with this obvious change the individual is still recognisable owing to the strength of old habit. The muscular customs of years are not easily obliterated, they have become in great measure automatic and readily fall back into their old swing. The animating spirit is lowered, but the same method remains.

The case of the little child is quite different. There is here neither self-command nor motive for concealment, while the methods of ordered movement, as yet but partially learned, have gained no stability(b) and require strict attention for their proper performance. We have to do with an unreasoning individual whose common mode of expression is by limb-movement, and whose utmost attention is insufficient to keep it still. Add some mental disturbance sufficient only to divert that attention, and the result can hardly be other than that we see. Movement is increased; the proper co-ordination of movement is lessened; lessened, that is, absolutely, because the necessary attention is withdrawn, but lessened still more in appearance because the sum of muscular movement is increased. And observe, that the very first appearance of muscular disorder is enough to insure its continuance. Such imperfect control as the child possesses is now relaxed. That it will at once summon up strength to quell the disturbance, no one that knows a child's nature will suppose. On the contrary, the *sight* of the disorder, its being observed upon and put to penalties, and the whole mode of life altered in consequence of it, can hardly fail to deepen the mental impression and extend its consequences.

But, besides this, there is that in the disorder itself which tends to propagate further disorder. I have alluded already to instances of chorea aggravated by derision or reprimand. But aggravation comes from within as well as from without. The affected limbs, in their failure to execute the purposes of the will, become, so to speak (and it is no inappropriate figure which expresses motor acts in the terms of mind,—common language bears continual witness to it), *demoralised*. Just as we find that the assurance of success is required for any ordinary muscular performance over and above the necessary muscular ability, so the expectation of failure is sufficient to insure failure, though the muscles themselves are not at fault. Everyone must have noticed that the elder children grow irritable under the continual disappointments of chorea; they must have noticed as well, not only that such children are most composed when unobserved, but that they will do easily many things for themselves which they cannot do under command. The want of co-ordination is not of the kind we see in ataxy. It is very variable with circumstances, and in great degree mental. In many cases there is no want of co-ordination at all.

It remains, however, in the third place, to show, by reference to the essential characters of chorea, that the hypothesis which has been suggested *works*. If the whole tenor of chorea is not in harmony with its asserted origin, the theory must be abandoned, for I would not seek to establish it upon the partial light of selected cases. I venture to think that the view here propounded receives a large measure of sanction from this appeal to facts, and may claim acceptance on its own merits as satisfying the conditions of the problem.

That the chorea of young children should be both common and tedious, yet, as regards the future, comparatively unimportant; that it should become more rare, yet more intractable, at puberty, and in later life sometimes quite incurable; that, at the same time, successive attacks occurring during the childhood of the same individual should be of decreasing severity; that the face-muscles should often be affected alone; that they should always be affected with the adult, but sometimes exempt with the child; that the limbs should be attacked in a particular order, and the same limbs in successive attacks; that the mind should be sometimes implicated and sometimes not; that the same cause which gives chorea to the child should give hysteria to the girl and palsy to the man;—all these features of the disease seem easily explicable upon this simple showing, and upon no other as yet advanced.

What has been already said may be deemed sufficient to justify this statement in part; to justify it altogether will need some amplification.

Observe, first, that while the affection is spreading, or tending to spread, as has been shown, out of material of its own providing, the newly imported habit of disorder is gradually effacing the old habit of order, and impressing its own characters instead. Hence it is that in young children with no very severe chorea, but whose habits of purposive movement are but feebly and partially fixed, the new habits soon become stronger than the old have ever been. It is very difficult in such instances to summon up the material out of which amendment is to be built up. These cases are tedious out of

(b) The word "stability" applies here in the precise sense which it serves in mechanics. The muscular equilibrium of the adult is "stable," tending on disturbance to revert to its place; that of young children is "unstable," having the contrary tendency.

proportion to their severity. They make no progress. Yet, unlike some adult patients, they recover at last almost certainly. They have but to wait for their cure until the mind is able to make effort on behalf of the body.

It is different with the chorea of girls at the time of puberty. More rare, and more difficult to excite than the other, it is usually severe, and sometimes even fatal. In these subjects, with the setting up of a new function the mental condition is for a while on the side of disorder. The violence of the storm is shown both in muscular movement and mental emotion. Yet here, too, when the new life is established, an improvement of will-power and mental stability will gradually provide a cure. Such chorea, though it is sometimes fatal, is never a permanent disorder.

In grown-up persons, on the other hand, when chorea has once obtained a lodgment, and dispossessed long-settled muscular movements—an event rare and difficult, as would be supposed,—the new habit is apt to acquire all the force of the old. Adult chorea, which is usually partial, and oftenest in the face, soon comes to share the character of the other muscular habits. Like the habit of grimacing at the same age, it becomes fixed and indelible. There is here no reinforcement to be looked for in the growing capacity of self-control. This form of chorea, therefore, is not uncommonly quite incurable.

From this same point of view we are able to reconcile the apparent contradiction that, while adult chorea is often permanent, successive attacks of the affection during childhood are continually less severe. In the child's case the same chorea, repeatedly called up, has to encounter on each occasion a greater resistance on the part of the ever-growing will. In the man's case the appearance of the disorder denotes a victory over all the power of resistance which established habit and matured will can offer. The mere fact of possession is some security for permanence of tenure.

Again, the order in which the muscles are successively affected in chorea accords with its functional relations. It is misleading to exalt one-sided chorea into prominence. The affection does not travel *along* the body, but *across* it. The hands and arms of children are affected first, because these are the limbs chiefly concerned in expression and the higher intellectual uses, and most responsive to mental impressions. The lower limbs, less exalted in function, are concerned in movements which, once learnt, soon become easy and automatic. The child will run and jump with ease and agility, while its arms and fingers are still occupied in difficult learning. In chorea, except with very young children, the legs suffer late and recover early, and usually the two together. Removed from the active and laborious control of the mind, they are slow to catch the disorder, and ready at the first suggestion to resume their orderly automatic movement.

The order of attack is somewhat altered in older children and grown girls, yet still in illustration of the same principle. With the growth of intelligence and self-consciousness, the muscles of the face become peculiarly sensitive and difficult of control. The face, therefore—but little affected, it may be, in young children—becomes the special and sometimes the sole seat of chorea in the elder girls and young women. The chorea of pregnancy always affects the face. Strictly speaking, there are very few hysterical women that are not also choreic thus far, nor is there a human countenance with a mind behind it that the affection does not reach sometimes.

It is for this reason that chorea is so often confined to the face throughout. Parents who have experience of the affection so far as to know that it commonly spreads from small beginnings, will often fear that facial twitching will lead to general motor disturbance. Their alarm is groundless. The power necessary to command the face is so far higher in degree than that required for the other muscles that there occurs, so to speak, a gap between the two. The one task is impossible, while the other is easy. "Nervous twitching" beginning in the face is little likely to spread. The weakest part has succumbed, but the parts beyond are so far stronger that they are hardly threatened in consequence. On the contrary, chorea of the legs is almost certain to involve the upper limbs also.

Governed by the same law of varying stability, it is not a matter of indifference, I suppose, whether the right or the left arm is first affected. I have as yet no sufficient statistics on the subject, nor is it easy to state in which way the principle would be vindicated. A fair comparison would require subjects of the same age. With young children right and left are all one. With those that are older it is not unreasonable to suppose that the asserted frequency of left- over right-handed chorea may be due to the fact that the left arm and hand are less educated, and therefore less stable than the right. On the other side it may be said that the right hand has to perform the more complicated movements and is more *tried* than the left. It is to be remembered, moreover, that left-handed chorea is less likely to be at once discovered, both because the left hand is less used, and that awkwardness and failure are instinctively associated with all that it does.

It has often been remarked that in successive attacks of chorea it is the same side that suffers repeatedly, whether sight or left. This is held for an argument in favour of some central origin of the affection. Not to dwell further on the exceptional character of one-sided chorea, it is in accordance with our everyday experience that muscular disorder is recalled exactly in its first shape when the circumstances recur. It is no figure to speak of the muscular system as having a memory of its own. It is this memory which causes the soldier always to step off with the left foot; which directs the hand to the face, in moments of reflection, with an unvarying attitude of the thumb and fingers peculiar to the adult; which enables the most intricate music, once learnt, to be fingered easily while the mind is away. The repetition of the same chorea is analogous to this repetition of all muscular acts whatever, good or bad, even those for which there is but infrequent occasion. There are persons with no other impediment of speech who will invariably stumble over the same word when met with in a particular connexion. I know a clergyman with perfect fluency of speech who will thus falter before two words, not in themselves difficult, occurring annually in a collect of the English Liturgy. It is the same with peculiar attitudes in adults as with chorea in children; only with these latter the muscular instability tends to grow weaker on each repetition as their power of control strengthens. Successive attacks are of decreasing severity until, as it is very aptly expressed, the child "grows out of them."

There yet remains the objection that the heart affection of chorea is without parallel in any functional derangement. I have spoken already of this occasional symptom, and would only repeat that it is the consequence and not the cause of chorea, and that this latter may occur with whatever severity without it. We are left, therefore, to construct its pathology independently. Heart disease in this connexion, be its significance what it may, is in some respects peculiar and *sui generis*. If, on the one hand, it may be insisted that the heart disturbance grows sometimes into a real structural disease comparable with that produced by rheumatism, it may be said on the other that in its mode of advent and ultimate subsidence it is analogous rather to those functional heart affections of half mental origin which arise with commencing puberty and disappear with the completion of youth.

(*To be continued.*)

Longevity in Algeria.—Cases of extraordinary longevity are not rare in Algeria, and the sanitary returns for the first quarter of the present year contain the following instances:—An Israelite died at Tiemcen aged 105, one died at Sétif aged 113, another at Blidah aged 103 (it being also stated that his father lived to 120), and a Moor also died at Blidah at the age of 101.—*Union Méd.*, May 22.

Dublin Branch of the British Medical Association.—At an adjourned meeting of members of the British Medical Association resident in Dublin and its vicinity, held at the King and Queen's College of Physicians, Kildare-street, on Friday, May 25, the by-laws of the new branch were considered, approved, and adopted, and the following officers were elected for 1877:—*President:* Alfred Hudson, M.D. *President-elect:* George H. Porter, M.D., Surgeon to the Queen in Ireland. *Vice-Presidents:* Samuel Gordon, M.D., President of the College of Physicians; and Robert McDonnell, M.D., F.R.S., Vice-President (and President-elect) of the Royal College of Surgeons. *Council:* Isaac Ashe, M.D.; Lombe Atthill, M.D.; Edward H. Bennett, M.D.; Thomas Darby, F.R.C.S.I.; Thomas W. Grimshaw, M.D.; Edward Hamilton, M.D.; Samuel Haughton, M.D., F.R.S.; Thomas Hayden, Vice-President K.Q.C.P.; Henry H. Head, M.D.; Edward D. Mapother, M.D.; Alfred H. McClintock, M.D.; William Stokes, jun., M.D. *Honorary Secretary and Treasurer:* George F. Duffey, M.D., 30, Fitzwilliam-place, Dublin.

ORIGINAL COMMUNICATIONS.

A SECOND CONTRIBUTION TO ANTISEPTIC SURGERY.(a)

BEING NOTES OF CASES TREATED IN THE GLASGOW ROYAL INFIRMARY.

By JAMES DUNLOP, M.D.,
Surgeon to the Royal Infirmary, and Professor of Surgery in Anderson's University.
[Reported by Mr. D. Tyndal, Surgeon.]

(*Concluded from page* 418.)

B.—Amputations in the Lower Extremity.

During the year there were sixteen amputations in the lower extremity; of these, nine were in the thigh, three in the leg, and four at the ankle-joint. The results on the whole were not satisfactory, for in four of the cases there was a fatal termination. As the history of these cases will show, they cannot be considered as affording any evidence of the value of any mode of treatment, for death ensued very shortly after operation. The first case was that of H. O'B., aged twenty-eight years, who was admitted into Ward 24, on August 12, with a very bad compound comminuted fracture of both bones of the leg, with much destruction of the soft tissues and loss of blood. Amputation was performed in the lower third of the thigh, but the patient never rallied from the shock of the operation, and died on the following day. The second case was that of a labourer, aged forty years, who had been injured by railway wheels. There was extensive laceration of the tissues on the outer aspect of the thigh, with a complete smash of the bones of the leg. Amputation was performed through the knee-joint. On the following day gangrene appeared in the thigh, and death ensued in the course of forty-eight hours. The third case was that of a man about fifty years of age, whose right leg was crushed by a large iron fly-wheel falling upon it. It was thought that an attempt might be made to save the limb, but on symptoms of gangrene setting in, amputation in the thigh was performed, and death soon followed. The last case was that of a man about sixty years of age, and of intemperate habits, over whose ankle two wheels of a loaded omnibus had passed, smashing both bones of the leg and also the astragalus. Shortly after admission, amputation was performed in the middle of the leg, but delirium tremens set in, and he died in the course of the third day.

All these cases were unfavourable from the first, and, as already remarked, do not supply any data for estimating the worth of antiseptic treatment.

As a set-off against these cases, the following three of amputation in the thigh for railway injuries, and one of amputation in the thigh for disease, may be briefly recorded, as they presented many points worthy of notice.

The first case was that of John W., aged twenty-two years, who was admitted on May 19, 1876, into Ward 23, with a smash of the left leg, a comminuted fracture of the left scapula, and a fracture of the neck of the left humerus. Beyond the statement that while applying his brake in a loaded waggon he fell off, the wheels of several waggons which were behind passing over his limb, he cannot explain how the accident happened, although he was quite sober at the time.

When brought into the Infirmary, a distance of several miles from where the accident happened, he was very much exhausted, though quite sensible. After he had somewhat rallied he was conveyed to the theatre, where amputation through the knee-joint was performed in a manner which I sometimes adopt in preference to the operation of Mr. Spence or Mr. Carden.

On the patient being put under the influence of chloroform, and an Esmarch band having been suitably applied, I made a circular incision through the integument at a point corresponding with the tuberosity of the tibia. I then dissected the skin up all round the limb till I reached the upper border of the patella, when the further steps of the operation were the same as in Carden's method. I had no difficulty in dissecting the flap and getting it over the patella without scoring or making holes in it. After the vessels had been ligatured with catgut, and the wound carefully washed with carbolic solution, the antiseptic dressings were applied as usual under the spray.

When the edges of the flap were brought into apposition by means of wire sutures there appeared to be a redundancy of soft structures hanging over the bone. I was pleased, however, with the small mouth the flap presented—there was such a small amount of surface to unite, and I felt satisfied that retraction of the tissues would take place to such an extent that in the end the flap would not in the least degree be too large; that, on the contrary, it would be of the proper size; and that there would be no risk of the bone protruding, as I had frequently seen it do when the flaps were shaped strictly according to the directions of Mr. Carden. When the patient had been removed to bed, and had regained consciousness, he expressed himself as feeling comfortable. Before he was removed from the operating-table, junk splints were applied to the fractured humerus, and by means of broad bandages the broken scapula was fixed, as well as the arm, to the chest. At bedtime a half-grain suppository of morphia was introduced into the rectum, and ice and milk were given freely.

On the following morning (May 20) it was noted that though he rested and was somewhat comfortable he had no sleep. Pulse was 130; respirations 20; temperature 101·2°. To have a suppository again at bedtime, and a little brandy-and-water if he feels weak.

May 21.—9.30 a.m.: Slept a little last night. The dressings were changed this morning. There had been some oozing, but little or no discharge from the stump. Temperature 102·5°; pulse 132; respirations 28. To have morphia suppository as before.

22nd.—9 a.m.: Patient slept well last night. He says that the thirst which he had has left him, but he has a cough. Skin is not so hot as before, and there is less flush in the face. Temperature 100·5°; pulse 120; respirations 26. ℞. Ether chloric ʒiij., aquæ camphoræ ad ʒvj.; a tablespoonful every four hours. 11 p.m.: Patient has taken his food to-day as well as could be desired. Pulse 104, respirations 28, temperature 101·7°. To have a quarter-grain morphia suppository.

23rd.—9 a.m.: Slept last night. Pulse 108; respirations 28; temperature 101·3°. 12 p.m.: Stump was dressed at midday, and looks well. A little discharge of pus, sweet to smell. Bowels were moved to-day for the first time since the operation; before the operation they had been twice freely opened. Pulse 104; temperature 100°; respirations 28.

25th.—Stump dressed to-day; discharge more copious, though sweet. Bowels to be moved by enema, and to have morphia suppository at bedtime. Pulse 104; temperature 100·4°; respirations 26.

27th.—Stump dressed to-day. The outer third of the lips of the flap has sloughed in the line of the sutures. Three stitches have been reapplied. 11 p.m.: Pulse 86; respirations 24; temperature 100·2°.

29th.—Stump looks well; only a little discharge. On being asked how he is, he says he is "fine." His skin is cool—temperature 99·5°; pulse 96.

The further history of the case may be summed up in a few sentences. His progress towards recovery was satisfactory, and his broken humerus and scapula did not disturb him much. His pulse gradually became lower, till it reached 68; and on June 6, seventeen days after the operation had been performed, there is a note to the effect that the stump is nearly united. On June 22 he was permitted to leave his bed, care being taken that nothing would go wrong with the fractures. This, however, was a mistake, for, not content with liberty to move about the ward, on the 29th he slipped out, and in essaying to go downstairs on one crutch, he fell headlong down three or four steps, his stump coming in contact with one in his descent. On being examined, a wound about three inches long extends obliquely across the front of the stump. It is not deep, however, and the edges can be readily approximated by adhesive plaster. He is very repentant, and will not leave his bed till further notice. On July 6 the splints were removed, and both arm and scapula found to have united satisfactorily. On July 14, with the stump perfectly whole, he walked out of the ward on his way to the Convalescent Home at Lenzie.

The second case was that of N. A. J., aged forty-two years, who was admitted on July 3 into No. 23 Ward, and whose history is as follows:—He said that three loaded waggons broke away, and were running down an incline, when he attempted to stop them by the application of a block of wood.

(a) A paper read before the Southern Medical Society of Glasgow on February 8, 1877.

Their speed, however, was too great. He stumbled before the first waggon came up to him, and, he added, six flanged wheels passed over his left leg at its middle. When admitted a small portion of skin and trousers connected the portions of the injured limb. A few hours after admission, amputation was performed at the knee in the same manner as in the preceding case, but with a slightly different result. The skin of which the flap was composed had at the time of operation all the appearances of having been uninjured, and I did not contemplate any sloughing. In six days, however, a considerable portion of the flap in front began to slough; and had there not been a large eke in the flap behind, there would have been an absolute certainty that the end of the femur would have by-and-by been protruding. By careful daily dressing under the spray, the slough in due time separated, and the edges of the flap were restitched. Before the month of July had expired the stump was nearly well; and on August 17 he was dismissed, not only with perfect union of the soft tissues, but able to bear a considerable amount of pressure upon the face of the stump.

The third case was that of H. C., a labourer, aged forty-three years, who was admitted into No. 24 Ward, on October 4, 1876, with a crush of the lower half of the thigh and all the leg. While at work in the hold of a ship, about half a ton weight of logwood battens fell from a height of about fifteen feet, in consequence of the breaking of the hoisting chain. The lower half of the femur was in numerous fragments. All the vessels were torn as high up as the middle of the thigh, and much blood had been lost. The soft tissues on the inner side of the thigh were quite destroyed, but on the outer aspect, as low down as four or five inches below the trochanter, they were fortunately uninjured. Were it not for this circumstance, amputation at the hip would have been required, and the chances of the patient recovering after such an operation would have been small indeed. After chloroform was administered and Esmarch's band was carefully applied in order to insure that no further bleeding would take place —as, from the already exhausted condition of the patient, an additional loss of blood would have certainly weighed down the scales against him—all the available sound tissue on the outer side of the limb was carefully dissected upwards, and the bone was sawn through about an inch below the trochanters.

When the operation was completed, the patient had to remain on the operating-table, and to be considerably stimulated before he could bear removal to the ward. At the visit on the following morning I hardly expected to find him alive. I was informed that he had passed a favourable night, and on inquiring of the patient himself he told me "that he felt better; that he had no intention of giving in or dying if he could help it." I ordered him milk and beef-tea, and half an ounce of a mixture of tincture of cinchona, cardamoms, and orange-peel every four hours; and on October 9, on account of profuse sweatings which set in, I directed him to have the hypophosphates of soda and lime in glycerine two or three times a day. Without burdening the record with details about the pulse and the temperature and the amount of discharge, it may be sufficient to state that he has recovered without a bad symptom, and at this date (December 10) his stump is perfectly whole, and he is waiting for the first vacancy in the Convalescent Home. He has been promised an artificial limb to enable him to earn his bread by "watching ships at the quay."

The last case of amputation in the thigh to which reference may be made was that of a girl aged fifteen, with extensive strumous disease of the knee-joint—pulpy degeneration of the synovial membrane. On account of the weakly condition of the patient, she was placed under careful constitutional treatment for three or four weeks before it was thought advisable to submit her to operation. On March 24 she was placed under the influence of chloroform, and amputation was performed in the manner recommended by Mr. Spence, with the addition of the antiseptic spray. During the further treatment of the case there were no observations made worthy of being recorded, and the patient was dismissed on May 19 greatly improved in health, and with a beautifully shaped and consolidated stump.

The remaining operations in the lower extremities—amputation in the leg and at the ankle-joint, both for disease and injury—were all successful.

General Remarks.

On comparing the amputations in 1875 with those in 1876, it is to be observed that while in the former year there were thirty cases with nine deaths, in the latter there were twenty-three cases with four deaths. Of the nine deaths in the list of amputations for 1875 there were four from pyæmia, while in the list for 1876 the four deaths which are there recorded cannot be accepted as evidence for or against any mode of dressing. If these cases point to any conclusion at all, it is this: that operating under the carbolic spray, and dressing once with gauze and protective, in cases of severe injuries inflicted by railway or other wheels, do not prevent death from shock, from spreading gangrene, or from delirium tremens. It is, however, to be noticed that it cannot be alleged that any of the smashes of limbs for which amputation was performed ought to have been saved, for the records will show how severe the injuries were; and in the table there appears to have been only one secondary amputation during the entire year, and fortunately that solitary one was successful.

Before leaving the subject of amputations and their treatment, I may remark of them, and of operations in general which are performed under the spray, that, with another year's experience of hospital work, I am satisfied that the safe administration of chloroform is greatly lessened, and the danger increased, by the atmosphere of carbolic acid which surrounds the patient during the operation, and I am in hopes that the day will soon come when the spray will be entirely omitted during operation, and confined to the period in which the dressings are being applied. During the year a fair trial was made of the bundle of antiseptic catgut for drainage purposes instead of the tubing, as recommended by Dr. Chiene, of Edinburgh, and with results by no means satisfactory or encouraging.

C.—Excisions.

During the past year the only joint excised was that of the elbow. The excisions were eight in number, and were all successful. Of the eight there were only three regarding which any remark may be made. The first case was that of H. B., a lad aged seventeen years, a moulder by trade, who was admitted to No. 15 Ward on May 17 with a stiff elbow-joint, the result of disease of eight years' duration. The lad stated that there was very little pain in the joint, but from the bones having become united while the arm was in an unfavourable position he was unable to make progress at his trade. On May 24 the joint was excised. The incision made was a straight one three or four inches in length, and on the ends of the bones being exposed they were sawn through by means of a butcher's saw. It was observed that the soft parts were very vascular, and the oozing of blood from the sawn ends of the bones was considerable. Although the wound was stuffed with lint and a roller applied the oozing continued, and in the afternoon the dressings were removed, and a search made for the bleeding points; there were none found. After well syringing out the wound with cold water, lint in strips saturated with tincture of muriate of iron was stuffed into it. This had the effect of arresting the bleeding. On June 1 bleeding from the ends of the bones recurred, and again the same procedure had to be adopted. This retarded the healing process, and for a time prevented the carrying out of Lister's dressings. During the early part of June the discharge was copious and offensive, and there was a considerable amount of constitutional disturbance. By-and-by, under carefully syringing with one-to-twenty carbolic solution, and dressing the gaping wound twice daily, the discharges became sweet and diminished in quantity, and there was soon a manifest improvement in the general condition of the patient. The healing process had been greatly interfered with by the repeated bleedings which took place, and it was only on July 3 that the appearances could be said to be entirely satisfactory. He was dismissed on August 3.

The second case was a more satisfactory one than the preceding. It was that of a servant-girl, aged sixteen years, who had strumous disease of the left elbow-joint of eight years' duration. On June 20 the joint was excised in the usual way, and on July 4 union was complete, and on the 12th she was dismissed from the ward, the movements of the new joint being remarkably free. It was only dressed four times altogether, and for a week before she returned to her home she was assisting the nurse in the ward, using her arm in carrying the dishes. In this case the operation was performed under the spray.

The only other case which need be mentioned was that of a little boy, aged five years, whose right elbow-joint was excised on July 6. He was dismissed well on August 12, and the movements in his joint were also satisfactory.

It is a direction given to each patient whose elbow-joint has been excised to return to the ward twice a week for a considerable time, in order to practise the difficult movements of the hand and forearm under the supervision of the resident assistant. Unless this is done there is always some risk of the joint becoming more or less stiff and the movements impaired.

HERNIA AND TUMOURS.

Space prevents me entering into any details regarding the successful case of strangulated hernia and those cases under the heading of excision of tumours.

In the second table, showing Miscellaneous Operations, the cases of open knee-joiuts which were treated antiseptically, the one case of vesico-vagina fistula (which was especially successful), and one of retention of urine which was treated by aspiration, as they presented points of interest to which reference at sufficient length cannot now be made, will form the subject of a special communication.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

TWO CASES OF CIRSOID ANEURISM TREATED BY THE CONTINUOUS GALVANIC CURRENT.

(Under the care of Mr. J. W. HULKE.)

ALTHOUGH cases of this remarkable disorder are not so infrequent but that a considerable number have been recorded, yet it must be allowed by all that its pathology continues very obscure and has yet to be worked out. Perhaps the most plausible hypothesis is that the irregular varicose arterial dilatations are consequences of a chronic creeping arteritis, inducing atrophy of the arterial walls, which, being thinned, are no longer able to support the blood-pressure upon their inner surfaces, and thus become dilated. Although in many of the recorded examples the subjects have been persons in advanced years, their histories nearly always show that the disorder had lasted several years, and that it had begun before the decline of life. In the two cases now published the patients were both young adults. Often the origin is referred to an injury. In the youug woman it was interesting to observe how the dilatation spread backwards along the anterior branch of the superficial temporal to the trunk itself, and how when the aneurismal knot was obstructed this dilatation gradually disappeared, until the vessel could hardly be felt, and this without any extension along it of the thrombus from the varix, for at no time during the shrinking was any hard or cord-like state of the vessel, such as there would have been had it been plugged, perceptible. At the present moment the solidified cirsoid knot has shrunken so much that only a trace of it can be felt upon very close examination. It is to be regretted that the obstinate stupidity of the man prevented a similar good result being obtained.

Case 1.—M. C., a *petite brunette* dressmaker, was admitted into Regent ward on March 22 last, having under the right eyebrow, encroaching on the upper eyelid, a soft, compressible, rhythmically pulsating swelling, of the size of half a walnut. The pulsation was attended with a continuous murmur. The anterior branches of the superficial temporal artery were much dilated, and the trunk of this vessel was so enlarged that where it crossed the zygoma it projected visibly in strong relief. The swelling seemed to be connected with an inosculation between the temporal artery and the supra-orbital branch of the ophthalmic artery, but chiefly with the former, since compression of the temporal artery nearly stopped the pulsation, whilst pressure on the supra-orbital was less effective. The simultaneous compression of both these vessels wholly arrested pulsation and murmur. She had previously been seen by Mr. Hulke six years before, when the swelling was not larger than a currant, and then declined to submit to any treatment. Subsequently, she said, she entered a metropolitan hospital, where her resolution was confirmed, and any direct interference condemned. The growth of the tumour at length alarmed her, and she was willing to submit to whatever might be advised. It was decided to try compression of the feeding vessels first, and a compressor, acting on the temporal artery at the zygoma, and also against the upper orbital margin upon the supra-orbital branch, was constructed and perseveringly worn till June, without, however, any beneficial effect on the swelling, except during the time it was actually on. Juno 14: Galvano-puncture. The swelling became firmer, but pulsation was not wholly arrested. July 1: Galvano-puncture repeated. On both occasions the blood-current was arrested by pressure on the vessels at each side of the swelling. This was followed by increased firmness and diminution of the pulsation, which wholly ceased on the 3rd. On the 10th the swelling had very evidently shrunken and was quite hard. The dilatation of the temporal artery had greatly decreased, but this vessel is soft, and certainly not plugged. August 3: Only a trace of the knot remains. The temporal artery and its anterior branches are as small as, or perhaps less than, those of the other side.

Case 2.—J. D., aged twenty-eight, a hammerman, of rather small but sinewy figure, was admitted on May 20 last into Forbes ward, with very extensive cirsoid disorder of the arteries of the scalp. Behind both ears are large, prominent, visibly pulsating swellings, reaching from the mastoid region inwards, and blending across the middle line. Above, they thin out insensibly, on the right side being continued forwards and inosculating with varicose posterior branches of the superficial temporal artery. Below, they reach downwards to the meeting of occiput and nape. From the lower margin of the mass on each side the extremely dilated trunk of the occipital artery passes downwards under cover of the mastoid process; and here compression of it upwards against the skull greatly reduces, in fact almost stops, the pulsation of the masses above. The whole tree of the superficial temporal artery on each side is enlarged, especially the posterior branches, and in particular those of the right side. The pulsation is rhythmical, it slightly precedes the wrist-pulse, and is accompanied with a continuous loud rough murmur. Beneath the pulsating occipital masses the surface of the skull (when the masses are emptied of their contents by pressure) feels irregular, as if from outgrowths of bone, but these are apparently not in structural connexion with the vascular tissue. The whirring noise greatly distresses him, and he has severe headaches, increased by any exertion, which he describes "as if the roof of my head was being lifted quite off." He had a feeble, rather slow pulse (56 per minute), and he was dyspeptic; his temperature 97·6° Fahr. His head was shaved, and covered with a large ice-bag, the dilated vessels being equally and uniformly compressed with a double-headed roller. He soon pulled off the roller, declaring that it increased his discomfort. On August 15, his general condition having improved, and his headaches being less, galvano-puncture was tried upon the right occipital swelling. Some solidification was obtained, especially about the needle connected with the negative pole, but, the skin traversed by the needle becoming grey, it was deemed prudent not to continue the current, and the needles were withdrawn. Next day the upper part of the swelling was very tender, and the branches passing forwards to the temporal artery were evidently plugged. Slight inflammation of these vessels ensued, followed by their shrinking and obliteration. The principal mass was also evidently in process of cure. Small superficial circular eschars fell off at the needle-holes, drying up and leaving the cutis already cicatrised at the time of their exfoliation. At the end of June he had a rather obstinate diarrhœa, and once he spat a little blood. His lungs were found to be slightly emphysematous, and the heart's first sound a little rough. He obstinately refused to submit to any further treatment, and insisted upon having his discharge. His manner whilst in the hospital had always been odd, and it was said that he had been in a lunatic asylum.

LONDON HOSPITAL.

MALIGNANT INFILTRATION OF AXILLARY GLANDS.

(Under the care of Mr. MAUNDER.)

A. B., a male, aged thirty, said that he noticed, about twelve months ago, a painless swelling just above the right elbow on the inner side. Swelling of the arm-pit and of the upper extremity began about three months since, and steadily increased; otherwise his health is good.

Clinical Remarks.—The prominent features of the case, which attract one's attention, are great œdema of the extremity and great fulness of the axilla; the latter being doubtless the cause of the former, and containing a something which interferes with the return of blood through the axillary vein, thus causing œdema. The fulness of the axilla may be explained by the presence either of abscess, or of aneurism, or of enlarged glands. With regard to abscess, there is neither heat, tenderness, nor fluctuation; so it is not that. Touching aneurism, though I feel confident about it myself, I may find it difficult to convince you in the negative. The swelling is not circumscribed, and is therefore not sacculated. If it were diffused, the swelling would be soft in some places and hard in others, while the integuments would be more or less ecchymosed. There is a pulse at the wrist, and I believe I appreciate a slight bruit over a part of the pectoral region. Both of these signs might be present with or without aneurism. The axilla is distended with material of equable consistence throughout, and the integument is adherent throughout, and hard and brawny; the contents of the space being concealed, and these and its walls bound together by an infiltration, rendering the whole solid and inelastic. Some of the minute veins are varicose. I have no doubt the patient is the subject of scirrhous cancer, beginning in the epicondyloid gland, and nothing can be done to arrest the disease. Cases of primary cancer of the glands being comparatively rare, I may mention that a very similar case came under my care about fifteen years ago, also in a male adult, thirty years of age. In this instance the disease apparently commenced in the axillary glands, and when I saw the patient he was almost moribund from hæmorrhage from an ulcerated opening in the floor of the axilla. The history was obscure, but it was agreed in consultation both to determine the nature of the swelling and find the bleeding vessel, if possible, by operation. I laid open the anterior wall of the axilla, and, after scraping away cancerous substance, placed a ligature on the axillary artery. The man died the same afternoon, but without a repetition of the hæmorrhage. The post-mortem examination disclosed cancerous infiltration of glands and walls of the axilla, and a large hole in the artery.

[The above case and the appended remarks are, though not new, of sufficient interest to justify republication.]

RUPTURE OF QUADRICEPS TENDON.

(Under the care of Mr. RIVINGTON.)

Jeremiah McC., sixty-two, was admitted January 10, 1876. A few hours before admission, as he was walking along the street, he slipped and fell on his right side into the road, his left leg being turned under him in a way that he could not intelligibly explain. He could not walk from the spot, nor even stand without aid. When examined on the couch in the receiving-room, and asked to extend the leg from the hip, he could not by any effort do so, although he could bend the knee; and when the heel was supported he seemed to straighten it, but this was apparently due to the weight of the limbs. A depression was found close above the upper border of the patella, and when the tissues were grasped betwixt finger and thumb an interruption in the continuity of the quadriceps tendon was found. The outer retinaoulum could be very plainly recognised on account of the looseness of the patella, which was very movable. The upper boarder could be tilted up when the patella was pressed upon below. There was neither bruising nor effusion into the joint. Looked at superficially there was nothing to indicate the nature of the injury but some prominence of the patella and the depression at its upper border. By the following day the joint had swollen. The limb was placed on a back splint and elevated, ice being applied to the knee. The patient made a good recovery, and, after union of the tendon, was discharged with a knee-cap.

RUPTURED LIGAMENTUM PATELLÆ.

(Under the care of Mr. RIVINGTON.)

Henry F., forty-seven, was admitted the day after the preceding case. Whilst assisting to remove a flagstone from a cart, the stone rolled over and struck his chest. He threw his body back and tried to save the stone. He did not feel it strike his knee. He was unable to walk to the hospital. On admission the patella was much drawn up, and a distinct hollow could be felt below it. The patient was unable to extend his leg. The joint was much swollen. The ligament united firmly, with great thickening and three quarters of an inch lengthening. The treatment was the same as in the last case, and a knee-cap was supplied.

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Medical Times and Gazette.

SATURDAY, JUNE 9, 1877.

HOMŒOPATHY AND HOMŒOPATHS.

Two letters have recently appeared in the *Times* which must surely have been composed by some laughter-loving god or devil of our medical mythology. One was a reprint from the *Lancet* of a letter addressed to that paper by "Dr. Richardson, F.R.S."; the other an effusion, hot and burning as lava, from the pen of "Alfred C. Pope, President (*elect*) of the British Homœopathic Congress." The former was full of that beautiful sympathy, generosity, and enthusiasm which Dr. Richardson invariably displays when he comes prominently before the public. He is happy, for he has found a way of peace and reconciliation between Homœopathy and old Physic. An elderly homœopathic practitioner had called upon him and had intimated that homœopathy was no more; that all homœopathic tenets had been abandoned,—except where they had still adherents; and that at last the time had come about when the great medical schism might be condoned, and the recusant followers of Hahnemann, having given up all Hahnemann ever taught, might now be received back again into the bosom of the profession. Here there is nothing but that pleasant blandness, that placid kind of intercourse for which some of our chiefs in the profession are so remarkable; but this would not suit the more fiery tempers of some of our would-be *confrères*, who will none of us on such terms. The "President (*elect*) of the Homœopathic Congress" promptly rushes to the rescue, and produces that rousing bit of writing in the *Times* of Monday to which we have alluded. However, to come to the point, Dr. Richardson's correspondent treats us firstly, as they say in Scotch sermons, to a short account—very inaccurate, by the way—of Hahnemann's life; but, says he, we admit that the views expressed by Hahnemann were often extravagant and incorrect. It is unwise, says he, and incorrect to assume the title of homœopathist, since we make

frequent use of all remedies of a simple kind, such as occasional aperients, anodynes, opiates, anæsthetics, tonics, galvanism, hydropathy, Turkish baths, and mineral waters. Finally, the use of the infinitesimal is practically all but abandoned. All these recantations must be very good for the individual who makes them; but the "President (*elect*) of the Homœopathic Congress" (the gentleman, by the way, signs himself "M.D.," but we are unable to trace the fountain of honour whence the dignity is derived) writes in a different style. According to this homœopathic authority, the recantation, the *amende*, should come from the other side; but let him speak for himself:—

"The simple fact is, that by the most thoughtful and scientific physicians of the day 'all the dogmas of homœopathy' are, to a very large extent, practically accepted, taught, and acted upon. To renounce them would be to revert to the therapeutics of forty years ago. The mode of studying the actions of medicines first promulgated to any considerable extent by Hahnemann is that now generally adopted. Two-thirds of the suggestions for using remedies in the most popular text-book on therapeutics are homœopathic. The dosage of such remedies is described as small in the extreme when compared with that formerly taught. These remedies are directed to be used singly, and not in combination with others. These are the 'dogmas of homœopathy,' and they are, I assert, taught in more than one London hospital at this hour. It is bigotry and intolerance that must be renounced, and their places supplied by courtesy and patient inquiry. Then, and not till then, will the profession be reunited. Then, and not until then, will the sick derive that full advantage from the entire field of therapeutics to which they are entitled."

Such harmony of views and aims, such brotherly sympathy in wrongdoing, is surely refreshing; but whilst accepting Dr. Wyld's letter and that of its godfather as the writings of amiable enthusiasts, we have otherwise to deal with those of "Dr." Pope. It is now tolerably well and generally known that there is a great split in the homœopathic camp. Certain gentlemen, bursting with a fulness of inspiration which cometh not of knowledge, have instituted what they are pleased to call a School of Homœopathic Medicine in connexion with that institution which has so long wasted its sweetness on the ungrateful air of Bloomsbury—the Homœopathic Hospital. But, again, certain of the more eminent of the homœopathic body, notably Drs. Quin, Drysdale, and Dudgeon, have protested against this. These gentlemen object to any such title being given to any such school, and, with many others, have publicly protested against it. Now, the beauty of the whole matter is, that these gentlemen have been severely taken to task in a printed letter by this same "Dr." Pope for thus objecting to the title of "Homœopathic School," but, with generous inconsistency, he asserts in the *Times* that the dogmas of homœopathy are taught in more than one London hospital at this hour. The dilemma seems to us perfect. If this last statement, as made by "Dr." Pope, be true, why start a school of homœopathic medicine? If not true—well, we leave the rest of the deduction to what the saying calls the "meanest capacity."

But, to pass from this particular phase of what should have been a dead and gone controversy, we would desire to say a few words for ourselves on the matter. We think that all such attempts as that fathered by Dr. Richardson and Dr. Wyld are premature and ill-advised. If matters were left alone there is a gradual change of practice going on which may some day result in unity, but it is impossible with the present feeling of the profession to bring this about in a day. Still less is there likely to be any general expression of feeling similar to, but in a contrary sense to, that which drove homœopaths from the ranks of orthodox medicine in 1851. At the present day there is less intolerance and more breadth of sympathy, or at least we are fain to think so, than there was at that time. But the growth of this feeling has been, and still must be, very gradual; nor are effusions like that of "Dr." Pope likely to advance the spread of such opinions. It is perfectly well known that many homœopathic practitioners have given up almost every shred of homœopathy save what they are pleased to call the "law of similars." This law we reject, as we do that of contraries. Therapeutics is not a science of deduction. It has no hard-and-fast principles which vary not. As far as it is a science at all—and we do not see that it can well be called a science—it is as yet in the stage of simple observation. Induction in therapeutics has not yet been carried to laws. Whether it ever can be is not for us to say, having no faculty of prescience. Meantime, here we rest, having no faith in similars or contraries, but only in that knowledge which wise men have from time to time carefully noted, and which tentatively we apply in each case as it comes before us to the best of our humble ability. But though this implies the use both of knowledge and wisdom, it is not science; it cannot be worked out like an algebraic equation, nor even by the differential calculus. The human frame is infinitely various, and the limits of variation we know not. Why, therefore, should doctrines so coarse and crude as proposed by homœopathic writers be accepted by us? Are we, let us say, to treat a man labouring under uræmic coma from uræmic poisoning for the symptoms of coma (*similia similibus*), or as careful observation of the general condition has suggested to those best qualified to judge?

Now, in homœopathy the professed practice is to go, as all homœopaths declare, by the law of similars; but when we come to inquire what law of similars, and by whom educed, the answer is not satisfactory. The so-called "provings," of which so much is said, are worth, in perhaps something more than nine cases out of ten, less than the paper they are written on. That is true from the days of Hahnemann downwards; and even if it were not, the method of inquiry of which so much is boasted is not homœopathic except in its absurdities.

The question of dose has always been a troublesome one to true homœopaths. We believe it to be true that the infinitesimal dose, though founded on a wise principle—viz., that no more medicine should be given than is necessary to effect the purpose had in view—was practically resolved by the prosecution of Hahnemann for dispensing medicines without an apothecary's licence. Hence arose the practice of sending medicine by letter—always expensive, and then much more so than now. To avert the difficulty of the small dose the fabulous absurdity of dynamisation had to be invented, and some still profess to believe in the immense efficacy of the thirtieth dilution. Most, however, we imagine, prefer the mother-tincture. This mother-tincture is made to represent as nearly as possible the expressed juice of the plant, varying consequently in strength at different times (always, however, stronger than our tinctures), and varying in dose. In the British Pharmacopœia we go on another principle—we endeavour to make all tinctures of the same dosage.

To search out and to declare all the weaknesses, all the absurdities, all the nonsense in the homœopathic system, would only weary our readers. Need we point out this cardinal one, that to a true homœopath, disease, however complicated, is but a bundle of symptoms, to which he has only to fit a remedy with, as nearly as possible, according to their ridiculous scheme, the same train of sequences as the malady—*et, voilà tout*, the disease is settled! Not so with us; we have such a thing to fall back upon as pathology: they have not. Is it to be wondered at that the better informed members of the homœopathic body should desire to obtain some more definite resting-place for their feet than they now possess, or that the more ignorant and presumptuous among them should be angry at being thus left in the slough—shall we say, of despond? It is plain that the time for reconciliation has not come yet.

In Thursday's *Times* appears another letter, this time from Dr. David Dyce Brown, who, as is usual in such cases, carefully appends his address in London, and *all* his titles and *all* his appointments; and he is still more zealous, still more furious than "Dr." Pope. Now, Dr. David Dyce Brown is comparatively a young man, a proselyte to homœopathy—shall we say, a pervert from orthodox medicine?—and, like most young men and all young perverts, eager for the fray. Some little time ago Dr. David Dyce Brown did us the honour to invite us to a controversy on certain articles he had contributed to the *Monthly Homœopathic Review;* we did then as we do now————leave him to himself.

HOSPITAL REPORTS AND HOSPITAL HYGIENE.

In a previous number(a) we invited attention to what seemed to us the general faults and shortcomings of hospital reports. We propose to offer some further remarks upon this subject, including in our survey this time the reports of several metropolitan as well as provincial hospitals, and making them occasion for comment upon certain points of hospital administration.

The great majority have the defects which we noted in our last article. They are briefly these:—Want of statistical abstracts giving those practical items of information which persons interested in hospital administration care to know; want of uniformity of plan in the statement of accounts, such as will facilitate comparison between those of different hospitals; absence of scientific value in the accounts of the diseases and injuries treated; absence of any sanitary report.

Instances of hospitals issuing reports of greater or less scientific value are the London, University College, Charing-cross, Westminster; and among special hospitals the Fever Hospital (Islington) and the National Hospital for the Paralysed and Epileptic (Queen-square). These reports give, with more or less fulness, a statement of the sanitary condition of their respective hospitals, and their accounts of the in-patients' diseases are invested with real clinical interest. These, however, are exceptions; the great majority have merely an economic value. Now, however humble the scope of a hospital report, it seems to us that an official sanitary statement should be an invariable and prominent feature. We mean by this a full and frank disclosure of any unhealthiness which may have existed in the hospital during the preceding year, and of the cause of such unhealthiness so far as could be ascertained. The tests of its sanitary state will be the quick or slow healing of wounds and injuries; the general health of the resident officials, nurses, and servants; and, above all, the prevalence or absence within its walls of erysipelas or other traumatic infection. But not only is all such information (even in hospitals where these diseases have been notoriously prevalent) often withheld, but the accounts of the in-patients' diseases are so given as to preclude the possibility of getting at it. The latter simply state the diseases for which patients were admitted, but are wholly silent about the diseases they afterwards contracted in hospital. It comes to this, therefore: that information may usually be looked for in a hospital report on most matters touching its welfare except one—viz., its sanitary condition. But surely the health of a hospital is (or at least ought to be) not less a matter of concern to the subscribers than its financial condition; and, if so, a proper sanitary report, in terms intelligible to the ordinary lay reader, becomes a most important part of every hospital statement.

The truth is, we suspect, that very few hospitals possess the materials for compiling such reports with any accuracy, even should this be desired. In few is there any special and systematic registration of infectious diseases (traumatic or other) originating in the hospital, among patients or attendants. We mean by traumatic infections, such septic diseases as erysipelas, diffuse cellulitis, pyæmia, clot-softening, phagedæna, gangrene—diseases which, when prevalent in a hospital, are the surest criteria of unhealthiness or defective administration. To these we would add another affection of less gravity to the patient, but of no less importance in its hygienic significance—the so-called "hospital throat." Of these and any other cases of disease (infectious or non-infectious) arising in a hospital there should be a weekly return, showing at a glance the following particulars:—Name and age of patient; date of admission; disease for which admitted; ward and number of bed; number and nature of cases in said ward during the preceding week; nature and date of appearance of supervening disease; whether isolated, and, if so, when and where; medical attendant; result.

Besides (1) infections *originating in* the hospital, the weekly sanitary report should further show (2) all infectious cases admitted *from without*, and (3) all offensive cases—*i.e.*, cases tending to foul the ward in which they are placed. Such a return made on printed forms could be filled in by the resident medical officer or registrar in a very few minutes, and should be presented by him to the committee of management, or whatever body may be responsible for the sanitary supervision in the hospital, at its weekly meeting. Mr. Netten Radcliffe,(b) in his recent sanitary reports on different hospitals, lays great stress on the imperative need for such weekly returns. He shows how, without full and frequent information under each of the above three heads, anything like sustained efficiency in the sanitary administration of an ordinary hospital is hopeless. Without the first requirement, he insists, it is impossible "to gauge accurately the wholesomeness of the wards"; without the second and third, it is difficult to *keep* them wholesome—*i.e.*, to "maintain the needful control over liabilities to ward-pollution and infection."

As it is only from weekly returns such as these that any trustworthy sanitary report for the year can be compiled, so in the absence of the latter, of course, any authentic historic record of the hospital-health during successive years cannot exist. Further, it is only by such minute registration and close study of the traumatic infections, with their accompanying circumstances at the time of their occurrence, that we can ever hope to accumulate such data as will enable us to differentiate their causes, and clear up our present very vague knowledge of their etiology. If anyone wants further illustration of the ulterior practical value of such sanitary records, let him study Mr. Radcliffe's reports just mentioned in particular his last, on the Manchester Royal Infirmary. He will there have practical illustration how, simply for want of such records, Mr. Radcliffe has again and again to halt on the threshold of some tempting line of inquiry.

The great majority of hospital reports, for lack of any official sanitary registration, say either nothing at all, or else make the vaguest general statements about the year's health of their respective institutions. Others, admitting the prevalence of some septic disease within their walls, try to explain away its serious significance by assertions which ignore all the recent teachings of hygienic research. Thus, the committee of management of a London general hospital states, in its last annual report, that an unusual number of cases of erysipelas had occurred in its wards during the year. (What the number of cases was, and what their result, cannot be gathered from any portion of the report.) But lest this epidemic of erysipelas should be thought to reflect on the efficiency of the hospital administration, the

(a) *Med. Times and Gaz.*, December 23, 1876.

(b) Those on the Oxford Infirmary, the Norwich Hospital, and the Manchester Royal Infirmary. These reports will abundantly repay close study by all interested in hospital administration. They will be found to bear just the same relation to dry hygienic teachings, as flesh-and-blood clinical lectures on *cases of disease* bear to scientific accounts of the same *diseases*.

committee immediately adds that the same prevalence of erysipelas had been common at most of the London hospitals. The drift of this statement of course is, that the cause of the epidemic was something too occult and too widely diffused for the committee to cope with. They then make the admission, without betraying a shadow of uneasiness, that after taking certain active measures of cleansing and disinfecting they had nearly stamped out the disease. So that it really looks as if, after all, certain local conditions in the hospital itself had caused the erysipelas; and, if these had not been allowed to exist, or had been earlier rectified, the disease would never have got a foothold in the wards.

Another report—that of a provincial general hospital—makes a similar confession of successive outbreaks of this disease in its wards at different times through the year; guarding the disclosure with a reminder that during part of the year the disease had been prevalent in the town, as well as with a stout assertion that its prevalence in the hospital had nothing to do with any defect in its hygienic arrangements. (We note, by the way, with surprise, that the committee which talks in this fashion counts among its members certain of the medical staff.) The absoluteness and self-complacence of this assertion would provoke a smile, could one shut out all thought of the error it has probably helped to disseminate, and of its capabilities for practical evil to the hospital in question. A strong statement of this sort, made in the teeth of all sanitary teaching to the contrary, should be backed by strong proof; and, in the absence of any proof whatever in favour of this particular assertion, we utterly disbelieve it. To maintain that erysipelas is unavoidable in a hospital when prevailing in the town about a hospital, is a most unwarrantable assumption. It is at variance with the known facts that this disease has prevailed outside a hospital and yet not prevailed within; that it has prevailed within hospitals when not prevailing outside; and further, that in every recorded instance in which it has prevailed within a hospital (whether rife in the town or not), and in which the hygienic condition and arrangements of that hospital have been examined by *an outside competent authority*, the latter have been found defective. Epidemic influence (so-called) is no excuse for a septic disease running riot in a hospital. What this "influence" is—*i.e.*, why erysipelas and other kindred diseases should be rife about the country at one time, and comparatively absent at another—is not yet made out. But, be this influence what it may, thus much seems proved: that it is, at any rate, very feebly operative except in the presence of local sanitary defects. Though it may occasionally visit, it never gets a foothold in a hospital which keeps itself always sweet and clean, and promptly isolates the intruder whenever he comes.

THE WEEK.

TOPICS OF THE DAY.

After a somewhat protracted inquiry the proceedings in connexion with the proposed Birmingham United Drainage Scheme came to a termination last week, and Mr. Harrison, C.E., will now report to the Local Government Board. Opposition was withdrawn on the part of the Handsworth and Aston Boards; and Mr. Dugdale, on behalf of the Birmingham Corporation, produced a draft of the proposed clauses of the Provisional Order for sanction by the Local Government Board, which had been drawn up by the Town Council and submitted to the various representatives of local authorities for approval. There are nine districts, exclusive of Birmingham, included in the proposed area, and it was resolved that one representative should be chosen from each of these, except Aston Urban Authority, which should be represented by two members. It is a subject of congratulation that affairs have thus been amicably arranged, since it was announced by the Birmingham Corporation, the original promoters of the scheme, that unless the opposition on behalf of the Handsworth and Aston Authorities was withdrawn the whole scheme would be abandoned, and resolutions to that effect were actually passed at a meeting of the Birmingham Town Council.

The Government Bill dealing with the question of the Canal Population is now before the House of Commons. It proposes to inflict a penalty not exceeding forty shillings on the master, and also on the owner if he is proved to be in fault, for every occasion on which a canal-boat shall be used as a dwelling at night, unless it has been registered under this Bill, or on which it shall be used as a dwelling at night for more than the number of persons of the age and sex for which it is registered. The registration authority, or rural sanitary authority, if informed that a person dwelling on a canal-boat is suffering from an infectious disorder, shall cause such steps to be taken as may seem to them requisite to prevent it from spreading, and may exercise the power of removing such person, and may also, if need be, detain the boat. The Bill is to come into operation next New Year's-day, and does not extend to Scotland or Ireland.

It may be remembered that a question was recently put in the House of Commons with regard to a case of alleged starvation in the Isle of Wight Workhouse. The Guardians have now received a letter from the Local Government Board, stating that the evidence before them confirmed the verdict at the coroner's inquest that deceased died from starvation. Two nurses are discharged, the master is censured, the medical officer requested to resign, and his deputy debarred from future employment in any similar capacity.

A Mr. W. Strother appeared at the Hammersmith Police-court, last week, to answer a summons at the instance of the Kensington Vestry with respect to several houses which were in an offensive and dangerous state. The Vestry Clerk said the property referred to consisted of five houses in Virginia-place, Notting-hill, commonly known as "Devil's-alley." The defendant was agent of the property. The inspector of nuisances had visited the property that morning, and had never seen houses in a more wretched and offensive condition. A number of persons had taken possession of them, and were living there without paying any rent. Most of the woodwork had been removed, there not being any doors, windows, or bannisters, and the houses were tumbling about their ears. It was useless to ask the magistrate for an order for their repair, as they ought to be demolished. There was no water-supply or drainage, and the houses altogether were in a dangerous state. The magistrate on referring to the Act said the owner or occupier must be summoned. The Vestry Clerk pointed out that there were no occupiers within the meaning of the Act; he submitted that the defendant was the owner. Mr. Bridge, after hearing the defendant on oath, made an order for the houses to be closed until rendered fit for habitation.

Last year Madame Christine Nilsson gave a concert in aid of the funds of the Westminster Training School and Home for Nurses, founded by the late Lady Augusta Stanley, upon which occasion nearly £1000 was added to the funds. On Wednesday morning last, Madame Nilsson repeated her benevolent experiment by giving a second concert at St. James's Hall, and it is to be hoped that the result will prove equally satisfactory. During the period that the Home has been in existence it has rendered efficient service in the training of nurses, and increased funds will enable the managers to extend the sphere of its usefulness.

Sunday, the 17th inst., is the date fixed by the promoters for this year's "Hospital Sunday," when the annual collections will be made in aid of the funds of the metropolitan hospitals and dispensaries. It remains to be seen whether the

movement has really taken root in London, and is likely to go on progressing as predicted by the original founders. Up to the present time it certainly has not realised the expectations which were formed regarding it, and the several amounts collected compare unfavourably with the sums subscribed in many country towns, their relative wealth and importance being duly considered.

The well-boring experiment at Messrs. Meux's brewery in Tottenham-court-road has resulted in a failure. A contemporary says:—"All hope of coming upon inexhaustible streams of water below the lower green-sand is now definitively abandoned. Perhaps the most unexpected result of these borings is the discovery that not only is the whole series of secondary formations (with the exception of the chalk and the green-sand) absent, but even some of the upper paleozoic or primary rocks are also missing. Up to a few weeks ago no one could be quite sure that there were not lying beneath the earth, between the chalk downs of Epsom on the south, and of Dunstable on the north, supplies of coal sufficient for the domestic use of London and its suburbs for ages to come. But Messrs. Meux's experiment has at least determined the fact that no coal will ever be found under New Oxford-street, nor, in all probability, under any portion of this part of the country. The last stratum bored through is now proved by its fossils to be Devonian. It is a very hard shale, resembling slate in colour, though not splitting so easily. This discouraging kind of core was found immediately below the green-sand at a depth of 1100 feet; and at forty feet lower, where the boring was finally discontinued, the diamonds were still cutting through this substance. The so-called green-sand cut through in these operations is represented only by sandstone and limestone; and hence the pieces of cores, which vary in length from fifty feet downwards, can fortunately be easily put together in unbroken succession without chance of disturbance."

In a report on the vaccination of children born in Scotland in the year 1875, Dr. Robertson, of the General Registry Office, Edinburgh, renews his representation that vaccination, except in cases in which it is postponed on medical authority, should be compulsory before the termination of the fourth (instead of the sixth) month of infant life. He shows that among the children born in Scotland during the year in question, and supposed to be alive at the age of six months, as many as 2575 had, when the period arrived for enforcing vaccination, been removed from their district, or otherwise lost sight of by the registrars, without any record of their being vaccinated. There were also 190 other children reported constitutionally insusceptible of vaccination, and it is all but certain that that will not be a life-long condition in most instances, as the report made merely indicates that from some cause or other two attempts to vaccinate had proved abortive. From this showing it therefore follows that 2765 of the children born in Scotland in 1875, when arrived at the age of six months, were not protected against small-pox. The deaths from this disease in Scotland in 1876 were certainly returned as twenty-eight only, but the epidemic of 1871-73 is too recent to have been forgotten, and the present outbreak in London should be regarded as a warning, since the existing system of vaccination cannot be a perfect protection. The Registrar-General for Scotland concurs with Dr. Robertson in recommending an abridgment of the period allowed for vaccination, so as to assimilate the law to that now in force in England, and he further adds that such an alteration would not be likely to encounter any opposition of the slightest consequence.

We are pleased to learn that Dr. Habershon, who has for some weeks been seriously ill, is now thoroughly convalescent, and has left London for change of air. His illness appears to have been caused by over-fatigue and chill. His health is now so much improved that it is confidently anticipated that at the end of this month he will return to town fully prepared for the performance of all his usual professional duties.

THE PUBLIC HEALTH (IRELAND) BILL.

A DEPUTATION of the Irish Medical Association, consisting of Dr. A. H. Jacob, chairman of Council, Dr. T. W. Grimshaw, and Dr. A. O. Speedy, waited on Sir M. Hicks Beach, Bart., Chief Secretary for Ireland, on May 17, for the purpose of calling his attention to several matters in connexion with the working of sanitary legislation in Ireland. Among the members of Parliamont who accompanied the deputation were—the Hon. D. Plunket, Dr. Lyon Playfair, Dr. Cameron, Mr. Mitchell Henry, Mr. Butt, Q.C., Dr. Brady, and several others. There were also present—Dr. Alfred Hudson, ex-President of the King and Queen's College of Physicians, the newly appointed Crown nominee for Ireland on the General Medical Council; Dr. Rawdon Macnamara, representative of the Royal College of Surgeons, Ireland, on the General Medical Council; and Dr. Stewart, Secretary of the Joint Committee on State Medicine of the British Medical and Social Science Associations. After some remarks from Drs. Macnamara and Brady, M.P., in which they signified the assent of the Council of the Irish College of Surgeons to the objects sought for by the deputation, Dr. Jacob proceeded to state the views of the deputation. They had been moved to action by the fact that the Public Health Act now existing in Ireland had not worked satisfactorily, and with the hope that, as a Bill was now before Parliament dealing with the question, they might succeed in inducing the Government to remedy the defects of which the medical profession complained. We cannot give his able statement at all fully; but the deputation considered that the causes of the failure were—(*a*) want of supervision by a central authority, (*b*) want of local supervision by superintending officers of health, and (*c*) insufficient payment. Although Clause 10 of the Act evidently contemplated the appointment by a sanitary authority of a superintendent officer of health, no such appointment had ever been made; and although consulting sanitary officers were appointed, they were workhouse officers, did not occupy a position of independence, and could not take the initiative with respect to the reporting of nuisances. The deputation therefore urged upon the Government the necessity of providing some system of inspection which would be independent of the boards of guardians. They complained also of the inadequate pay of the sanitary officers, the Local Government Board having restricted the sanitary authority from giving these gentlemen a greater payment for the discharge of their sanitary duties than one-fourth of their salary of £100 a year as dispensary doctors. Thus the sanitary officers could not receive more than £25, and in some instances the payment given them was as low as £5 and £10 a year. They also proposed that the name of sanitary officer should be changed to that of officer of health. Drs. Grimshaw and Speedy having supplemented Dr. Jacob's remarks, Sir M. H. Beach said two of the points which had been brought before them were matters for legislation. The proposed change of title was rather a matter of sentiment, and he saw no reason why it should not be conceded. The second point—viz., the remuneration which should be awarded to sanitary officers when appearing as witnesses in sanitary prosecutions—was a more difficult one. He presumed the claim was made because they were skilled witnesses, and their time was therefore of more value than that of ordinary witnesses. With regard to additional inspection, he did not think it would be possible to appoint additional medical inspectors solely for the purpose of carrying out the Public Health Act, but he should consult his colleagues on the subject, and consider whether more supervision could not be given for the purpose of carrying out the

Act more efficiently. With regard to the scale of salaries, he was himself very willing that it should be raised, subject, of course, to that which it was very difficult to obtain—namely, the consent of the Treasury. The deputation must bear in mind that the Government had been endeavouring to increase sanitation, as it was called, and to improve the public health of the country, often against the desire, and sometimes with the active resistance, of the local authorities. The whole subject should have his careful attention, and he hoped before the Bill was considered in committee he would be in a position to state what could be done with regard to it. He did not make any promise on the subject, as it was necessary to consult his colleagues of the Local Government Board and the Treasury before doing so. The deputation then thanked Sir M. Beach for his courtesy, and retired.

SOCIAL SCIENCE ASSOCIATION AND CORONERS.

The Council of the Social Science Association has transmitted the following resolutions to the Home Secretary:—"1. That, in the opinion of this Council, a Parliamentary inquiry into the mode of appointment, the office, duties, and jurisdiction of coroners, is imperatively demanded. 2. The Council draw attention to the fact that the office of coroner is one of high antiquity and great utility; that it has been the object of much and intricate legislation, and has come in process of time to be attended with inconveniences in respect of the constituency by which the coroner is elected, the manner of election, the abolition of a standard of qualification, the mode of remuneration, the procedure and place of holding the courts, as well as many points relating to functions, procedure, and responsibility. The Council are of opinion that in consequence of various social changes since the time of the original creation of the coroner's office, the expediency of retaining the coroner's jury, either at all, or at least in its present form, the existing relations of the coroner to the justices of the peace, and the provisions for the use of expert witnesses, have become matters demanding fresh and special arrangements. 3. That the question of inquiry into the cause of fires is one of urgency, and should be considered in regard to the appointments, duties, and functions of coroners."

INFANTILE MORTALITY IN BASFORD RURAL DISTRICT, NOTTINGHAM.

If there could be any question as to the soundness of the legislation which, under the Public Health Act, called into existence the appointment of medical officers of health, a study of the annual reports furnished by those gentlemen would be sufficient to convince the most sceptical. The statistics of the various districts, while dealing with certain peculiarities incident to each, confirm each other in many particulars. In his third annual report on the health of the Basford Union Rural District for the year 1876, Mr. V. Whitgreave, the Medical Officer of Health, calls attention to the alarming infantile mortality which prevails in that neighbourhood. Of the 913 deaths which occurred there in 1876, 322, or 35·27 per cent., were of less age than one year, the percentage in 1875 having been 30·08. Something, Mr. Whitgreave observes, must be radically wrong for the infantile mortality in this district to be 10 per cent. higher than that of the whole of England and Wales, which is only 25·38 per cent. of the total deaths. To quote Mr. Whitgreave's own remarks—"I respectfully submit that many deaths of children occur which should not take place. Criminal negligence and want of love for children constitute, no doubt, two of the great factors, regarding especially illegitimate children, who die in so immensely greater proportion than others. But I am strongly of opinion that ignorance, the result of want of opportunity for learning, is the grand operator and causation of a large infantile mortality. Many—the majority of—mothers are anxious to do the best for their offspring, but know not what the best is, neither do they know where to get the information. They cannot dress their infants in a way to prevent bronchitis, neither do they know that certain foods good for an adult will give diarrhœa and death to a baby. How, then, are they to be taught? I remember reading of, and afterwards seeing at the office of one of the registrars, a number of circulars advising all mothers to give their infants a certain sleeping nostrum, which has, undoubtedly, caused thousands of deaths. The registrars were offered a certain small payment for giving one of these circulars to every mother who registered a child. My suggestion, emanating from the above, is that the registrars of this district should be provided with a number of copies of such 'instructions to mothers' as are issued by the Obstetrical Society of London, and published by them at a very low price. I have reason to know that the registrars will be most willing to supply copies of them to those for whom they may register births, enclosed, perhaps, in the order for vaccination." This suggestion is not unworthy of consideration; but it is to be remembered that registrars are, as such, Government officials, and ought not to be allowed to distribute any papers unapproved of by the Registrar-General, even though recommending articles that have paid for a Government stamp.

THE SANITARY CONDITION OF REDRUTH.

Redruth, a thriving town of some 10,000 inhabitants, situated in the western division of the county of Cornwall, is built on two hills, divided by a valley through which runs a small stream; and it possesses therefrom natural advantages which should insure it being a very healthy town. But for many years the town has had a most unenviable notoriety for unhealthiness, periodical visitations of zymotic disease, always of virulent type, being very common. Scarlatina in particular has been prevalent, and during the last eighteen months just one-fourth of the total mortality of the town, or ninety-nine deaths altogether, have been due to this disease. The attention of the Local Government Board having been directed to the exceptional mortality from zymotic diseases, Dr. Blaxall, medical inspector to the Board, was appointed to make an inquiry into the sanitary condition of the town, and his report, which has just been published, discloses such a state of utter disregard of all sanitary laws that one is led to believe that the inhabitants of Redruth retain an undue veneration for the customs of savage life. The town possesses no drainage system, no arrangements exist for excrement removal, and overcrowding is common. In the principal street of the town the drains of the houses discharge their filth into roadside gutters, which ultimately empty into the stream before referred to. In some instances cesspits two or three feet deep are situated at the very doors of the dwellings, the liquid and black contents of which give forth a stench unbearable to those unaccustomed to such odours. The stream is the main sewer, and it receives the drainage from numerous privies and houses situated along its course. In other cases the privies discharge into large open cesspits, which are not emptied until the contents have so accumulated as to become such a nuisance as seriously to interfere with the comfort and movements of the residents. Other privies are placed over old disused wells, in which the excremental matters have collected for years. Dr. Blaxall concludes his report with a list of recommendations; but it is very doubtful whether those who are responsible for the administration of sanitary matters in the town will act upon them. There is a Local Board of Health, but their attempts at improving the sanitary condition of the town have taken the direction of endeavouring to render their nuisances less unsightly. Dr. Blaxall states that, under a better local administration, many cases of sickness and much waste of human life might have been prevented. If those who are responsible for the conduct of sanitary matters in

Redruth continue to neglect their duty, some power ought to step in and compel them to carry out such measures as are necessary to improve the sanitary condition of the town.

ON THE TREATMENT OF AMPUTATION WOUNDS.

M. Azam made a communication on this subject to the Academy of Medicine of Paris at their last sitting. This important subject is one of great interest to hospital surgeons, and cannot be too often discussed. M. Azam described what he calls the "Bordeaux method," as follows:—The aim is to get primary union of the flaps, either along their entire edges or in part, and to avoid the retention of any discharges which this primary union might favour. A drainage-tube is inserted deep down in the wound behind the bone, the ends of which are turned up and tied together in front of the anterior flap. In order to favour coaptation of surfaces, a deep suture is put in, and then the edges of the flaps are united with fine sutures along their whole extent. Great care must be exercised in doing this; indeed, as much care is required as though one were doing a plastic operation on the face or elsewhere. Another necessary precaution is to see that all hæmorrhage has ceased before the flaps are brought together; otherwise the clot of blood which subsequently forms not only tends to prevent coaptation, but runs a risk of decomposing and giving rise to pus and other irritant and dangerous discharges. The deep suture is so arranged that if swelling takes place it can be partially loosened in order to allow for this. The fine sutures are best put on in the form of a figure of eight; they may be fortified by strips of lint dipped in collodion and laid across. Finally, the stump is covered with a thick layer of cotton-wool; the drainage-tube, however, is not covered with wool, but layers of lint are put on in order to absorb the discharges. The dressings are only changed every three or four days. If hare-lip pins have been used for the line of sutures, they must be removed on the third day; the deep sutures may also be loosened. This mode of dressing has long been in use in Bordeaux, and has given the best results: of 202 amputations—thirty of the thigh with five deaths, and thirty-three of the leg with three deaths, and 139 other (not specified) amputations with four deaths. Though this method is far from being new, it is one well worthy the attention of the French Academy: it points out certainly the great object surgeons ought to have in view—primary union—in ordering any method of dressing which they may choose; and whether or not M. Azam can, or should, or does claim any priority as the discoverer of this method is beyond the question: the results speak for themselves.

SMALL-POX IN LONDON.

The fatal cases of small-pox in London, which in the three preceding weeks had been 78, 70, and 69, declined further to 61 in the week ending June 2; 27 were certified as unvaccinated, 12 as vaccinated, and in the remaining 22 cases nothing was stated as to vaccination in the medical certificates. The 61 included 32 which were recorded in the Metropolitan Asylum Hospitals; the other 25 fatal cases occurred in private dwellings. Of the deaths occurring in private dwellings, 3 were recorded in Peckham, 3 in Islington, and 3 in Walworth. Twenty of the 61 deaths from small-pox were of children under five years of age, of whom 15 were certified to be unvaccinated. A child aged sixteen months died of small-pox on May 12, in Stratfield-road, Bromley, and was returned as vaccinated. The child had had the operation performed, but it did not take, so the child was not successfully vaccinated. Medical vaccinators should never sign certificates of successful vaccination unless they see on the arm the well-defined marks of cow-pox. "Vaccinated," used alone in a medical certificate of the cause of death, is an ambiguous term, as it is often applied to the mere insertion of lymph on a lancet under the skin, and in this sense the word is misleading, as in the case referred to. The Metropolitan Asylum District Hospitals contained 891 small-pox patients on Saturday last; in the five preceding weeks the numbers had steadily risen from 824 to 964. The number of new cases admitted during the week was 178, against 254 and 219 in the two previous weeks.

SINGULAR SOURCE OF LEAD-POISONING.

A singular instance of lead-poisoning is reported by Dr. Alford, Medical Officer of Health for Taunton, in his last annual report. The disease, as observed by him, was in most cases of a very marked character, the blue lines on the gums, the colic, and other symptoms being unmistakable. The first cases that occurred were in an isolated farmhouse. Repeated visits and analyses of water, preserves, etc., threw no light whatever on their origin, no lead being found. Then, in quick succession, a large number of fresh cases were reported in various houses, mostly isolated, several of which were very severe. They had all in common, it appeared, sent their corn to be ground at the same mill. Dr. Alford accordingly visited and inspected the mill, and the origin of all the mischief was at once apparent. On having the millstone raised, he found the surface of each stone honeycombed with lead. The millstone being of a very loose nature, large spaces had occurred, which of late, during the illness of the owner, had been filled up by pouring in quantities of molten lead. The first grinding of wheat after the "dressing" contained, no doubt, large quantities of the metal. Dr. Alford ordered the lead to be at once removed, but from what he heard this was by no means an uncommon method of repairing millstones. He considered it his duty, therefore to report the matter fully, in order that the public might be made aware of a dangerous source of poisoning. There were about ten pounds of lead upon the surface of the millstone, and the cavities were all filled up with the same metal.

INTERNATIONAL MEDICAL CONGRESS.

This Congress will hold its next meeting in Geneva, on September 9 and following days, under the Presidency of Dr. Carl Vogt. The work is arranged under six heads:—1. Medicine, including, among others, papers "On the Etiology of Typhoid," by Dr. Bouchard, of Paris; and "On the Indications and Therapeutic Value of Tracheotomy in Croup," by Dr. Revilliod, of Geneva. 2. Surgery: Professor Esmarch, of Kiel, "On the Bloodless Method"; "Influence of Traumatism on Pregnancy, and *vice versâ*," by Dr. Verneuil, of Paris; "On the Treatment of Ozæna," by Dr. Rouge. 3. Gynæcology. 4. Public Medicine: "Influence of Alcoholism in Mental Diseases," by Dr. Magnan. 5. Biology: Dr. Broadbent, of London, will read a paper "On Cerebral Localisations"; "Functions of the Spleen," by Dr. Schiff, of Geneva. 6. Ophthalmology: Dr. Warlomont, of Brussels, will read a paper "On the Indications for Enucleation of the Globe in Cases of Sympathetic Inflammation of the Eye"; Dr. Colladon, of Geneva, "On Tenotomy of the Tensor Tympani." There will likewise be an exhibition of surgical instruments and appliances; also of other scientific instruments used in medicine. This will be under the direction of Dr. Reverdin, whose name is well known in connexion with skin-grafting. Such a programme ought, and we venture to believe will, draw a large afflux of visitors; and as the Congress is to be held during the long vacation, and in Switzerland too, it will no doubt be thoroughly successful. Intending visitors must inscribe themselves. Names are received either by Dr. D'Espine, or M. Reverdin, of Geneva.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At the annual general meeting of the College, held pursuant to the provisions of the Supplemental Charter on Monday, June 4, 1877 (the first Monday in June), the following Fellows were

elected officers for the ensuing year:—*President:* Robert McDonnell, M.D., F.R.S. *Vice-President:* Philip Crampton Smyly, M.D. *Secretary:* William Colles, M.B. *Secretary to Council:* James Stannus Hughes, M.D. *Council:* William Colles, Richard G. H. Butcher, Rawdon Macnamara, George Hornidge Porter, Benjamin McDowel, Edward Ledwich, Albert J. Walsh, Edward Dillon Mapother, Archibald H. Jacob, Edward Hamilton, George H. Kidd, Alfred H. M'Clintock, John Denham, John K. Barton, Samuel Chaplin, Jolliffe T. Tufnell, William Ireland Wheeler, John Cronyn, and Henry Wilson.

DR. PEACOCK.

We hear that Dr. Peacock has resigned his appointment as Senior Physician to St. Thomas's Hospital. The absence of this distinguished physician and teacher will long be felt, and, although St. Thomas's can boast of several rising men, it can ill afford to lose such a man as Dr. Peacock. Dr. Ord, in the natural order of things, will become full Physician, and this will create a vacancy on the assistant staff, which, we presume, will be filled by Dr. Greenfield, who, as Registrar and Pathologist, has for some years been attached to the Hospital. Dr. Greenfield's work both here and elsewhere is fully appreciated, and we doubt not will go far to secure his election.

SURGEON TO THE QUEEN IN SCOTLAND.

The appointment of Surgeon to the Queen in Scotland—a vacancy created by the necessary resignation of Professor Lister—has been by general consensus awarded to Professor George Macleod, of Glasgow. We say by general opinion, for we are not aware that her Majesty has as yet been pleased to confer the dignity on Professor Macleod; we only re-echo the words of those we have heard discussing the subject. There is certainly no surgeon in Scotland who more deserves to be thus selected,—no more worthy man in any respect; and it is not too much to ask for the profession in Glasgow that one more should be added to their list among the honorary appointments to the Queen in Scotland.

VACANT CHAIRS IN EDINBURGH.

At the present moment there are, or are likely to be, two medical chairs vacant in the University of Edinburgh. The one vacancy is created by the resignation of the Nestor of Scottish Medicine, Sir Robert Christison; the other by the actual or impending resignation of Professor Lister. Thus the chairs of Materia Medica and of Clinical Surgery become open for candidates. The various candidates and their claims we can hardly now discuss, but we are well pleased to know that the fame of the University is likely to be amply supported by any one of those who now come forward and may be elected.

EPSOM COLLEGE.

We understand that a large meeting of old Epsomians was held on Saturday, June 2, at St. James's Hall, and that it was unanimously agreed to form a Club for the purpose of occasional meeting, the rules of which were drawn out, and the officers appointed. About forty have already enrolled themselves as original members; and the first meeting (of which there are to be three annually) will be held in July next, before which date it is confidently expected that many more will join.

HARVEY TERCENTENARY MEMORIAL FUND.

We are requested to state that subscriptions for the erection of a statue of Harvey, the discoverer of the circulation of the blood, and father of English physiological science, at Folkestone, his birthplace, are earnestly requested. They may be sent to Sir G. Burrows, Bart., M.D., F.R.S., 18, Cavendish-square, London, W., or Mr. Prescott Hewett, F.R.S., 1, Chesterfield-street, Mayfair, London, W.—the temporary honorary treasurers; or to Mr. George Eastes, M.B., 69, Connaught-street, Hyde-park-square, London, W., or Mr. W. G. S. Harrison, B.A., Town Clerk, Folkestone—the honorary secretaries; or they may be paid to the account of the fund at the Western Branch of the Bank of England, Burlington-gardens, London, W. A meeting of the committee, of which the Right Hon. the Earl of Derby is chairman, will shortly be held for the purpose of commissioning a sculptor to undertake the work.

MEDICAL PARLIAMENTARY AFFAIRS.

Vaccination.—Mr. Dodson made an attack upon the appointment of inspectors and commissioners at the debate on Supply in the House of Commons, referring more particularly to the heavy expenses in connexion with the Local Government Board and the carrying out of the Vaccination Acts. He thought that boards of guardians were harassed by the over-scrupulous supervision of sanitary inspectors, as also the various trades in connexion with the subject of adulteration. To test the feeling of the House, Mr. Parnell moved that the vaccination grant be reduced by £10,000; but only one member voted with him, and the grant was therefore approved by the Committee.

Medical Act Amendment.—The Bill for amending the Medical Act, 1858, was, on the motion of Dr. Lush, withdrawn, as he intended to move for leave to introduce another Bill.

Canal-Boats.—The Bill on this subject was read a second time in the House of Commons, after midnight during the Thursday debate, by the President of the Local Government Board, without giving rise to any discussion. After the recent disclosures respecting the generally insanitary condition of canal-boats, especially when they and their occupants are herded together in the large London basins, it is time that some measures were taken for controlling and regulating this large migratory population.

Scurvy.—Dr. Playfair inquired whether, the report on the outbreak of scurvy in the Arctic Expedition having been received from the Admiralty Committee, steps would be taken in future to prevent similar calamities, as the outbreak of scurvy was distinctly traceable to the neglect of the officer in command of the Expedition, and his failure to supply the sledging parties with the necessary antiscorbutics. Mr. Egerton's reply referring solely to the improbability of another arctic expedition being shortly fitted out, Dr. Playfair remarked that his question was not confined to arctic expeditions, and he would again call attention to the report on the motion for going into Committee of Supply.

Public Health.—Mr. Sclater-Booth obtained leave to bring in a Bill to consolidate and amend the law relating to the Public Health of the Metropolis. It was read a first time.

Cattle Disease.—Dr. Cameron asked the chief Secretary for Ireland under what provision the veterinary inspectors in Ireland were authorised to order the flesh of cattle slaughtered because labouring under pleuro-pneumonia to be sold for human food. Sir M. Hicks Beach replied that the inspectors have always had the power of deciding whether the flesh of animals slaughtered for pleuro-pneumonia is fit for human food, and this he believed to be the general practice both in Great Britain and in Ireland.

Proposed Amendment of the Medical Acts.—On Monday a deputation from the East London Medical Defence Association waited upon the Home Secretary to ask for the support of the Government to the Bill for amending the Medical Acts, which has been brought forward by the above body. The deputation was introduced by Mr. Nelson Hardy, who gave a description of the changes proposed to be made in the existing acts. The chief desideratum was that an enactment should be passed to deal effectively with the numerous quacks now practising throughout the country. In consequence of the different constructions placed by different magistrates on the words of the law, many quacks are now permitted to carry on their practices unmolested. One of the members of the deputation complained of the General Medical Council for not discharging the duty of protecting the public from unqualified practitioners. The Home Secretary, in reply, said that the matter properly belonged to the Privy Council Department, but he would make inquiries on the points affecting the magistrates, and then forward the memorial and the wishes of the deputation to the Duke of Richmond.

FROM ABROAD.

Prof. Schiff on a New Function of the Liver.

In 1861, Prof. Schiff performed a series of experiments on mammifera by ligature of the vena portæ which led to a curious result. In from half an hour to two hours after the ligature had been rapidly applied the animals fell into a state of "enormous" depression, much resembling the condition produced by a very active narcotic substance. Death supervened in from one to three hours and a half after the operation. After the consideration of various hypotheses in explanation of this result, Prof. Schiff admitted as the most probable that the economy of the mammifera always produces, as the result of the retrogressive metamorphosis of some of the tissues, a very energetic narcotic or poisonous substance, which is destroyed again in the liver, to which it is conducted by the venous circulation. After the ligature of the vena portæ this substance accumulates in the body. Since the account of these experiments has appeared their results have been confirmed by many observers, none of whom, however, admit the justice of the hypothesis. No other plausible explanation has, however, been suggested.

Having of late years found difficulty in procuring the necessary number of vigorous dogs or cats, Prof. Schiff has been obliged to delay a further pursuit of the investigation that he is now able to resume at Geneva, and an account of the progress of which he publishes in the March number of the Geneva *Archives des Sciences Physiques et Naturelles*. In defence of the hypothesis which supposes that there is an incessant production of a strong poison in the normal circulation of mammifera, it has to be proved that such a poison exists, and is rendered more active by the suppression of the hepatic circulation. If it cannot as yet be isolated, we must at least prove that the venous blood of an animal dying after ligature of the vena portæ acts otherwise and in a more deleterious manner than the venous blood of an animal dying under circumstances which do not favour an accumulation of this hypothetical substance. And in order to support the theory by analogous facts, we ought to be able to demonstrate that the liver has the power of destroying or decomposing other better-defined narcotic substances, possessed of a generally recognised energetic action.

First investigating this latter point, Prof. Schiff has made use of *nicotin*, which in minute doses caused death in a few minutes in a dog and in frogs. The experiments performed with this furnished the following results:—1. Introduced in dogs and frogs in more than double the dose which proves fatal in the cellular tissue, but introduced into the intestine without coming in contact with the mouth, œsophagus, or lower part of the rectum, it neither kills nor produces "alarming" symptoms—no cramps or convulsions. In half an hour the animal is well again. 2. It is the same with dogs when the kidneys have been extirpated to prevent the elimination of the poison by the urine. 3. An injection which is not too concentrated into the ramifications of the vena portæ, the substance of the spleen, or the coats of the intestine, has not more effect. 4. Moleschott's statement has been confirmed, that frogs may live a long time without disturbances after ligature of the liver and all the hepatic vessels. 5. A frog, the liver of which has been tied, dies when one-thirtieth of a drop is injected into a noose of the intestine. 6. If the liver has been tied, a frog dies after the injection of one-eightieth of a drop into a lymphatic sac, while a healthy frog will survive such an injection, and not exhibit any very characteristic symptoms. 7. Other lesions or ligatures do not diminish the tolerance of frogs for small doses of nicotin. 8. Frogs after ligature of the afferent vessels of the kidneys will bear the injection of one-twentieth or even one-fifteenth of a drop into a lymphatic sac without symptoms of poisoning. 9. If the liver of a rabbit or a large piece of one of a dog be triturated in a mortar, and four drops of nicotin rapidly mixed with it, the red juice pressed from this through a cloth may be injected into the cellular tissue of a small dog without killing it or producing "alarming" symptoms. 10. But if for liver the kidneys are substituted, violent poisoning is produced, which is not the case when the juice of the kidney, uncombined with nicotin, is employed. 11. The effects of these last experiments are still more marked in the frog. 12. In dogs a complete and partial ligature of the vena portæ does not suffice to render the dose indicated poisonous when injected into the intestine. 13. It is often said that the economy may accustom itself to a certain extent to the action of nicotin, successive doses acting less powerfully. This is not the case with frogs, when, after the effects of the first or second fractional doses have passed off, the liver or vena portæ is tied. In this case a far smaller dose will now prove fatal.

In these experiments with nicotin, the liver destroyed its lethal properties, and prevented convulsions, fibrillary contractions, tetanus, and the "alarming" symptoms in general. But other less serious symptoms have exhibited themselves when the injection has been made into the ramifications of the vena portæ, viz.:—1. The respiration becomes almost immediately deeper and more accelerated, with active inspiration. This symptom disappears in from six to eight minutes, and often even sooner. 2. Temporary acceleration of the pulse. 3. More or less complete disappearance of tactile sensibility in all the extremities—which, however, does not impede locomotion; and the insensibility does not extend to the sensation of pressure and pain. 4. Alterations in the eye when a large dose has been rapidly introduced. 5. Sometimes retching and vomiting when the dose has been a strong one. 6. The vagus loses for a short time its arresting power over the pulsations of the heart. 7. The oscillations (which are wrongly termed respiratory) in the cardiac pulsations disappear. With all these symptoms the animal still does not appear very ill; but they seem to indicate that the liver only destroys a portion of the symptoms produced by the nicotin, while the other portion persists. The liver would seem to produce a kind of separation (*dédoublement*) of the toxical effects of nicotin—which, perhaps, indicates a separation of the active substances contained in the alkaloid, which has never yet been obtained in the crystallised condition.

After many attempts at finding another narcotic substance the effect of which is neutralised in the liver, Prof. Schiff has discovered that *hyoscyamin* is a poison the effect of which is not only diminished, but entirely destroyed, in the hepatic circulation. All the experiments made with nicotin have been repeated, with the result of proving a completely analogous effect, as regards the neutralising action of the liver, to that produced by nicotin, the effects being still more marked in the employment of hyoscyamiu.

The great diminution of the tolerance of these poisons in frogs after the ligature of the liver, points to the hope of being able to employ such frogs as a physiological test of the presence of a toxical substance in the blood of dogs which die after the ligature of the vena portæ. If we consider that a dog weighing nine kilogrammes possesses about two kilogrammes of blood (two-ninths of his weight), and that we cannot inject into the lymphatic sac of a frog, at the outside, more than two cubic centimetres of blood, we perceive that the frog receives at the moment of the death of the dog only a thousandth part of the poison which has sufficed to kill the latter. Among the known poisons and venoms, a thousandth part of what kills a dog has scarcely any action on a frog; so that we could scarcely expect the slightest traces of toxical action even on frogs which "could not be saved by their livers." Still, the following results have been observed:—The dogs employed in this series of experiments had lived for from forty-five to sixty-eight minutes after the ligature of the vena portæ and their recovery from etherisation. Almost at the moment of death the thorax was opened, and one and a half cubic centimetre of blood, taken from the right heart, was injected into the lymphatic sac of a frog which had lived for more or less time since the ligature of its liver. In twenty minutes the frogs so treated were greatly depressed, their movements when excited being slow; and when they were raised up vertically they made no attempt at spontaneous movements, and allowed themselves to be laid on the back without attempting to recover their position. Respiration took place at long interruptions, and the frogs no longer leapt, but, when much excited, moved like toads. In some this state of things disappeared after some hours, but in others continued to be aggravated until their death. Comparative experiments, made with the blood of dogs which had died without any interruption of the hepatic circulation, exhibited no analogous results. The frogs appeared quite well even a long time after the injection. The blood of dogs, when *slow occlusion* of the vena portæ has been produced, does not give rise to these symptoms. Comparative experiments, made with the blood of the jugular vein, and that of the vena portæ

of dogs dying after the ligature of the latter, exhibit essentially the same result. The blood of the vena portæ of dogs dying without interruption of the hepatic circulation exerts no poisonous effects on frogs.

REVIEWS.

Clinique des Nouveau-nés : L'Athrepsie. Par J. Parrot, Professeur à la Faculté de Médecine de Paris. Avec planches en couleur.

Clinical Lectures on Young Infants : Athrepsia. By J. Parrot, Professor to the Faculty of Medicine of Paris. With coloured plates. Paris : G. Masson. 1877. Pp. 450.

The large Paris Hospital "des Enfants Assistés" affords probably one of the best, if not *the* best, fields for the observation of children's diseases, especially of those diseases which occur during their early infancy. In England (where children's hospitals were *altogether* unknown prior to Dr. West's establishing that one in Great Ormond-street) there is but scant opportunity for a systematic study of the diseases of very early infancy; for infants are not admitted into most of the English hospitals for children, or, if admitted at all, only as very special cases. This is much to be regretted, for nothing short of a systematic study of the diseases of this period of life will enable us to meet the ever-increasing difficulties which "hard times," over-population, and consequent overcrowding impose on infants during the earliest and most critical weeks or months of their lives.

By the word "nouveau-né" is meant any infant whose age does not exceed two months. Thus, then, it will be seen that the word does not exactly correspond with the term "*infancy*" as used by Dr. West, for this includes that period of life which extends to about the close of the second year. Under the word "athrepsia" our author includes a variety diseases, such as diarrhœa, vomiting, thrush, buccal and cutaneous ulcerations, convulsions, and also trismus: he differs from previous authors in attributing them to one common cause, and goes in advance by grouping them under a single name, and as various stages of a common disease; "its various stages are closely related, are governed and explained by a circumstance which is itself the very essence of the disease, viz., a profound interference with the nutritive function."

Our author, in his preface, says—"I am convinced that '*evolution*' plays a most vital pathological *rôle*, and that in nearly all morbid conditions functional troubles and derangements present themselves but as modifications, either of deficiency or excess, of physiological phenomena." And he points out how sudden is the call which is made on organs which have hitherto been dormant and in total subjection, especially the stomach, even under the most favourable circumstances, the moment a child is born. "After its birth, the infant needs the breast, where it finds that which before its birth it derived from the placenta: to deprive it of this is to interfere with the most intimate relations of life." It is, in fact, a disturbance of these relations which is the *fons et origo* of athrepsia. And, indeed, it is anything but marvellous that so much disease of this kind exists, when we consider what innumerable experiments are made on the stomachs of new-born infants. It is no uncommon thing to see young and inexperienced mothers dosing their babies with food that even an adult stomach, in spite of its training, would resent and reject.

Dr. Parrot divides the evolution of athrepsia into three periods. During the first period the initial symptom is an alteration in the stools, which become more frequent and looser than normal, and at the same time the urine diminishes in quantity and becomes darker in colour. In the second period, in addition to the above symptoms, which all become aggravated, the buccal mucous membrane becomes reddened and covered with white patches of thrush, the flexures of the joints are generally covered with an erythematous eruption, and there is general wasting. In the third stage the trophic disturbance is so great that a return to health is all but impossible, and the dried-up, wasted infant then acquires a characteristic appearance: the mouth looks large, the eyes sunken, the maxillary bones exceedingly prominent; the skin hangs in folds, is harsh and dry, and of a pale bluish tint. Life becomes gradually extinct. As to the causes of athrepsia, our author divides them into predisposing and determining. The latter include deprivation of mother's milk from whatever cause it may arise, and the substitution for it of other foods which are not proper for the child. The ingestions are in effect both less abundant and less nutritive than they should be, and are still further lessened by frequent vomiting and diarrhœa. The blood undergoes various modifications; it is providing nutrition, without receiving from outside those elements which are intended for its restoration: hence secondary changes. The various secretions and excretions become affected. The buccal secretion becomes acid, and the mucous membrane desquamates and gets covered with *oïdium*. This condition, only visible in the mouth, extends, nevertheless, down the alimentary canal, as may be learnt and seen at post-mortem examinations. This process of ulceration (for such it is) is favoured by the age of the infant, cell-formation being active: hence the liability to erythematous irritations and secretions all about the body, especially about the flexures. "While, therefore, this alteration in the blood provokes new troubles, the old ones continue their course, become aggravated, and make the autophagy more active."

As to treatment: this will be obvious from what has already been said regarding the causes of athrepsia. If improper food has been the starting-point, it is clear that a wholesome and judicious diet is the first and essential part of the cure. It must be constantly kept in mind, however, that our author does not consider that athrepsia is a pathological unity,—he looks upon it rather as a succession or progression of morbid processes, each of which depends on, and leads to, reciprocal changes; and thus in treating not only must remedies be adopted which will heal existing disease, but care must be had that those causes which produced the disease are at the same time removed.

At the end of the book there is a series of beautiful drawings—many coloured ones—illustrating the disease in all its stages and bearings. They are very well done, and add greatly both to the value and interest of the book.

Chambers's Elementary Science Manuals : Zoology. By A. Wilson, Ph.D. London and Edinburgh: W. and R. Chambers. 1877. Pp. 152.

Another little science volume for popular use. The present manual is intended as an introduction to the study of comparative anatomy and physiology, and is especially adapted to the requirements of students who are preparing for the preliminary art and science examinations now so universally held, and so often passed by young persons of both sexes. We can heartily recommend the little book to all who wish for a preliminary insight into animal organisation, and as a basis on which a more extended study may most advantageously be commenced.

Lehrbuch der Ohrenheilkunde. Von Dr. A. von Tröltsch.

Handbook of Disease of the Ear. By Dr. A. Tröltsch. Leipzig: C. W. Vogel. 1877. Sixth Edition, 8vo, pp. 624.

This well-known handbook appears once again before us. The new edition is considerably improved and augmented: much old material has been struck out, and much new inserted in its place; old engravings have been changed for new and improved ones. The book is accessible to English readers through Professor Roosa's American translation. We have nothing but praise to bestow upon it, unless perhaps to regret that it is not more freely illustrated.

In the town of Bradford it is the annual custom to hold galas on Whit-Monday and Tuesday in aid of the funds of the local hospitals. Upon the last occasion, although the weather was very ungenial, the *fêtes* in the Peel Park were highly successful. Over 100,000 persons were present on the two days, and the receipts, after defraying all expenses, amounted to about £1100.

The weekly return of births and deaths in the Punjaub for the week ending March 31 last shows that the health of the province is very satisfactory. No deaths were registered under the head of cholera, but small-pox was credited with 194 deaths, against 136 in the previous week; and 47, 31, and 19 respectively were reported to have occurred from this disease in the districts of Bannu, Gurgaon, and Dera Ismail Khan. In the fifty large municipal towns 598 deaths were registered during the period in question, giving a death-rate of 24 per 1000 of the population; this must be acknowledged to be very favourable, when it is considered that the death-rate of London for the corresponding period was 26·6 per 1000.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, May.

THE DEBATE ON TYPHOID FEVER AT THE ACADÉMIE DE MÉDECINE; ETIOLOGY OF TYPHOID FEVER—THE DRAINAGE OF PARIS.

THE discussion which has been taking place by adjournments for many weeks past at the Académie de Médecine of Paris, upon the etiology of typhoid fever, seems scarcely likely to add much to our knowledge of the subject, though it has served to bring into strong relief the peculiarities of thought of the French scientific mind upon matters of hygiene, as compared with the views now held by the leaders of the medical profession on the other side of the Channel. The general tendency of the speakers in the debate has been to express their individual opinion—the kind of impression they have got as to the original source of the fever and as to its mode of propagation. In England I think we have come to recognise that the whole matter lies in a nutshell, and that all that is now wanting to clear up the problem are certain facts—difficult, perhaps, to obtain, but facts of a very definite character. It has come to be looked upon in England almost as a truism that the contamination by sewage of drinking-water, of the air, or of anything else which is taken into the body, is the great essential element in the spread of the disease, and we have in consequence been making enormous efforts for years past to control this spread by guarding against such contamination in every possible way and at all hazard. The only question, then, which in England would be considered to be really open to discussion is as to whether ordinary sewage containing simply decomposing animal matters is sufficient to give rise to the disease, or whether, on the other hand, it is necessary that a specific poison, emanating from a patient with typhoid fever, be present; in other words, whether it is possible to have a *de novo* origin of the disease. Now, this is a question which one of our greatest authorities on typhoid fever—the father, so to speak, of the disease—Sir William Jenner, in his address before the Clinical Society, considered could only be settled by extremely careful observation of, and inquiry into, cases of typhoid fever occurring in houses isolated as far as possible, and about which the most accurate information could be obtained as to water-supply, drainage, and other particulars. Unless, therefore, a physician is prepared with statistics of this nature, fully worked out in detail and authenticated, it is mere waste of time to talk about the etiology of typhoid; and without such statistics the expression of an opinion on the *de novo* origin of the disease, even by the greatest authorities, can be of but little scientific value.

When, however, we examine the speeches that have hitherto been made in this debate what do we find? Much time taken up by assertions and counter-assertions relative to the influence of sewage, and the discussion becoming angry and almost personal. M. Guéneau de Mussy having written a long *brochure* to prove this influence, he is vigorously attacked by M. Bouley, the President of the Académie de Médecine, who almost wholly denies that sewage has anything to do with the disease. Then follows M. Bouchardat, the Professor of Hygiene at the Faculté de Médecine, who asserts that the drainage system of Paris is practically perfect, and that therefore it must be impossible that the sewers can have had anything to do with the present epidemic. At the same time, he denies the possibility of the *de novo* origin, and looks upon typhoid fever as endemic in large towns, without saying what he considers to be its mode of transmission. M. Bouchardat was followed by M. Jaccoud, the Professor of Medicine at the Faculty. We find M. Jaccoud expressing the opinion which I have taken to be the general one in England, namely, that the dependence of typhoid fever on sewage contamination may almost be looked upon as a truism—"L'origine fécale de la fièvre typhoide est au nombre des vérités étiologiques les mieux établies; en fait, cette origine et l'origine par transmission voilà ce qui est de plus positif, de plus demontré, et de plus démontrable, dans cette question si importante." But then, if we look further into M. Jaccoud's views, we shall find that, instead of helping us, he simply begs the question by asserting in a dogmatic manner his opinion on the really doubtful point of the *de novo* origin of the disease. In his "Traité sur la Pathologie Interne" he says—"All the etiological facts prove that the generating poison of typhoid fever is eventually contained in the products of decomposition of animal matter. Observation shows that the poison strikes the organism in one of three ways: 1. Contained in the air, in the water, in substances to the emanations from which the patient has been exposed—this may be called the *extrinsic* mode of origin. 2. Arising primitively in the organism under the influence of certain bad conditions—the *spontaneous* origin. 3. Reproduced by the patient like cholera-poison, and transmitted to healthy people—the *contagious* origin, or transmission."

Thus, then, this long discussion, which has attracted so much attention, has produced nothing more than this: that out of four of the first physicians in France who have taken part in it, two have declared their strong opinion that the sewers have nothing to do with the spread of typhoid, the Professor of Hygiene asserting that the drainage of Paris is excellent; whilst the other two have asserted equally strongly that the sewers are the great vehicles for the conveyance of the disease—one of the latter, however, damaging his cause by making a dogmatic statement, not only that simple sewage without a specific poison is efficacious, but also that the disease may arise *spontaneously*, independently of sewage or of other external agencies.

If now we come to examine the facts which are supposed to throw light on this difficult question, what do we find? Let us examine first into the drainage question, with which the Professor of Hygiene is so satisfied. We find that Paris is perfectly riddled with cesspools from one end to the other; by far the greater quantity of fæcal matter is received into these receptacles; and we all know what this means—what soakage into the soil, what chances of water-contamination and of air-contamination. As everyone who has lived in Paris knows to his cost, these places are periodically emptied, and though the contents are pumped into air-tight carts to be conveyed away, yet but little pains are taken to prevent the escape of effluvia during the process of emptying. The result is that at frequent intervals nearly the whole population is exposed to sewage influences of the worst kind through the medium of the air. The contents of these carts are taken to manufactories where they are converted into manure, and one of these is situated on the banks of the Seine, *above* the point whence the water is taken to supply a considerable portion of the town. In addition to this, a system now prevails to a considerable extent by which liquid sewage is allowed to flow off through gratings into the common sewers, the solids being retained for manure. Here we have direct contamination by fæcal matter of water which flows direct into the Seine; and though the sewers fall into the river below the point where the supply of water is taken for the town, yet when one considers how widely the suburbs of Paris extend, and the numerous towns situated on the banks of the Seine, it is easy to see what a fertile means of communication exists here for extension of the disease in the district. When I add that the system of trapping drains is almost absolutely unknown in Paris, that the water-closets and sinks open directly into the receptacles (whether they be cesspools or sewers) which are to receive the ejecta or other refuse, and that at every street-corner one meets with large untrapped openings to receive the water from the streets, from which the most foul odours are constantly arising, I think we may well wonder how the Professor of Hygiene would justify his assertion as to the high standard of the Paris drainage. Perhaps it is by comparison with other French towns that he judges: and there he may be right, because the system of sewers in Paris is a good one, so far as simple bricks and mortar go, though it is so bad from a scientific point of view; whereas most other French towns make very little pretence to having a drainage system at all.

Such, then, being the conditions, how can we hope to obtain evidence of any scientific value as to the etiology of typhoid fever? A severe epidemic of typhoid is raging; there is every possible means for its spread by way of the sewage. Every individual in Paris is exposed more or less to this influence, and probably, also, to many other influences. By what possible inductive method, then, can the connexion or want of connexion between the two phenomena—viz., the existence of defective drainage, and the existence of typhoid fever—be scientifically proved? The present discussion has certainly served to show that the French mind is as far behind the English in the theory of hygiene as the French are behind us in its practical application. Whilst we have been for many years making great endeavours to shut off the sewers as much as possible

from the inhabited world, by carefully trapping every opening into the drains, abolishing cesspools, legislating against the pollution of rivers, and seeing that the water-supply is taken from unmistakably healthy sources, in France not only is little or no attempt made to shut off the receptacles for excrementitious matter, to obtain water uncontaminated by animal matter, or to dispose of the sewage without endangering the public health, but also the heads of the medical profession, for the most part, appear in happy ignorance of the danger which is lying all around them; and whilst Paris is suffering from a scourge of typhoid fever, they are wasting precious months in quarrelling amongst themselves upon the elementary question as to whether there can be any connexion between the fever and the drains.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, June 5.

Annual Medical Meetings: Royal College of Surgeons—Irish Medical Association—Royal Medical Benevolent Fund Society of Ireland.

The annual meeting of the Royal College of Surgeons, held pursuant to charter on the first Monday in June, calls for little remark. The number of Fellows voting was smaller on this occasion than had been the case for several years past. This may be partly accounted for by the fact that there was no contest for the Vice-Presidency, to which Dr. P. C. Smyly, Surgeon to the Meath Hospital, was elected without opposition. Dr. Robert McDonnell, the outgoing Vice-President, was chosen President. He carries with him into the presidential chair the good wishes of the profession in the metropolis and throughout Ireland. For the seats on the Council there was a contest, but the voting resulted in the re-election of the outgoing councillors, the only change being that Dr. Kidd, the ex-President, took the place of Dr. Smyly, who was promoted to the Vice-Presidency.

The members of the Irish Medical Association began the day by meeting at breakfast in the Shelbourne Hotel, Stephen's-green. The annual general meeting was held at noon in the Royal College of Surgeons, and was largely attended by town and country members. Dr. James Martin, of Portlaw, the outgoing President of the Association, occupied the chair. In the course of some introductory remarks he alluded to the subject of preliminary and professional education. He was sorry to say, he observed, that circumstances were such that if serious and grave measures were not taken to insist on increased preliminary education, the status of the profession would deteriorate. Every man who had head and hands could come into the profession, and rise to the highest position in it, but he must do so by the exercise of his intellect. Men were now coming into the profession from a social circle rather beneath that from which recruits formerly came. No doubt everyone had a right to enter the ranks, and he said God speed to them all; but it must be remembered at the same time that social position was a species of education in itself, and that if that is not replaced by educational culture the members of the profession would be placed in a different position from that which they formerly held. It was thought by some that any kind of doctor would suit a country dispensary. There never was a greater mistake, for there was no place where a more superior class of men was required. The farming classes of Ireland had the highest respect for cultured intellect, and, therefore, he said the country practitioners could not be too highly educated.

The annual report was then read by Dr. John H. Chapman, Honorary Secretary; it was an elaborate record of very decided success during the past year. The statement of accounts, read by Dr. Humphrey Minchin, Honorary Treasurer, showed that the total receipts for the year ending May 31, 1877, amounted to £391 3s. 11d., and that the balance in the treasurer's hands was £213 13s. 9d. After the adoption of the report the President proposed a resolution to the effect that, recognising the very valuable services rendered by the Honorary Secretary (Dr. Chapman), not only to the Association, but to the profession in Ireland generally, he should be presented with a cheque for one hundred guineas. Dr. Whistler, of Bray, seconded the motion, and Dr. A. H. Jacob, chairman of the Council, bore testimony to the great zeal and attention of Dr. Chapman. The resolution was carried with acclamation; and a number of other resolutions on various subjects were also passed by the meeting. The officers for the commencing year were then elected; and Dr. Darby, of Bray, the newly elected President, having been called to the chair, and votes of thanks to the press and to the retiring President having been carried, the proceedings terminated.

The annual dinner of the Association took place in the evening, in one of the Halls of the King and Queen's College of Physicians, Kildare-street. The President was supported by the Presidents and Vice-Presidents of the Colleges of Physicians and of Surgeons, respectively; Mr. Porter, Surgeon to the Queen; Sir George B. Owens, M.D., ex-Lord Mayor; etc.

The Royal Medical Benevolent Fund Society of Ireland met at 4 p.m. in the College of Physicians, Kildare-street. The chair was taken by Dr. G. H. Kidd, retiring President of the Royal College of Surgeons. After some remarks from the chairman, in which he said that the practice of funding donations seemed to him inexpedient and calculated to lessen sympathy with the objects of the Society, the report was read by Dr. A. H. McClintock, Honorary Secretary. The grants awarded by the Central Committee during the year amounted to £1273—viz., to medical men £357, to widows £763, and to orphans £153. The applications for assistance from the Fund were 105—namely, 77 from widows, 17 from orphans, and 11 from medical men. Of the total applications only 8 were rejected. Among the contributions of this year, the Committee refer with peculiar pleasure to those received from medical students in Galway and Dublin, amounting to £20 12s. 6d. "It is," to borrow the language of Dr. Stokes on a former like occasion, "a wholesome example, and full of bright promise for the future of these young men." Moreover, it substantially refutes the wholesale charges of levity and selfishness often cast upon the character of medical students. After the usual resolutions had been adopted, Dr. Banks was called to the chair, and on the motion of Dr. Martin, of Portlaw, a vote of thanks to Dr. Kidd for presiding was passed, and a highly successful meeting was brought to a close.

LIVERPOOL.

May 28.

The Death after Transfusion Case—Changes in the Staff of the Royal Infirmary—Health of Liverpool.

After an inquiry extending over three days into the cause of death of Walter Robert Williams, a shipping clerk, a Liverpool coroner's jury returned a verdict of "Death from misadventure," at the same time adding a presentment that in their opinion "sufficient inquiry was not made by the medical men as to the deceased's habits and physical conditions; and that the man did not receive sufficient caution as to the risk he was running." The grounds for this presentment are not equally apparent—at least, to the medical profession here. The facts are briefly as follows:—A gentleman, twenty-one years of age, having suffered from secondary hæmorrhage on the seventeenth day after amputation of the thigh had been performed owing to disease of the knee-joint, it was decided as the only means of prolonging his life to transfuse. In order that the conditions might be as promising as possible, a robust man following an outdoor occupation was sought for as the blood-giver. Williams, who was engaged as an outdoor clerk at the Wapping Goods Station, and who volunteered to give the blood, seemed to be a very suitable subject. He was thirty-two years of age, was robust and well developed, and of generally sober habits. On the morning of the 10th inst. about four ounces of blood were transfused. Williams expressed himself as being all the better for having lost the blood, and, after having had the arm properly bandaged, was particularly desired to call twice a day and show himself to the gentleman who had been the means of selecting him, and whose house he would have to pass on his way to his work. He called once, when everything seemed doing well, but was not again heard of until a message was sent desiring the doctor to see him. He had continued well up to the 13th, on which day he ate heartily of roast pork, and subsequently vomited. On the 14th he felt sick, and could not continue at his work; and on the 16th he died, the cause of death being general erysipelas. The jury felt themselves justified in affixing to their verdict the presentment mentioned above; and the profession very generally here feel much sympathy for the two excellent surgeons in whose practices the sad accident—an accident which it is felt might have occurred in the practice of anyone—to which it refers took place.

By the resignation of Mr. Hakes from the Royal Infirmary, a vacancy for an Honorary Surgeon exists. There is no doubt that Mr. Banks, the present Honorary Assistant-Surgeon, will be elected to fill Mr. Hakes's post, and then the Committee, with whom the appointment rests, will choose a gentleman to succeed Mr. Banks.

The health of the town is in a fairly satisfactory state. Small-pox has almost entirely disappeared. A local outbreak, after the more general subsidence of the epidemic, occurred in one of the out-townships, but immediate isolation and removal to hospital in every case where this was practicable soon checked the spread of the disease, which is now confined to two or three cases.

GENERAL CORRESPONDENCE.

THE ETIOLOGY OF SCURVY.

Letter from Dr. P. Black.

[To the Editor of the Medical Times and Gazette.]

Sir,—There is an advantage sometimes in putting an argument in a very brief compass; for, when unduly extended, minds not logically trained are apt to lose the strings, and are perplexed by that amplification which should only serve for more copious illustration. Let me apply this to the protest I offer with all due respect against the conclusion arrived at by the "Arctic Committee."

The argument is this: Man's weight, or condition in health, may be represented as a *constant* quantity; so also may the temperature of his body, at the constant of 98°. Now, let two men of equal weight and strength go forth on an expedition, during which they shall endure the same amount of physical labour. One shall do this at an external temperature of 60°—say he shall work in the Portland quarries; the other shall do his work at −60°—say sledging in Polar circles. The labour, by hypothesis, being equal in the two cases, may be eliminated. Now, to keep 150 lbs. of water or a man's body at 98° will require many more pounds of fuel at −60° than at 60°; but that quantity only is supplied which is sufficient at 60°. The extra quantity which is needed in the other case is pulled out of his body, and this is scurvy.

London. I am, &c., P. Black, M.D.

ON TRANSFUSION OF BLOOD.

Letter from Dr. Roussel.

[To the Editor of the Medical Times and Gazette.]

Sir,—The direct transfusion of living human blood is very often the only means of saving the life of numerous sick or wounded, sinking from loss of blood. The offer of the blood should be given without hesitation or fear. In consequence, it is to the public interest to know that the recent operation terminating in death at Liverpool was not performed according to the actual rules of science, but by the old method of opening the vein of the blood-giver in open-air, inserting a tube into it, and, fixing it with a ligature, thus withdrawing the blood.

Now that the Liverpool coroner's inquest is concluded, one can say that this method is so well known as dangerous, by phlebitis, erysipelas, or other accidents, that it was generally condemned many years ago. A simple and well-performed bleeding by venesection is never attended with danger. By any transfuser the blood is obtained by a simple venesection performed under water and without exposure to the air. For these reasons prudent surgeons have adopted this transfuser, with which I have been able to perform more than fifty successful transfusions, and more than 150 harmless venesections.

The Russian surgeons employ it every day in the war; and it is to the interest of the English nation that it should be occasionally employed by the English surgeons. To this end Sir James Paget has honoured my book on "Transfusion of Blood" (Churchill, publisher) with a preface, in which he says—"Roussel's transfuser fulfils better than any other known to me the conditions requisite for the transfusion of pure blood unchanged *in transitu*. With its help, transfusion may safely be performed by anyone competent in the practice of surgery. It may be hoped that the greater facility and safety of the operation may add to its more frequent performance. To a healthy person the loss of a few ounces of blood by venesection is, I believe, absolutely harmless." Sir James Paget would never have said that for the old method; and a medical journal is wrong in placing Sir James and myself under the same title with the Liverpool transfusion.

As your journal, and many newspapers, have spoken of the accident at Liverpool, I beg you to allow me a space in your column, in justice to science and myself, to reproduce my letter. Transfusion should not be compromised by people who flatter themselves they can practise it without sufficient knowledge of it, and who wait for an accident before applying for lessons, as has occurred many times, and on this particular occasion.

I am, &c., Dr. Roussel.

23, Gloucester-place, Hyde-park, May 29.

[It will be seen that we have in this case allowed Dr. Roussel to speak entirely for himself, and the better to do so we have left his proof copy of the above unaltered.—Ed. *Med. Times and Gaz.*]

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 1.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Unusually Large Vesical Calculi.

Mr. Barker exhibited these specimens, removed from a patient upwards of sixty years of age. The man had been relieved by Mr. Nunn in 1872, by lithotrity, but the symptoms had speedily returned. One of the calculi showed a small angular fragment forming its nucleus.

Aneurism of the Thoracic Aorta.

Dr. Felix Semon exhibited a specimen of this nature from a man of forty, who gave a history of symptoms for years, but had suffered severely for two months only. The chief complaints were of thoracic pain, dyspnœa on exertion, palpitation, and dysphagia. The diagnosis made was of aneurism of the descending aorta: it was a feature of special interest that the condition of the larynx was perfectly normal. Death occurred suddenly by hæmorrhage from the mouth. Post-mortem a fusiform aneurism was found involving the descending thoracic aorta from the fourth to the sixth vertebra, and communicating with the œsophagus by an opening which was closed by a thrombus.

Gummata on Cranial Nerves, and Vascular Changes, in Congenital Syphilis.

Dr. Barlow brought forward these specimens, and showed microscopic sections of the growths. They were taken from the body of an infant of fifteen months with a doubtfully syphilitic history. When brought to Dr. Barlow, the patient was emaciated to the last degree; the eyeballs were usually turned to the left; there was slight, but intermittent, nystagmus; the pupils were equal; and there were no morbid ophthalmoscopic signs. The facial muscles were slightly affected—there was less frown on the left forehead than on the right; the left cheek was flat on crying, and very slight tremors of the muscles of both sides were perceptible. The condition of the other cranial nerves was doubtful; laryngeal spasms occasionally occurred; vomiting was probably associated with gastro-enteric disturbance. There were no general convulsions. The diagnosis made was of tumour at the base of the brain, probably tubercular. Post-mortem, no tubercle whatever was found. The liver contained four cicatricial patches; but it was not puckered, the growth being almost purely cellular. The spleen presented some old disease of the capsule. The principal changes were found in the brain, which was atrophied as a whole. The membranes of the base were slightly opaque; and several of the nerves presented distinct swellings at the point of their superficial origin. This enlargement was almost perfectly symmetrical. Microscopically the nerves presented almost complete atrophy of the cylinders, a new growth irregularly distributed around, and corpora amylacea in some places. Such a growth, which might be called a "nerve gumma," somewhat resembled to the naked eye the changes found in the nerves in anæsthetic leprosy, but in the

latter the process affected the interfunicular tissue rather than the cylinders. With respect to the cerebral bloodvessels, all the basic arteries were found to be thick, opaque, and of increased firmness, without either gummata, special dilatation, or calcification. On section they presented a diminished lumen, and that irregularly. Both the adventitia and muscularis were found diseased when examined microscopically; but the chief thickening was situated in the intima, while the endothelium was healthy. The arteries of the second order were almost free from this change. Dr. Barlow said, in conclusion, that this case appeared to be of remarkable importance, not only because it was probably the first recorded instance of gummata on nerves in congenital syphilis, and these symmetrical, but because it was another example of congenital syphilitic disease of the nervous system in children.

Mr. Spencer Watson said that he had recently had a case of a child, with congenital syphilis, presenting marked nystagmus. Great benefit followed mercurial treatment, the nystagmus in a great measure ceasing. The diagnosis was therefore probably correct. In some cases of nystagmus in congenital syphilis the choroid might be the seat of disease.

Syphilitic Lung.

Dr. Mahomed showed two specimens of this nature. The first, from a woman of seventeen, dead of erysipelas and pyæmia, was associated with extensive gummata and amyloid disease in various organs. Both lungs were puckered, the patches of cicatricial tissue consisting of perivascular fibro-nucleated growth, which invaded the alveolar walls, and presented in its midst an artery with greatly thickened wall. In the other patient, who died from syphilitic ulceration of the rectum and intestinal obstruction, there was stenosis of both auriculo-ventricular openings; the fibroid patches in the lungs were found to consist of perivascular growth. These were therefore early stages of fibroid growth.

The President inquired respecting the history of syphilis in the second case.

Dr. Mahomed replied that this was distinct, and that there were extensive gummata in other organs.

Spinal Cord in Muscular Atrophy.

Mr. Nunn exhibited for Professor Charcot, of Paris, sections of the spinal cord in muscular atrophy. In one case the anterior grey cornua were primarily diseased, and the anterior columns secondarily; in the other case the disease had commenced in the lateral columns, and spread to the anterior cornua. The first was a case of progressive muscular atrophy; the second one of descending sclerosis. Professor Charcot also sent a specimen of the phrenic nerve in which the fibres were atrophied, being associated with great wasting of the diaphragm, in a case of progressive muscular atrophy.

Epiphysial Disease in Inherited Syphilis.

Mr. Warrington Haward showed specimens illustrative of this condition, the disease being traced in them from simple hyperæmia to complete separation of the epiphyses. They were taken from the body of an infant with a distinctly syphilitic history. At ten weeks of age it had lost the use of its right arm; and both upper limbs were powerless when Mr. Haward first saw it. Death occurred from bronchitis; and post-mortem this disease was the chief lesion found in the viscera. Around the lower end of each humerus there was a collection of laudable pus; and, while the synovial membrane was not diseased, the epiphyses of the bones belonging to the joint were separated by granulation-tissue and pus. Mr. Haward described the course of this disease, stating that it was not unfrequent in inherited syphilis, that it was accompanied by a form of pseudo-paralysis, was marked in its early stage by a swelling limited to the epiphysial line, and usually yielded easily to mercurial treatment. It ought not, with care, to be mistaken for rickets, and it might occur as the only evidence of syphilis in a child.

The Physiological and Pathological Processes of the Breast.

Dr. Creighton, of Cambridge, showed a large collection of microscopic specimens illustrative of these changes. The specimens, he said, illustrated, in two parallel series, normal and morbid changes—and especially the growth of tumours. First, with respect to the *normal* gland, there were two important periods in the functional history of the mamma—namely, those of its evolution or unfolding, corresponding with pregnancy in time, and those of its involution, upfolding, or return from full activity to the starting-point of inactivity. These two periods and processes, involution and evolution, consisted of stages which were strictly comparable, and were characterised by the appearance of products in inverse order. At the commencement of functional activity the acini were found to be filled with large yellow spheroidal nucleated cells; these were to be regarded as products of immature secretion, and, as evolution advanced, they were replaced, first by mucus-cells, and at last by perfect milk-cells. Similarly, during involution—an orderly and regular process, not an atrophy—the secreting structure was reduced in size, the cellular products that continued to be formed being no longer utilised, but appearing as waste material. At the end of the involution, which occupied from four to six weeks, the large yellow cells were again formed, as at the commencement of evolution. Drawing special attention to these waste products, Dr. Creighton proceeded to say that he had found them with pathological relations in mammary tumours from the dog, though not from man. There were, however, other forms of waste products, which were not pigmented, in the process of normal evolution. Of whatever kind, they were disposed of by the lymphatics, the sinuses of the lymphatic glands being found filled with yellow cells, which probably became converted into lymphoid corpuscles; thus contributing to the leucocytosis of pregnancy. Now, cells similar to these waste products were to be found in certain *pathological* states; and it was reasonable to suppose that the effect of certain excitations was to start the breast upon a course of evolution—this commonly occurring in quiescent glands, such as in the aged, where the function was in abeyance. In the extended mammary gland of the bitch the normal and the morbid processes could be well seen side by side. Besides pigmented cells there could be seen in the acini in such preparations an exuberant growth into processes of the same coloured cells; and outside the acini, groups of cells, some yellow and others not. In conclusion, Dr. Creighton showed how cancer of the breast could now be referred to disordered functional activity, a motive being thus discovered for the exuberant growth. This had no reference to chemical changes. With respect to morbid growths in other organs, the physiological and pathological changes might be shown to be connected—for example, the pylorus and the cervix uteri were at once most liable to catarrh and the favourite seats of cancer.

The President thanked Dr. Creighton for his communication, and said that he had also previously pointed out that in cancer of the liver the new cells were derived from the gland-cells by a process of endogenous formation.

Mr. Butlin spoke upon the occurrence of yellow pigmented cells in new growths. He had himself rarely met with them in cancer in man, but had seen them in sarcomata; in one instance the lymphatic sinuses were full of yellow cells, which were probably the products of degenerated spindle-cells. The tumour itself did not contain many of these cells.

Mr. Knowsley Thornton said that he had tried to discover whether any relation could be traced between the yellow-coloured cells of the corpus luteum and the development of the Graäfian follicle. Since he failed to find such cells except in the advanced stages of the corpus luteum, he concluded that they were products of degeneration; they were to be found in the lymph-spaces of the ovary some distance from the corpus luteum. He inquired whether Dr. Creighton considered that the yellow cells were formed as such, or were the products of the degeneration of a previous epithelial cell.

Dr. Creighton replied. With respect to the corpus luteum, the yellow cells were probably of the same nature as those found in the breast, but their appearance in the ovary was still obscure. In the breast these yellow cells were unquestionably transformed epithelium; in some of his specimens they were columnar and still *in situ*. They were not to be considered as the result of degeneration, but as the immature or early products of the conversion of epithelium into the substance of secretion. Indeed, in certain glands of the invertebrata a solid secretion was produced; and, as Goodsir had pointed out many years ago, there were three types of secretion—first, that in which the products were solid or purely cellular; second, that in which there was a mixture of solid and fluid elements; and, third, that in which the products were wholly fluid. The several stages of the evolution and involution of the mammary gland were represented by these varieties.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MAY 2.

CHARLES WEST, M.D., F.R.C.P., President, in the Chair.

THE following gentlemen were elected Fellows of the Society:—Thomas Henry Barnes, M.D., Croydon; Eustace J. Carver, M.R.C.S., Fulham; John Dewar, L.R.C.P. Ed.; Patrick Jamieson, M.D., Peterhead; J. Jardine Murray, F.R.C.S. Ed., Brighton; and John Cooke Verco, M.D.

APPARATUS FOR EXHIBITING UTERINE INJECTIONS AFTER DELIVERY.

Dr. ROBERT BARNES showed, for Dr. Bernard, of Londonderry, an apparatus for facilitating the injection into the uterine cavity, after labour, of water or perchloride of iron. It is made of indiarubber, and consists of a band which passes over the operator's hand. It carries a tube on the palmar aspect, which divides into threo branches, so as to distribute the injection.

PESSARY.

Dr. BARNES also exhibited, for Dr. Scott, of Canada, a pessary for prolapsus uteri.

FIBROID TUMOUR OF UTERUS.

Dr. WILTSHIRE exhibited for Dr. Hadden, of Horncastle, a specimen of fibroid tumour of the uterus. The case was thought to be one favourable for enucleation, but operative interference was declined. At the post-mortem examination the uterus was found adherent to the surrounding parts, and the tumour lodged in a capsule, out of which it could have been easily enucleated.

Dr. GALABIN showed an ascitic fœtus which presented great obstacle to delivery. Besides the ascitic fluid, the abdomen contained a tumour, which turned out to be the bladder greatly distended. The President requested Dr. Galabin and Dr. John Williams to examine and report upon it.

ON A NEW MODE OF TREATING CERTAIN CASES OF RETROFLEXION OF THE UNIMPREGNATED UTERUS.

A paper by JAMES BRAITHWAITE, M.D., of Leeds, was read on the above subject. The plan of treatment advocated in the paper is applicable to cases in which Hodge's pessary failed, and consists in dilating the canal of the uterus by means of sponge tents. Then a wire threaded with an indiarubber ball is so arranged as to occupy the uterus, vagina, and sulcus between the buttocks. The uterine portion of the wire, which is limited by a button on its proximal extremity, is covered by indiarubber tubing, and bent so as to maintain the uterus in anteflexion. When the wire is introduced, the indiarubber ball should be pushed up to the button and inflated, and the external part of the wire be so bent as to occupy the sulcus between the buttocks; the instrument cannot escape, nor enter further into the uterine cavity, nor get out of position. The instrument should be worn for four days, during which period the patient should remain in bed and ergot be administered. When the instrument is removed a Hodge should be introduced. The author had cured the retroflexion in the four cases which he had treated by this means.

Dr. PRIESTLEY said that some years ago Dr. Moir had recommended the dilatation of the uterus by sponge-tents in cases of persistent retroflexion of the unimpregnated uterus, and the insertion afterwards of an intra-uterine stem, with an oval-shaped bulb half-way up corresponding to the bend in the retroflexion. He could not say what results had been obtained by this method, but Dr. Braithwaite's plan was the same so far as the dilatation of the uterine cavity was concerned, although the latter part of the process was different.

Dr. BARNES was slow to resort to internal until external means had failed. Hodge's pessary rarely failed. All internal supports, however ingenious, must cause a certain amount of chafing; they also fix the uterus. The organ should not be fixed. When all other means had failed, intra-uterine supports might be tried. Before introducing a Hodge the displacement should be reduced.

Dr. GRAILY HEWITT thought the instrument ingenious, and carrying out a necessary principle of treatment of flexions—viz., flexion in the opposite direction. He had done this by means of the sound. This, with the introduction of a modified Hodge, and the prone or semi-prone position, usually proves successful. There were some cases where the difficulties of treatment were almost insuperable, owing to adhesion of the uterus posteriorly, thinning of the uterine wall at the point of flexion, the chronicity of the flexion, and the hardness of the uterine tissue. He preferred, if possible, the avoidance of intra-uterine stems in retroflexion.

Dr. ROUTH said the instrument presented many points of ingenuity. Some of them were not new. The pessary was not of the full length of the uterus, and by this means irritation of the fundus was avoided. Dilatation by tents he had practised for many years; but instead of using sponge-tents, he employed laminaria bent into the shape of the uterine cavity. This instrument fastens behind like Dr. Priestley's, but unlike Sir James Simpson's. The ball on the stem was new. There are some cases irremediable. No instrument can effect a cure, and certainly not in four days. It had been said that stems caused inflammation. He thought this was favourable in some cases, and in some essential to cure. He had used Dr. Muirhead's instrument with good result.

Dr. MEADOWS was entirely opposed to the views expressed by Dr. Barnes and Dr. Graily Hewitt. The uterus was not thinned on the concave, but on the convex side of the flexion. He had seen Hodge's pessary inefficient and injurious. The uterus is often retroflexed when a Hodge is worn. A too mechanical view was taken in the treatment of flexions, though mechanical treatment was of great value, and stems were the most efficient form of it. He did not agree with Dr. Routh that inflammation was favourable to cure.

Dr. BANTOCK was surprised to find that retroflexion was still treated by means of a Hodge. The instrument was of use in retroversion, but of no use in retroflexion. Stems alone could effect a cure. Stems did not give rise to uterine contraction or hypertrophy. The effect of introducing a small bougie into the uterus was to cause relaxation, so that a larger one could be introduced next day. Retroversion with anteflexion is very difficult of cure, and cure can be effected by stems alone.

Dr. GALABIN had found the Hodge's pessary and the use of the sound for reposition effectual in retroflexion except in rare cases. Cases of anteflexion presented greater obstacles. This was because the pressure of the intestines was greater on the posterior than on the anterior surface of the uterus.

Dr. ROGERS had often found Hodge's pessary inefficient. He used leeches, douche, and counter-irritants. He had used stems extensively, and with good effect. They required careful watching, and, should inflammation set in, leeches, etc.

Dr. HEYWOOD SMITH insisted upon the necessity for constitutional treatment, and for depleting the uterus before having recourse to mechanical means. The treatment of out-patients was much less satisfactory than that of in-patients, because the former were deprived of rest.

Dr. E. J. HICKS felt uncertain whether or not flexion produced results. The general state, local inflammation, and congestion should be attended to.

Dr. MURRAY considered that pessaries were used much too frequently. He had known many pelvic pains referred to displacement when the uterus was in normal position. He had found Hodge's pessary and intra-uterine stem of great value. He had seen no ill effects arise from the stem pessary, and he had always been able to introduce it without dividing the os uteri as some had advocated, both to allow of its passage into the uterus, and also to assist in curing the displacement.

Dr. WYNNE WILLIAMS did not recommend stems in retroflexion, but chiefly in anteflexion. Thinning occurs in concave side of flexion. He recommended reposition of the uterus by the sound, and the introduction of a Hodge while the sound is in the uterus.

Dr. WILTSHIRE thought the Hodge efficient if properly used. Stems were efficient, but dangerous. He recommended the use of the sound and the prone position.

Dr. BEIGEL lamented the want of pathological knowledge. He had examined 500 uteri post-mortem, and found flexion only ten or twelve times, and no change whatever in the uterine wall, no thinning or microscopical change. The sound cannot be introduced in some cases because the canal is closed. Inflammation of uterus does not favour the cure of flexions. Irritation of uterus sets up inflammation, which was very common in some part of the organ. The only means of cure is a stem.

The PRESIDENT said it was remarkable in what different light the uterus was regarded. By some it was looked upon as universally sympathetic, while others looked upon it as one which would stand any amount of maltreatment. He could not reconcile these views. Sydenham said it was the duty of

those who practise medicine to find out indications for treatment rather than special remedies for this or that condition. The great point to aim at with regard to flexions of the uterus was to distinguish the different classes of these displacements, and lay down rules when treatment should not be adopted because unnecessary or not beneficial. Great ingenuity had been shown in devising mechanical contrivances, but this may lead to mischievous practice. It should be remembered that the Society should lead the medical profession in a particular branch. The results of Dr. Braithwaite's work were hardly such as to be encouraging. There are some cases which are found out accidentally, and do not require treatment. In others the suffering is connected with congestion. Others, again, do not bear mechanical treatment, because of the presence of adhesions. Virchow showed that thinning of the uterine wall took place on the concave side of the flexion, and brief treatment could not cure such a condition. Then a condition found so rarely post-mortem as flexion is, according to Dr. Biegel's observation, cannot be of very great importance. Stems are objectionable, because of the risk of inflammation. The great principle of treatment should be, not to do harm if good cannot be done.

Dr. Braithwaite stated that the treatment described by him should be followed in exceptional cases only. Hodge's pessary is usually efficient, but in some rare cases it fails, and recourse must be had to stems. Cure was not effected in four days, but the uterus was placed in position for recovery.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 8.

Charles West, M.D., F.R.C.P., President, in the Chair.

Removal of Tracheotomy-Tube from Bronchus after Lodgment for Seven Weeks.

Mr. Hulke communicated to the Society, for Mr. R. Clement Lucas, a case in which a silver tracheotomy-tube was removed from the left bronchus, where it had been lodged seven weeks. The patient was a man, aged fifty-six, and the tracheotomy-tube had been worn for fifteen years without being changed. The operation was originally performed for an injury to the larynx, caused by throttling. The outer tube broke away from the shield on December 28 last, and dropped into the trachea, but the symptoms were so slight that the patient's story was not credited; a new silver tube was introduced, and he left the hospital in a week. On January 5 he came to Guy's Hospital, stating that he had violent attacks of coughing and dyspnœa when turning on his right side. His trachea was examined, under chloroform, with a long probe, and the tube felt. Various forceps were tried, without effect. No signs of irritation followed, and the man left the hospital. He came again on January 29, looking more sickly than before, and stating that he could neither sleep nor do work. Dr. Pye-Smith examined him, and found dulness at base of left lung, and absence of respiratory murmur, etc. He was unable to lie on his right side. A larger tube was inserted, and the patient left the hospital breathing more freely. He was again admitted on February 16, with general rhonchus and his sputum fetid, and he consented to be operated on. Under chloroform a metallic body was felt in the left bronchus. After an unsuccessful attempt with a soft copper wire, bent as recommended by Mr. Hulke, which on being withdrawn brought a large blood-clot with it, affording much relief to the patient's breathing, and attempts with several kinds of forceps, the tube was seized by a pair of slightly curved forceps opening laterally, and was withdrawn with great ease. A red rubber tube was introduced, but it partially collapsed, and it being choked with mucus, and air being driven into the cellular tissue of the neck, it had to be replaced in three or four hours by a metallic tube, which gave immediate relief. No rise of temperature followed, and the expectoration and emphysema of the neck gradually subsided. In ten days he was able to sit up and to walk. After the removal of the tube the patient's urine was examined, and found to be loaded with albumen; there was œdema of the ankles and a slight general anasarca. The patient progressed well till March 9, when he caught cold, and expectorated a quantity of greenish mucus; and he was still troubled with bronchial expectoration when he left the hospital on March 16. The tube, which was thickly coated with black sulphide, was found to have broken away from the shield. The case shows that, in a person who has worn a tracheotomy-tube for years, a foreign body may become lodged in a bronchus, without causing any great difficulty in breathing or grave symptoms of irritation, for a considerable period; that instruments may be freely introduced into the trachea without fear of exciting serious bronchial inflammation; and that if a wire be used it should be of soft metal, lest it become immovably fixed. The difficulties of the case arose principally from a want of proper instruments, the various forceps having improper curves for opening in the trachea. The author has since had a forceps made for him by Mr. Millikin, adapted for removing foreign bodies from the trachea or bronchus, a specimen of which was shown at the meeting.

Mr. Barwell said that the retention of foreign bodies in the air-passages without producing irritation depended on their position and size rather than on the fact of tracheotomy having been done. In a case under his notice, a lad had drawn a Punch's squeaker into the trachea, where it lay a fortnight without irritating; and instruments could be introduced without giving rise to irritation, provided that the back of the trachea were avoided. Tracheotomy was then performed, and an unsuccessful attempt was made to seize the foreign body. After a severe fit of coughing, it could no longer be found; but the muco-purulent discharge to which the lad had been subject ceased, and he recovered. It was probably discharged through the bowels.

Mr. Hulke said that the difficulty in removing the wire hook depended on the extent to which the wire was bent. He thought the forceps shown by Mr. Lucas very useful, but would call attention to the flexible forceps described by Dr. Gross in his "System of Surgery."

The President thought that the flexible indiarubber tube should not be introduced at once in cases of tracheotomy, but at the end of twenty-four or forty-eight hours.

Mr. Lucas said that Mr. Morrant Baker, in bringing the flexible tubes before the Society, had recommended that they should not be introduced until a day or two after the operation.

Ovariotomy.

Mr. J. Knowsley Thornton brought before the Society a table giving the particulars of twenty-five cases of ovariotomy, with some remarks on the causes and treatment of the fever so frequently following the operation. Referring to the smallness of the table of cases as compared with the one lately given to the Society by Mr. Spencer Wells, the author said it was, nevertheless, impossible to deal with all the features of interest in the individual cases. For many of the cases he was indebted to Mr. Wells; and to the fact that he had assisted Mr. Wells in the greater number of the 300 cases he was indebted for much of the knowledge which had enabled him to attain fair success. Mr. Thornton then drew attention to the fever so frequently following ovariotomy, defining fever as any temperature between 100° and 103° Fahr., above this high fever. He believed there was a simple fever distinct from that caused by peritonitis or septicæmia, but liable to lead to serious lesions in important organs if not checked. Attributing this form of fever chiefly to the sudden increase in the volume of blood circulating in the body after the removal of the large circulating area contained in the tumour, he pointed to the various organs which might suffer, drawing special attention to the brain as receiving a large blood-supply. The treatment of this form of fever must be especially directed to the control of the circulation and lowering of temperature. The readiest means of effecting this object was by the application of dry cold to the head. Briefly sketching the history of the use of coiled tubing conveying iced water, the author showed how he was led to the use of the ice-water cap for the fever after ovariotomy. While giving due praise to the use of blood-letting and aconite, he believed if the ice-water cap was used early and efficiently they could be dispensed with. He then drew attention to the differential diagnosis of this simple fever and the fever accompanying peritonitis or septicæmia, making special mention of the tranquil expression of the patient with the former. He then referred to some of the cases in the table to illustrate the use of the ice-water cap (of which an engraving accompanied the paper), remarking that they were none of them quite typical of the condition he had described, because, having had considerable experience in the after-treatment of cases of ovariotomy, before he operated himself he always put on the cap early, prevention being better than cure. In conclusion, he gave a

short analysis of the cases in the table, alluding especially to the large proportion of complicated cases and double operations, in spite of which the mortality was only 28 per cent. Some of the cases were almost hopeless from the nature of the adhesions and the state of the patient, but he thought it right to give them the last chance of life.

Mr. Spencer Wells had noticed that the chief cause of death after ovariotomy was not peritonitis so much as fever. Packing with the wet sheet had been tried, but was attended with disadvantage. The ice-cravat had also been used; but all other plans were set aside when Mr. Thornton introduced the system of applying iced water which he had seen used in Glasgow in the treatment of injuries of the head. The plan was attended with some objections; it required a large quantity of ice, and caused much labour to the nurse. These obstacles were less in hospital than in private practice. He had lately used a sort of helmet of ice in a double cap. Great credit was due to Mr. Thornton for introducing a plan of lowering the temperature.

Sir Joseph Fayrer thought that the ice-cap would be very useful in the treatment of cases of heat-stroke.

Dr. Routh said that the application of the ice-cap in practice must be very difficult; and he did not see its advantage over the old indiarubber cap. He had used the ice-collar with the result not only of checking fever, but of relieving the troublesome sickness following ovariotomy. He would ask whether, in cases where the temperature was as high as 105° or 108° Fahr., the cap would cool the body as well as the cold bath; the use of which after ovariotomy he did not believe to be dangerous. He objected to blood-letting.

Mr. Page believed that the changes in which fever consisted were the result of some condition of the nervous system.

Dr. Heywood Smith thought that, when venesection failed, it was from not being employed at the right time. He called attention to veratrum viride as a means of reducing febrile temperature.

Mr. Thomas Smith thought that the ice-cap acted through the medium of the nervous system.

After some remarks from the President, Mr. Thornton replied; and the meeting adjourned.

CLINICAL SOCIETY OF LONDON.

Friday, May 11.

Geo. W. Callender, F.R.C.S., F.R.S., President, in the Chair.

Case of Taliacotian Rhinoplasty.

Mr. Mac Cormac exhibited the patient, a healthy girl, aged sixteen, who had lost the tip and both alæ of her nose when an infant, from the injection of a nævus, situated on the nose, with the Pharmacopœial solution of pernitrate of iron, which had resulted in a slough. Photographs showing the condition of the face before and after Mr. Mac Cormac's operation were also exhibited. Mr. Mac Cormac determined to attempt relief by means of the operation of Taliacozzi. The apparatus for keeping the arm in position consisted of a pair of ordinary stout stays, with two perineal straps attached to prevent displacement upwards; a helmet, partly made of leather, connected to the stays by a leather band running up the neck and back; an arm-piece, strengthened by a steel band, moulded in leather, and extending from the wrist to the shoulder, where it was buckled to the stays; and a gauntlet for fastening the wrist and hand to the helmet; while the elbow could be fixed in any required position by straps running from it to the stays and to the sides of the head-piece. There was nowhere any undue strain, and the apparatus was applied for days before the operation, to accustom the girl to its use and remedy any defects in it. It proved to be so comfortable that she could sleep in it. A model of the part required to make good the deficiency was taken in guttapercha, and from this the extent of the deficiency could be projected on a flat surface. On February 12, 1877, a flap was mapped out on the inner aspect of the left arm, two-thirds larger than the actual size of the estimated deficiency; it remained attached to the arm by a broad long pedicle, and consisted of all the tissues down to the muscular sheath. A triangular gap was next made on the right side of the nose, and into this the flap from the arm was fitted, where it became partly united by the first intention. Subsequent suppuration occurred around the flap, but it had all united within three weeks. Then the operation was completed by detaching the base of the flap from the arm, and preparing the left side of the nose to receive it, where it was adjusted by sutures. In a fortnight healing was completed. The dressings of the arm and nose consisted of cotton-wool soaked in olive oil. The leathern apparatus answered its purpose completely and without inconvenience. For the first two or three weeks after the operation much contraction of the new nose occurred, but very little subsequently. The extensive wound on the arm had nearly healed on May 11. The nostrils were kept dilated with indiarubber tubing. The improvement in the girl effected by the operation was most satisfactory.

The President, in introducing the case to the meeting, said he thought the operation was likely to be followed by better results than ordinary.

Mr. Maunder said everyone could appreciate the value of a good nose. He congratulated Mr. Mac Cormac on having given his patient a handsome appendage, and also on his having improved upon the method of Taliacotius, who, if Hudibras may be credited, required a second person to provide the necessary integument, and that too from a very inconvenient region of the body.

Mr. Furneaux Jordan remarked on the good symmetry of the organ, the two sides being exactly alike. There was, moreover, no disfiguring scar on the face. Had Mr. Mac Cormac tried any other method? Mr. Hardie, of Manchester, had in one case taken the flexor surface of the thumb and made an excellent nose from it. The apparatus ceased to be irksome after a time.

Mr. Spencer Watson alluded to the perfection of the apparatus used, inasmuch as this operation was probably given up on account of the irksomeness induced by the entailed position. Moreover, the nutrition of the parts to which the new skin was to be attached was perfect, and not half-destroyed, as in lupus. Was any impairment of smell left behind?

Mr. Gant asked if the part was protected by cotton-wool or any such substance after the operation.

Mr. Mac Cormac said that the connexions between the new nose and the arm were divided three weeks after the transplantation, but in all probability this might have been safely done at the end of two weeks. The new part bled freely. There was no sloughing whatever. The only dressing was oiled lint. The apparatus admitted of ready dressing.

A Case of Excision of the Os Calcis and the Astragalus, in which the Second Row of Tarsal Bones was subsequently drawn underneath the Malleoli.

Mr. Furneaux Jordan brought forward the case. It was that of a girl aged fourteen, who was supposed to be the subject of caries of the os calcis. For this condition, gouging had been resorted to without success, although followed by careful and prolonged rest. As the direction of the carious area seemed to extend upwards, and new sinuses pointed to the implication of the astragalus, Mr. Jordan determined to excise both the os calcis and the astragalus. The bones were reached by means of a flap made at their outer aspect, the convexity of which looked downwards and slightly backwards. In the after-treatment the foot was most easily kept on a line with the axis of the leg by holding it up by means of the toes. Healing went on favourably, so that in eight weeks the wound and the sinuses had healed, and the foot could be moved and handled without pain. But now a curious circumstance attracted notice. It was found that not only had the foot become shorter, but that, the first row of tarsal bones having been removed, the second row had in some degree taken its place. The scaphoid and cuboid bones were partly under the malleoli; the tibia and fibula were thus kept at some distance from the floor when the foot was put down. This unexpected result was, no doubt, brought about by the action of the muscles which lay at the front and sides of the ankle-joint. The weight of the body had now been placed on the foot with some retentive apparatus for several months without any sign of deformity or weakness. In conclusion, this question was asked: Assuming that it was desirable to bring the scaphoid and the cuboid under the malleoli after excision of the os calcis and the astragalus, could any special operation, or dressing, or position facilitate such a result?

Mr. Maunder said that the Society was much indebted to Mr. Jordan for having taken the trouble to come a long distance in order to communicate a fresh instance of the value of operative surgery. He fully agreed with the author concerning the inveterate character of caries of the spongy bones

of the foot. He advocated accordingly in hospital practice the removal of the bone in preference to repeated gouging. By this means much time and pain were saved to the patient. With regard to the case under consideration, the operation was most successful; but Mr. Maunder feared that possibly the abnormal pressure to which the bones left would be necessarily subjected in a person whose occupation required that she should be on her feet many hours daily, would lead to further caries and further operation. In the normal foot each bone is called upon to support only a certain proportion of the weight of the body; but after such an operation as is above described, the extra degree of weight may prove highly injurious to the health of the remaining bones. Mr. Maunder also advocated (having such a case in the London Hospital at the present moment) excision of the os calcis by an external flap, so as to avoid having a cicatrix on the sole of the foot.

Mr. Gant said that in a case under his care, where the os calcis and cuboid were removed, there was no retraction, but a flat foot. The flap, he thought, might be made in two ways. He was opposed to gouging, as the result was generally bad.

Mr. Spencer Watson mentioned a case in which Mr. Carr Jackson had used gouging and sulphurous acid lotion with advantage.

Mr. Furneaux Jordan liked to remove the bones, though in some cases the sulphuric acid plan did well. He remembered that, in a conversation with Mr. Syme, that gentleman mentioned that he had been under the necessity twelve times to remove the foot after partial operations.

Fatal Case of Syphilis, contracted from the Congenital Form of the Disease.

Dr. Dowse read notes of this case. It occurred in a young girl, aged nine, who was admitted into the Central London Sick Asylum, at Highgate, on January 12, 1875. There was no history of congenital syphilis, excepting that the mother had eight miscarriages, and no objective signs beyond an irregular and notched condition of the incisor teeth of the upper jaw. There was no interstitial keratitis, no pigmentary change of the choroid, or optic neuritis. According to the mother's statement, her daughter was born without a blemish, and grew up to be a strong healthy girl until the month of July, 1873. At this time she was living neighbour to a family who were known to be syphilised, and she took an especial fondness for one of these children (an infant), who, in addition to other sores about the body, was suffering from mucous tubercles around the anus. She was constantly nursing this child, and, neglecting a scratch upon the flexor surface of the right forearm (upon which she carried the child), she soon found it became very painful, and shortly formed an open wound, with indurated edges. The lymphatics became affected and the axillary glands enlarged. The precise period of incubation was unknown. From a fine healthy girl she became rapidly emaciated, complained of aching pains all over the body, followed by the train of signs and symptoms which were fully delineated in Dr. Dowse's remarks and in the photographs which were exhibited. He stated that there was considerable destruction of the alæ of the nose; and that the ulceration extended to the pharynx, larynx, and, as was found at the post-mortem examination, to the trachea and larger bronchi. So severe was the ulceration of the throat and pharynx that swallowing was at times almost impossible. The eruption upon the skin first made its appearance as a lenticular syphilide, which rapidly ulcerated, giving rise to a fetid discharge and crusts resembling a modified rupia. The chest, abdomen, flexor surfaces of the arms and thighs, were comparatively little, if at all, affected; but the head, the nose, the angles of the mouth, the extensor surfaces of the extremities, and the back were covered. The rapidity of change from the destructive to the reparative process was a marked feature in the case. Dr. Dowse said that he could scarcely pass to its pathology without making some few remarks upon the treatment, and here he considered that he failed most unfortunately, for the reason that nature was doing battle most manfully. Upon several occasions he thought her cured; but the disease again recurred with greater severity. He tried every remedy; but mercurial inunctions proved more beneficial than increasing doses of iodide of potassium. Dr. Dowse finally remarked that most writers upon syphilis speak of the rarity of rupia in syphilitic children. Zeissl says that, with his large opportunities, he had rarely seen such cases; and Cullerin remarks that he had never seen it. The clear history in this case appeared to give it greater interest; for the child contracted the disease in the secondary stage, and then gave evidence of a secondary eruption, which rapidly passed into the tertiary form. The patient was of fair complexion, with light very fine hair, and long eyelashes—just a girl in whom lupus might in all probability be anticipated; and it certainly became a question as to the exact difference between the ulceration about the nose and lupus, and might lead to a point for discussion as to how far lupus might originate and be due to a modification of the primary syphilitic agent; and again, should it be correct that the patient was the subject of hereditary syphilis, it went to prove, what had hitherto been to a great extent denied, that primary syphilis could be acquired in a girl the subject of hereditary taint.

The President remarked that the case was of interest to the Society as regards its mode of origin, the train of symptoms, and the mode of death.

Dr. Cayley thought there was no very good evidence of hereditary syphilis in the case. There were no signs of it whatever till after the primary disease was contracted. Notched teeth by themselves were not absolutely confirmatory.

Dr. Dowse said the only signs of hereditary syphilis were the notched teeth. There was no history whatever of the disease till after infection.

Mr. Morrant Baker suggested that the syphilis might have been combined with lupus; but Dr. Dowse said he could not make that out, though the child was rather scrofulous.

A Case of Abscess of the Liver and Empyema, in which Paracentesis was performed.

Dr. Irvine read particulars of this case. The patient, aged forty, was admitted into Charing-cross Hospital, under Dr. Silver, on February 16, 1877. He had been a soldier; was in India five years, where he drank freely, and was invalided at twenty-eight because of chronic dysentery. After his discharge he had tolerable health and no return of his dysenteric symptoms; but just before Christmas, 1876, he caught cold, began to cough and spit, and suffer from pains in the right chest. The cough became worse and worse, and was accompanied by dyspnœa. He lost flesh rapidly and sweated greatly at nights, but had no rigors, no diarrhœa, and no pain in the right hypochondrium. Shortly after admission he could breathe calmly in the recumbent position, but complained of a distressing cough. He was much emaciated; his nails were incurved; the superficial veins of the thorax were distended; the right side was bulged and showed scarcely any movement. There were dulness, diminished vocal fremitus, and weak, though bronchophonic, resonance over the whole right chest, back and front. The heart and liver were displaced; the liver could be percussed from an inch to two inches below the margin of the ribs, but its edge could not be felt. There was no bile in the urine. On the morning of admission the temperature was 100·2° Fahr. There was no improvement from his stay in the hospital, and the dyspnœa became more distressing. The temperature varied considerably, on one occasion falling 5° in little more than a day without obvious general improvement. On March 2 a trocar was passed through the ninth space, behind the posterior axillary line, where the empyema seemed to be pointing, but only two ounces of pus mixed with blood were brought away. The temperature sank to 97·6° Fahr. afterwards; but on the second day the patient's condition was most critical, and a free opening was made in the eighth space, in the mid-axillary line, and by means of a probe connected with that made in the ninth space. A tube was passed, and about a pint of sero-purulent matter escaped. This gave temporary relief; but it was dangerous to proceed with operative measures. The man died next day. It was found post-mortem that the lower puncture had passed below the diaphragm into an abscess of the liver, from which the first pus had come; the opening in the eighth space had passed above the diaphragm into the pleural cavity, but the diaphragm was bound by old firm adhesions to the chest-wall, and because of these adhesions the operation had been inefficient. A catheter went through the eighth space, diaphragm, abscess of liver, and out through the ninth space. The pleura was full of sero-purulent matter; the lung completely collapsed and adherent to the diaphragm. The liver was displaced and altered in shape; its right lobe was rounded, the gall-bladder wholly anterior, and there was no edge. This lobe was lying anteriorly as high as the sixth rib and as low as three inches below the margins of the ribs. The left lobe was completely under the sternum and under the adjacent left cartilages. It seemed probable that the man

had been the subject of hepatic abscess, which had for years been latent; that perhaps, as a consequence by direct transmission through the diaphragm, pleurisy had from time to time occurred, and finally ended in a very acute attack and empyema. The chronic nature of the disease was proved by the position of the liver and the adhesions which existed between it, the diaphragm, and lung. The diminutions from time to time in the amount of pleuritic fluid would vary the intrathoracic pressure, and modify, therefore, the position of the liver, which besides was completely changed in shape by its own internal disease. Clinically, it seemed impossible to arrive at a diagnosis of the exact conditions in cases like this. All the usual distinctions between empyema and hepatic abscess were wanting, and it was impossible to determine how far the liver ascended in the thorax. The effects of respiration were valueless, because there was no respiratory lung on the right side; the points where vocal fremitus and resonance ended were useless; and the difference in resistance at the margin of the ribs was like that met with in simple pleurisy with displacement of liver, because of the peculiar twisting and shape of the latter, which also prevented any lower edge from being felt. As regarded the operation of paracentesis, the case was of most interest. It was impossible to have avoided the belief that the pointing in the ninth space was empyemic, because the signs of empyema were so certain, while of hepatic abscess there were none. Physicians were asked, before surgeons operated, to say where the liver began, and, though wounds of different organs were not of serious importance in the operation, it was well to make it as perfect as possible. The case was an illustration of the difficulties which arose in the diagnosis of the exact relations of lung and liver in hepatic abscess, and empyema.

Dr. Silver said that had he known the case was coming on for discussion he might have been able to furnish some more exact clinical details than were now available for discussion. There were, however, certain facts in connexion with the case as a diagnostic puzzle which were worthy of notice. The man had been a soldier in India, where he had drank a great deal. He had been discharged on account of disease of the liver following dysentery, and since his return to England he had often drunk night after night as much as a bottle of brandy on each occasion. It was fair to conclude from such a history that the liver was likely to be in a very unsound condition. He was employed as a "commissionaire," and was much exposed to cold and wet about Christmas, since which time he had suffered from a cold and cough. A day or two before admission he was suddenly seized in Hyde-park with a violent pain in the right side, with exacerbation on coughing, and with difficulty reached home. When admitted, his right pleura was full of fluid, but from the history it was not quite clear whether the pleurisy was recent or of some standing. He did not improve after admission, and his temperature showed regular and considerable nocturnal exacerbations, and as the fluid did not yield to treatment it was determined to ascertain its nature, with a view to relief either by aspiration or drainage. The liver could not be felt, and when the man inclined to his left side, so as to expose his right for percussion, but little liver-dulness was appreciable. The fluid seemed pointing in the ninth interspace nearly in a line with the angle of the scapula. Here the needle of the aspirator was introduced, and pushed in for some distance. About two ounces of thick grumous fluid came away. The character of the fluid showed that successful aspiration was hopeless. Accordingly, an opening was made with the knife, but on that occasion no additional fluid came away. The extremity of a drainage-tube was introduced to keep the wound open, in the hope that during the night the fluid might escape by its side, but this did not take place. On Sunday (two days after), finding the man much worse, the original wound was deepened, much of the same kind of pus coming away as before, and a counter-opening was made higher up in the chest; between these two a thick elastic catheter was passed and fastened in, hoping that thus at last the accumulated fluid would find free vent. Unfortunately it did not. Dr. Silver did not again see the patient, nor was he present at the post-mortem examination. The lungs were too completely collapsed to allow of more than partial and temporary relief by aspiration being thought of.

Dr. Coupland asked what was the position of the heart.

Dr. Powell considered the position of the heart important in many cases. In cases where there was much difficulty in evacuating the fluid, more than one or even two openings should be made in the chest, if necessary. He, along with Mr. Arnott, had seen a case of empyema following on a miscarriage. There was great difficulty in getting the pus out by means of a trocar. After a time a free opening was made; only a little came away then, but the wound was stuffed, and a great deal of fluid came away in the night.

Artery Constrictor.

Mr. Henry Morris exhibited some specimens of the external iliac and common carotid arteries, removed from dead subjects, which had been subjected to constriction by Dr. Fleets Spiers's "artery constrictor." He also demonstrated the mode of application of the instrument. The constrictor acted much as the ligature and torsion by dividing the internal and middle coats; it did not, however, destroy the external coat, while the inner coats could be peeled away and involuted to a degree varying with the extent to which the screw of the instrument was worked. The specimens showed the success of the constriction. The instrument had to be applied for a few seconds only, and, after its removal, it was found that the involution of the coats was of itself sufficient to resist the flow of fluid injected into the artery. The results of experiments on the dead subject, and the trials which had been made of the constrictor on the living by American surgeons, were very satisfactory; so that it deserved, Mr. Morris thought, a fair trial from all surgeons interested in measures having for their object the checking of hæmorrhage or the occlusion of arteries in their continuity, without leaving any foreign body whatever in the wound. In aneurisms of the arch of the aorta, of the innominate, carotid, subclavian, and axillary arteries, torsion was impossible; Esmarch's bandage out of the question, compression was neither convenient nor safe, even when it could be borne; carbolised catgut ligatures had been proved to be unreliable, and the galvano-puncture was fraught with dangers of its own. In such cases as the above, constriction of the "artery constrictor" seemed to possess advantages over all other methods, and promised a fair amount of success. Mr. Morris pointed out that it was most essential that the hook of the instrument should be accurately made, or it would lacerate the external coat. Such he found to be the case with a constrictor made in this country from the drawings in Dr. Spiers's original paper. This had led him to obtain a pattern, through Mr. Hawkesley, from America, made by the instrument-makers employed by Dr. Spiers.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 31:—

Nariman, Kaikosro Sorabji, Bombay.
Floyd, John, Oxford.
Coates, William Henry, 233, Hackney-road.
Tritton, William Parsons, Kilburn.

The following gentlemen also on the same day passed their primary professional examinations:—

Marsh, Frank, King's College, London.
Stone, John William, St. Bartholomew's Hospital.
Cheesman, Geo. Edward Alexander, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Craven, R. Musgrove, M.R.C.S. Eng., L.R.C.P. Edin.—Honorary Medical Officer to the Southport Convalescent Hospital and Sea-Bathing Infirmary, *vice* G. B. Barron, M.D., resigned.

Parker, Rushton, F.R.C.S.—Lecturer on Surgery at the Liverpool Royal Infirmary School of Medicine, *vice* Reginald Harrison, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

Yeomanry Cavalry.—Ayrshire: William John Naismith, gent., to be Surgeon. Derbyshire: Surgeon Frederick Borough resigns his commission.

BIRTHS.

Adams.—On June 4, at West Town, Somerset, the wife of G. D'Arcy Adams, M.D., of a son.

Chessall.—On June 5, at Horley, Surrey, the wife of Wm. Chessall, M.D., of a son.

Croom.—On June 2, at 10, Hope-street, Edinburgh, the wife of J. Halliday Croom, M.B., L.R.C.P. Edin., of a son.

Deeping.—On May 28, at Southend, the wife of G. D. Deeping, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

LANCHESTER.—On June 1, at Park House, Croydon, the wife of Henry T. Lanchester, M.D., of a daughter.

LOVELL.—On May 29, at 53, Wellington-road, St. John's-wood, the wife of F. Otley Lovell, M.R.C.S., prematurely, of a son, stillborn.

NEWCOMBE.—On May 29, at 2, Walker-terrace, Gateshead, the wife of F. W. Newcombe, M.D., of a daughter.

O'FARRELL.—On June 3, at Tangier, Boyle, the wife of George Plunkett O'Farrell, M.A., M.D., of a daughter.

PARROTT.—On May 25, at The Thorn, Hayes, Middlesex, the wife of Edward J. Parrott, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

PHELPS.—On June 2, at Freshwater, Isle of Wight, the wife of William Phelps, M.R.C.S.E., prematurely, of a daughter.

TREVES.—On May 31, at King's Cliffe, Northamptonshire, the wife of Edward Treves, M.R.C.S., of a daughter.

WOOD.—On May 26, at Woolton, Liverpool, the wife of Thomas Wood, M.D., of a daughter.

MARRIAGES.

MARRIOTT—SHARPE.—On June 2, at St. Mary's Church, Woolwich, Horace Marriott, son of General Hayes Marriott, to Julia Mary Katherine, eldest daughter of Alfred Sharpe, M.D.

MARTEN—HOLTTUM.—On June 5, at St. Martin's, Canterbury, Stephen Watson Marten, of Shalmsford-bridge, Chartham, third son of Peter Marten, Esq., J.P., to Bessie Louisa, only daughter of Charles Holttum, F.R.C.S.E., of The Friars, Canterbury.

SWORDER—ROGERS.—On June 5, at St. Clement Danes, Strand, John Smith Sworder, C.E., eldest son of Henry Sworder, Esq., of Great Hallingbury, Essex, to Gertrude, second daughter of William A. Rogers, M.R.C.S., of Wolverton, Bucks.

THORNHILL—CAMPBELL.—On May 26, at St. Stephen's Church, Guernsey, Thomas Alen Thornhill, M.B., Surgeon-Major Army Medical Department, to Annette Charlotte, second daughter of the late Archibald David Campbell, Esq., of Argyllshire.

WATSON—JONES.—On May 31, at Holy Trinity, Paddington, Arthur Watson, M.D., of Manchester, to Eliza Anne, eldest daughter of the late Isaiah Jones, Esq., of Gravesend.

DEATHS.

ALLEN, MORGAN HENRY LAWRENCE, M.R.C.S.E., L.A.C., eldest son of David John Allen, M.D., of Wellington-road, St. John's-wood, on June 3, aged 23.

BUTTON, BENJAMIN, M.R.C.S.E., L.S.A., formerly of Great Yarmouth, and late of Diss, Norfolk, at Kelnetham, Harling, Norfolk, on June 2, aged 52.

MACRAE, CHARLOTTE IDA, wife of A. C. Macrae, M.D., at 119, Westbourne-terrace, Hyde-park, on June 3.

MOORHEAD, THOMAS, M.D., Deputy Surgeon-General, at Tunbridge Wells, on May 26, aged 55.

JONES, WILMOT T., M.D., at the Rectory, residence of his father, the Rev. Andrew Armstrong Jones, Rector of Kilmore Parish, on May 24, aged 24 years.

RICHARDSON, WILLIAM T., L.S.A., at North-road, Highgate, on May 31, aged 71.

WILLIAMS, MANDERSTON, wife of Joseph Williams, M.D., and daughter of the late Archibald Douglas, Esq., of Edinburgh, advocate, at Holmhurst, Cambridge-park, Twickenham, on May 30.

OOD, EDMUND, M.R.C.S., at 13, Globe-street, Wapping, on June 6, in his 58th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CARNARVONSHIRE AND ANGLESEA INFIRMARY, BANGOR.—House-Surgeon. Candidates must be registered to practise in medicine and surgery, and acquainted with the Welsh language. Applications, with testimonials, to the Secretary, on or before June 14.

CITY OF LONDON LYING-IN HOSPITAL, CITY-ROAD.—Consulting-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, stating qualifications, etc., to the Secretary, on or before June 19.

EAST RIDING ASYLUM, BEVERLEY.—Assistant Medical Officer. Candidates must be under thirty years of age, unmarried, and have at least one registered qualification. Applications, with testimonials, to the Medical Superintendent, not later than June 23.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Candidates must have double qualifications. Applications, with testimonials, to the Secretary, on or before June 11.

PROVIDENT SURGICAL APPLIANCE SOCIETY, 37, GREAT ORMOND-STREET, LONDON, W.C.—Assistant-Surgeon. Candidates must be M.R.C.S. Applications, stating age, qualifications, etc., with testimonials, to the Secretary, on or before June 11.

RIPON DISPENSARY AND HOUSE OF RECOVERY.—Resident House-Surgeon and Dispenser. Candidates must be single. Applications, with testimonials as to professional ability and moral character, to the Hon. Secretary, on or before June 16.

SALOP INFIRMARY, SHREWSBURY.—Resident House-Surgeon. Candidates must be Fellows or Members of the Royal College of Surgeons of England, Edinburgh, or Dublin, and hold a qualification to practise medicine. Testimonials, with certificates of qualification, to the Board of Directors, not later than June 15.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of London, Edinburgh, or Dublin, and be possessed of a medical qualification. Applications to the Chairman of the Medical Committee, at the Hospital, on or before June 11.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Freebridge Lynn Union.—Mr. A. E. Barrett has resigned the Workhouse; salary £25 per annum. Also the Second Eastern District; area 15,697; population 3022; salary £57 per annum.

Samford Union.—Mr. Maurice S. Duke has resigned the Stratford District; area 3149; population 1044; salary £31 10s. per annum.

Tiverton Union.—The Tiverton East District is vacant; salary £70 per annum. Also the Tiverton West District; salary £70 per annum. Also the Washfield District; area 4581; population 671; salary £15 per annum. Also the Cadbury and Cadeleigh District; area 4090; population 576; salary £27 per annum. Also the Workhouse; salary £30 per annum.

APPOINTMENTS.

Bedminster Union.—Lionel Alexander Weatherley, M.R.C.S. Lond., M.B and M.C. Aber., to the Seventh District.

Newcastle-under-Lyme Union.—James P. Warburton, L.R.C.P.E., L.S.A., L.F.P. & S. Glasg., to the Whitmore District.

Southmolton Union.—Frederick Fludd Dickinson, M.D. Queen's Univ. Ire., M.R.C.S. Eng., to the Fourth District.

IT is stated that the Corporation of Wolverhampton is about to remodel the east part of that town, at a cost of £160,000, under the provisions of the Artisans and Labourers' Dwellings Act.

COLLEGIATE ELECTIONS.—The annual election of Fellows into the Council, as already stated, will take place on Thursday, July 5. Candidates desirous of a seat are required by the by-laws to send in their nomination papers within ten days after publication in the *London Gazette* of the day of meeting.

THE Earl of Kimberley has presented a park, bearing his name, to the inhabitants of Falmouth, for their use and recreation. The borough members, the Mayor and Corporation, and a large number of residents, were present at the opening ceremony. The park, which has been planted and beautified by his Lordship, is picturesquely situated in Berkeley Vale, diverging from the centre of the town westward.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—At a Council meeting held on Tuesday, the 5th inst., it was resolved that it was expedient to adjourn the annual general meeting of the Association from Thursday, June 21, as previously announced, to Tuesday, July 3. The meeting will be held at 3, Bolt-court, Fleet-street, at 3 p.m. precisely, when several matters of much interest to the Poor-law Medical Service will be brought under consideration. The Council therefore earnestly hope that all members and friends of the Association will make it convenient to attend.

PRESENTATION OF PLATE TO DR. ARTHUR HILL HASSALL.—A presentation of a very handsome service of plate has just been made to Dr. Hassall, the Right Hon. Viscount Eversley and the Right Hon. Sir Lawrence Peel having been the treasurers of the fund. The tray bears the following inscription:—"This silver tray, with the tea and coffee service and 300 guineas, were presented to Dr. Arthur Hill Hassall by a numerous body of contributors in recognition of his valuable services as the originator and founder of the Royal National Hospital for Consumption and Diseases of the Chest located at Ventnor."

ROYAL COLLEGE OF SURGEONS.—At the half-yearly examination of candidates for the Fellowship of the College, which was brought to a close on the 4th inst., twenty-two candidates were examined, the dates of whose diplomas of Membership ranged from May, 1862, to April last, and one not a Member of the College. Of this number sixteen passed; the remainder were referred to their professional studies for twelve months. The following were the questions on pathology, therapeutics, and surgery submitted to the candidates at the written examination, when they were required to answer all four of the questions, viz.:—"1. State what pathological changes are produced by rickets in the minute structure of bone, and describe the effects of this disease on the walls and contents of the great cavities of the body. 2. Describe the anatomical characters of phlebitis in its several stages; state what you know of its causes, and sketch the clinical history of the affection. 3. State the diagnostic signs of the various forms of dislocation of the bones of the ankle-joint and tarsus. 4. What do you understand by the term secondary hæmorrhage? State the causes to which it may be due, and the treatment you would adopt in each case." The names of the successful candidates cannot be published until submitted for confirmation to the next meeting of the Council of the College.

THE LATE FLEET-SURGEON JACOB E. DYAS.—An inquest was held on Monday week, at Portsmouth Dockyard, on the body of Fleet-Surgeon Jacob E. Dyas, who died on her Majesty's ship *Warrior* on the previous Saturday, in somewhat singular circumstances. He was found lying on the couch in the dispensary in an insensible state. It appeared that he was in the habit of taking nightly a sedative of from twenty-nine to thirty minims of tincture of opium. On the present occasion it seems he did not use the graduated measure, but poured about an ounce of the tincture into a tumbler. Pecuniary embarrassments had previously troubled him, but of these he was being relieved. The jury felt some difficulty in coming to a verdict, but ultimately it was returned to the effect that the deceased had been killed by an overdose of laudanum, but whether taken for medicinal or other purposes there was no evidence to show.

THE LEAMINGTON PROVIDENT DISPENSARY.—The Leamington Provident Dispensary has published its eighth annual report for the year 1876, from which it is to be gathered that its advantages are adequately appreciated by those for whom it was established. An influential committee, at the head of whom is Lord Leigh, contributes undoubtedly to the success of the undertaking, and although the benevolent subscriptions for the year are about £10 less, the payments of the provident members during the same period have increased by £48. The report of the medical staff, consisting of Mr. J. Fenn Clark, Dr. Thursfield, Mr. J. E. Wood, and Dr. A. Wellesley Tomkins, shows that 3990 cases have been attended during the year, the mortality in the number having been remarkably low—15·7 per 1000 only. This is in some measure explained by the fact that the members, feeling themselves undeterred by the fear of expense, apply for relief for trivial complaints, and in the earliest stages of more serious illnesses. Thus the medical officers have the opportunity afforded them of meeting serious disease in its very earliest development, of preventing its increase, and of maintaining generally the health of that section of the community which is committed to their care. The Leamington Provident Dispensary appears to be established on a proper basis for institutions of this character.

LIBRARIES FOR HOSPITAL PATIENTS.—A writer in the *Progrès Médical* (May 19), while urging the necessity of forming or improving medical libraries at the various hospitals of Paris, also calls attention to the desirableness of instituting libraries for the patients. It would be a great honour, he observes, to the medical officers attached to these hospitals if they would undertake so useful a work; and if their incessant occupations prevent their devoting the time necessary for this, there is no reason why their wives should not undertake so charitable a duty. Numbers of books are consigned to the waste-paper basket, or carelessly disposed of, which might contribute to the recreation of unfortunate beings condemned to pass long hours without any means of distraction. Among their acquaintances the medical officers and old *internes* might easily found such libraries; and as a beginning the medical students would do well to give their patients their newspapers when they have finished reading them.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN MAY.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	20·50	0·049	0·135	0·001	0·007	13·2	3·3
West Middlesex .	20·20	0·059	0·150	0·000	0·007	13·2	4·2
Southwark and Vauxhall . .	19·60	0·052	0·150	0·001	0·008	13·2	3·3
Chelsea . .	20·10	0·052	0·135	0·000	0·007	13·2	3·3
Lambeth . .	21·00	0·053	0·180	0·000	0·008	13·7	3·7
Other Companies.							
Kent . . .	31·00	0·003	0·420	0·000	0·002	19·4	6·5
New River . .	19·40	0·036	0·138	0·000	0·006	12·6	3·3
East London .	18·80	0·028	0·180	0·000	0·007	11·6	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in the Grand Junction, the West Middlesex, and the Lambeth Companies.

PODOPHYLLIN IN CONSTIPATION AND HÆMORRHOIDS.—Dr. Rousselet, on the strength of forty-seven cases, confirms the favourable reports that have been given of the utility of this substance in habitual constipation. He prefers pills of the gum-resin, and is of opinion that the remedy is usually continued for too short a period, two or three months being required to contract the habit of passing a daily stool, which, too, should be always attempted at the same hour. He begins with one pill of a centigramme, adding another if necessary, and continues this dose daily for a fortnight; after this he gives one every other day for a week, and increasing the interval by a day every week. If the bowels in the meantime act irregularly, he goes back to the daily dose, again to diminish it. He prefers giving the pill with the last meal, instead of at bedtime as usually advised. Having observed hæmorrhoids, which so commonly accompany constipation, disappear when this is relieved by the pills, Dr. Rousselet tried their effect on persons who suffered from hæmorrhoids as a substantive affection, giving one or two centigramme pills in the same way. His success has been very considerable, the stools becoming softened, and the pain, tumefaction, and vascular enlargement being promptly relieved. The remedy, however, may require to be continued daily for a month or two.—*Gaz. Méd.*, May 26.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. John Tremearne, Victoria.—Received with thanks.

Old Jewry.—Yes; the late Mr. Coulson was there interred, close to the resting-places of his former colleagues—Dr. Birkbeck and Mr. Salmon.

Mr. Simpson.—The questions have already been published in the *Medical Times and Gazette.* Candidates were examined on recently dissected parts, in addition to which upwards of 200 choice preparations from the Museum were used for the purpose.

F.Z.S.—According to the last report on the district criminal and private lunatic asylums in Ireland, the total number of lunatics in asylums in Ireland on December 31, 1876, was 12,123, of whom 6001 were males and 6122 females. Between the two sexes there were 346 patients resident in public institutions in excess of the number at the end of the preceding year. The proportion of persons more or less mentally impaired is, in the 5,314,000 inhabitants of Ireland, put down at 3·50 per 1000.

Lex.—London was computed by the Census of 1871 to contain 3,254,260 persons, of whom 80,430 died within the year.

W. W., Berkshire.—Dr. Granville was an Italian by birth; his original name was Augusto Bozzi. He was born at Milan on October 7, 1783. His father belonged to an old and respectable family in Lombardy. His mother was an English lady—Rosa Granville; and it was at her request that he, while still a young man, added Granville to his surname. On his father's side young Bozzi was connected with the Buonapartes, for the Bozzis had settled in Corsica as well as in Genoa. He had five sons, but none of them took to the medical profession.

Huth.—1. Sir William Gull had been a Lecturer at Guy's Hospital for twenty-four years when he was called away to Sandringham. 2. A baronetcy has hitherto been the limit of medical honours in England.

Tanto, Norfolk.—The skeleton of Jeremy Bentham is in University College. This eccentric individual left his body by will to Dr. Southwood Smith, who wrote a letter on the subject to *Notes and Queries*:—"Jeremy Bentham left by will his body to me for dissection. I was also to deliver a public lecture over his body to medical students and the public generally. The latter was done at the Well-street School. After the usual anatomical demonstration was over, a skeleton was made of the bones. I endeavoured to preserve the head untouched, merely drawing away the fluids by placing it under an air-pump over sulphuric acid. By this means the head was rendered as hard as the skulls of the New Zealanders, but all expression was gone, of course. Seeing this would not do for exhibition, I had a model made in wax by a distinguished French artist. . . I then had the skeleton stuffed out to fit Bentham's own clothes, and this wax likeness fitted to the trunk. . . . The whole was then inclosed in a mahogany case, with folding glass doors, and I ultimately gave it to University College, where it now is."

CONTAGIOUSNESS OF DIPHTHERIA.

A serious and painful case of communication of disease is reported from Ellesmere. About three weeks ago the children of Mr. Lawrence, of the Bridgwater Hotel, Ellesmere, were at Duddleston, and being thirsty, a glass of water was procured from a cottage, where, it subsequently transpired, a child was suffering from diphtheria, and one or more of the children drank of it. Since then they have all been fatally attacked with the disease, and last week the sixth and last surviving child succumbed to it. The hotel has been closed, and workmen are thoroughly cleansing and disinfecting every part of it.

Maximinus.—Dr. Thomas Young was elected one of the Physicians of St. George's Hospital in January, 1821, an appointment which he retained till he died in 1829. He was buried in the vault of his wife's family at Farnborough, Kent.

BUTTER ADULTERATION.—LEIPZIG.

The Leipzig Pharmaceutical Union offers a prize of 300 marks for the discovery of a sure and practical method for the detection of adulteration of butter by other fatty substances. Drs. Heintz and Knop have consented to act with Herr Kohlmann as the judges. All communications are to be forwarded to the latter, in Leipzig-Rendnitz, before the end of September.

SMALL-POX ON BOARD STEAMERS.—AUSTRALIA.

The latest Australian news states that the appearance of small-pox on board steamers coming to Australia from Indian and Chinese ports was of frequent occurrence. The Torres Straits mail steamer *Brisbane*, having on board Sir Arthur Kennedy, the new Governor of Queensland, was for this reason quarantined at Brisbane; and on similar grounds the *Bangalore*, with the February mails from England and India, was detained at the quarantine station at Port Philip Heads for more than a week. There was no serious outbreak on board either vessel.

COMMUNICATIONS have been received from—

Mr. PARKER, London; Mr. T. AMYOT, Diss; Dr. GAVIN MILROY, Richmond; Dr. RIDOE, Enfield; Mr. MEADOWS, Hastings; Mr. E. L. HUSSEY, Oxford; Mr. ALFORD, London; THE SECRETARY OF THE ROYAL INSTITUTION, London; Dr. GUSTAV BISCHOF, Bloomsbury; Mr. J. WICKHAM BARNES, London; Mr. COLMAN, London; Dr. R. B. SEARLE, London; Dr. WILLIAM SQUIRE, London; Mr. JOHN CHATTO, London; Dr. ROUSSEL, London.

BOOKS AND PAMPHLETS RECEIVED—

Transactions of the Odontological Society of Great Britain—Dr. McCall Anderson, Clinical Lectures on the Curability of Attacks of Tubercular Peritonitis and Acute Phthisis—Whose Dog is it? or, the Story of Poor Gyp—Cassell's History of India, part 18—Louis A. Duhring, M.D., Atlas of Skin Diseases, part 2—Transactions of the Pathological Society of Philadelphia, vol. vi.—L. Duncan Bulkley, A.M., M.D., On the Nomenclature and Classification of Diseases of the Skin; Two Cases of Hydroa—Stephen S. Alford, F.R.C.S., Dipsomania: its Prevalence, Causes, and Treatment—Gustav Bischof, On Putrescent Organic Matter in Potable Water—George Heaton, M.D., The Cure of Rupture—Transactions of the American Gynæcological Society, vol. i.—J. Marion Sims, M.D., The Discovery of Anæsthesia.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Medical Inquirer—Veterinarian—Gazeta Medica da Bahia—Obstetrical Journal of Great Britain and Ireland—Morningside Mirror—Monthly Letter of the English Anti-Tobacco Society—Lahore Civil and Military Gazette—Allahabad Pioneer—Edinburgh Medical Journal—Archives of Dermatology—Practitioner.

APPOINTMENTS FOR THE WEEK.

June 9. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Mr. C. T. Newton, "On the Recent Discoveries at Mycenæ."

11. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

13. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

EPIDEMIOLOGICAL SOCIETY, 8½ p.m. Election of Officers, &c. Surgeon-Major Colville, "On the Plague in Baghdad."

14. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

15. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 2, 1877.

BIRTHS.

Births of Boys, 1163; Girls, 1062; Total, 2225.
Average of 10 corresponding years 1867-76, 2178·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	769	674	1443
Average of the ten years 1867-76	673·2	615·6	1288·8
Average corrected to increased population ...	...	...	1379
Deaths of people aged 80 and upwards ...	...	...	47

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	6	9	1	2	3	...	2	1	2
North	751729	30	14	5	2	7	...	...	...	4
Central ...	334369	...	8	...	1	5	...	2	...	1
East	639111	6	24	10	1	14	...	2	1	2
South	967692	19	14	12	2	12	3	5	...	4
Total	3254260	61	69	28	8	41	3	11	2	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·443 in.
Mean temperature	53·7°
Highest point of thermometer	66·4°
Lowest point of thermometer	43·0°
Mean dew-point temperature	45·0°
General direction of wind	S.W.
Whole amount of rain in the week	0·28 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 2, 1877, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending June 2.	Deaths Registered during the week ending June 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2225	1443	66·4	43·0	53·7	12·06	0·28	0·71
Brighton	102264	43·4	62	43	65·0	43·7	53·9	12·17	0·34	0·86
Portsmouth ...	127144	28·3	67	42	62·0	46·8	52·8	11·56	0·50	1·27
Norwich	84023	11·2	62	40	68·0	45·0	54·9	12·72	0·45	1·14
Plymouth	72911	52·3	45	30	63·0	48·0	53·5	11·95	1·02	2·59
Bristol	202950	45·6	159	86	68·2	42·2	53·4	11·89	1·02	2·59
Wolverhampton ...	73389	21·6	55	23	65·4	39·0	50·9	10·50	1·12	2·84
Birmingham ...	377436	44·9	292	172	...	...	...	...	...	...
Leicester	117461	36·7	85	41	72·2	41·2	54·1	12·28	0·95	2·41
Nottingham ...	95025	47·6	89	33	69·2	40·5	52·9	11·61	1·04	2·64
Liverpool	527083	101·2	378	277	64·9	44·5	52·3	11·28	0·53	1·35
Manchester ...	359213	83·7	342	185	70·0	42·0	53·9	12·17	1·39	3·63
Salford	141184	27·3	160	90	63·6	40·0	51·0	10·56	1·12	2·84
Oldham	89796	19·2	92	70	...	...	...	...	...	...
Bradford	179315	24·8	121	81	65·7	43·1	52·2	11·22	1·46	3·71
Leeds	298189	13·8	229	127	69·0	42·0	53·6	12·01	1·07	2·72
Sheffield	282130	14·4	206	149	64·0	40·0	52·2	11·22	1·96	4·98
Hull	140002	38·5	97	57	65·0	42·0	53·6	12·01	0·65	1·65
Sunderland ...	110382	33·4	90	62	69·0	43·0	53·8	12·12	0·63	1·60
Newcastle-on-Tyne	142231	26·5	99	66	...	...	...	...	...	...
Edinburgh	218729	52·2	173	79	61·9	39·5	52·3	11·28	0·97	2·46
Glasgow	555933	92·1	442	288	59·7	40·5	51·4	10·78	1·31	3·33
Dublin	314666	31·3	149	189	65·0	38·0	53·0	11·67	0·41	1·04
Total of 23 Towns in United Kingdm	8144940	38·3	5719	3673	72·2	38·0	53·0	11·67	0·91	2·31

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·44 in. The lowest reading was 29·09 in. on Monday, and the highest 29·89 in. at the beginning of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE CLINICAL ASPECTS OF CHOREA,

AS AFFORDING A KEY TO ITS PATHOLOGY.(a)

By OCTAVIUS STURGES, M.D., F.R.C.P.,
Physician to the Westminster Hospital; Assistant-Physician to the Hospital for Sick Children.

LECTURE III.

LAWS OF ORIGIN AND DEVELOPMENT—TREATMENT.

(*Concluded from page* 609.)

THE hypothesis of chorea which has been just proposed, and in a measure vindicated by reference to the special characters of the affection, is still further commended by this: it admits of a common cause being asserted for all chorea alike. It is quite certain that neither anæmia nor rheumatism nor fright can stand, as such, in that relation. And yet the chorea of rheumatism is all one with that of anæmia or of fright. From the common result we are irresistibly led to seek a common cause. The theory of mental impression supplies it.

It has been urged already that if fright is an efficient cause of chorea, other emotions, less obvious because less easily expressed, but to which childhood is especially liable, will probably be so too. Why should not physical pain be placed in the category? In early childhood it is a new sensation, for the pain of infancy is not mentally recognised. That form of pain, especially, which is aggravated by movement, not only arrests the process of muscular education, but deprives the child at the same time of its chief means of expression. It is not surprising, then, that an affection like rheumatism should so disturb the muscular control that, when the disused limbs are again set free, they should fail to resume that proper order of movement which the illness had interrupted when only half learnt.

Not only rheumatism, but even trivial localised pain is found to produce chorea. Something similar may be observed in the allied affection, hysteria. There are many women who, by painful effort and watching, succeed for the most part in keeping under their over-emotion. But when from any cause, such as pain or mental excitement, this difficult self-control is weakened, emotion gets the mastery. Bodily pain is not the cause of hysteria any more than of chorea, except indirectly as taking away the little obstacle that is in the way of it.

But you will say, Why then does not illness produce chorea more often than it does? The prolonged wasting diseases of childhood, the marked anæmia of splenic enlargement and of renal disease, do not in the least predispose to chorea, while acute disease is conspicuous rather for arresting than causing it. The answer is, that in general illness the whole vitality is lowered together; if the power of control is lessened, the readiness of response is less too. It is thus the rule of chorea to emerge when the affection that occasions it has some time departed. The exceptions to that rule are instances of local pain—tooth-ache, joint-ache, and the like. These will provoke chorea at once; general illness excludes it for the time, but opens a way for it afterwards.

There still remain those numerous examples of chorea occurring, as it were, spontaneously; neither rheumatism, nor pain, nor fright, nor anæmia preceding. Such cases outnumber all the rest; yet they fit in with no particular theory and are, in a measure, neglected. My hypothesis requires them; for, if the cause of chorea passes undiscovered, so does also the cause of much childish fretfulness and waywardness. Supposing, I say, the theory of mental impression as a cause of chorea to be true, it would need instances of this kind where the precise origin of the disorder was unknown.

From such considerations as I have laid before you, I am led to adopt the somewhat unpopular belief that chorea is an affection of function depending not upon anything that is added, but upon something which is taken away. Its elements reside already in the individual, where they are habitually controlled with difficulty, and always ready to break out in riot. The nature of this control is mental, and, while it grows and strengthens with the intellect, is yet distributed in different measure to different individuals. But it is never so firm and impregnable as to be beyond assault—never, indeed, secure against surprise. The loss of this control may be sudden or gradual, partial or complete; and according to the degree of its impairment, so precisely is the measure of disorder. We pass on without any break at all and only an arbitrary line of separation, from that restlessness and instability which is the heritage of every child to the violent jactitation of so-called "acute" chorea, where the will is altogether useless, and the nervous centres are beginning to suffer and make a response of their own.

If the phenomena we have been considering are best expressed in the words of Dr. Bastian, as "due to an enormous down-rush of molecular motion"; or by saying, with Dr. Dowse, that "the automatic balance of nerve-function is superseded by emotional hypergenetic agency," it must be gratifying to learn that the facts can be so compendiously stated. But that the vascular theories at present in vogue, whether of general arterial repletion or minute emboli, or of thrombosis, serve in any degree to explain, or are even consistent with, those clinical features of chorea of which we have spoken, I for one would venture to deny. In accepting the light of morbid anatomy it is necessary to remember the circumstances in which it is given, and the stage of chorea to which it refers. "In looking at the nature of the lesions," says Dr. Dickinson, "it is not possible but to connect them with those of a large group of nervous disorders." How, then, it may be asked, can they be adduced in explanation of symptoms which are peculiar to each member of that group? That hyperæmia of the nervous centres (such as Dr. Dickinson has shown to exist), or even destructive change, should be amongst the *products* of chorea, and that it should produce in its turn results of its own, if it were not in evidence, would be an almost necessary hypothesis. How otherwise should we explain the remarkable fact that in rare instances chorea is transformed into a violent and ceaseless spasm in which all the characters of the original disorder are lost? But while hyperæmia, occurring as secondary to the limb-disturbance and in consequence of it, serves to complete the picture of chorea, it is gratuitous and unintelligible when regarded as its cause.

"The nature and the steps of the morbid process," says Dr. Dickinson in the paper I have repeatedly quoted, "hyperæmia, exudation, and its consequences, are open to view, but not so the causes in which the series has taken origin. Arterial repletion seems mainly concerned in the development of the disease. Why or at what bidding do these vessels thus gorge themselves?" The answer to this question, as Dr. Dickinson intimates, concerns the priority of origin between vascular and nervous "changes," and, in this case as in others, is likely to remain undetermined. It is not possible, I conceive, to place in order of time the material changes of chorea any more than of fear or of passion. We speak of one in anger as "pale," or "dumb," or "breathless," just as the disturbance of circulation, or innervation, or respiration is the most striking. Yet all these functions are deranged together, and so nearly simultaneously that no observation can determine the actual starting-point, or, even if it reached it, would be able to recognise that ideal "irritation" which precedes the earliest material change. Although almost everyone has a very decided preference, either for the vascular origin or the nervous, this preference is arrived at upon considerations beyond the range of pathology, and indicates no less than our adhesion to one or other of two schools of speculative belief.

"No one thinks," says Dr. Liveing(b) (of whose observations what I have been saying of chorea is no more than the corollary), "of a condition of hyperæmia or anæmia as a necessary attendant of a fit of sneezing, vomiting, terror, etc., or imagines that such hypothesis would assist our comprehension of the nature of these phenomena. We regard them as primarily nervous, and any disturbance of the circulation as effects of the nervous disorder. In the various passions and emotions," he continues, "we have very obvious signs of disturbance both in the general circulation and local distribution of blood. Yet no one points to these incidents as a key to the condition of the nervous centres on which the paroxysms depend. Why," he asks, "should it be different in pathology?"

Without seeking, therefore, to determine in the case of chorea those ultimate questions which remain undetermined for all disease whatever, we may yet advance in a knowledge of the real nature of the affection if we succeed in establishing its pathology in relation to normal function. My contention has

(a) Delivered at the Hospital for Sick Children, Great Ormond-street, March, 1877.

(b) "On Migraine," etc., page 392.

been that this relationship is clear and distinct, that the natural history of chorea is in harmony with—nay, that it blends with—our everyday experience of ourselves and of our wives and children, that its symptoms are explained and anticipated by reference to this experience, and are perhaps as well expressed in the terms of common life as in those suggested by a likeness between the nervous system and an electrical machine.

I need not allude further to the theories of chorea, so ably advocated by Dr. Hughlings-Jackson and others, referring its phenomena to cerebral changes due to minute emboli or to thrombosis. The more obvious objections to such views have been often urged. The rejection of one hypothesis does not involve the acceptance of another; yet I think both the facts of emotion-display and the facts of chorea itself may fairly demand of those who dissent from the theory for which I am contending an answer to these two questions, which are correlated:—First, why do the phenomena of chorea happen as they do, in order and method and choice of subjects, except it be for some such reason as is here alleged? The theories which suppose some local change in a nerve-centre as the origin of chorea, even if they obtained the verification of direct observation, which they notoriously want, would still fail to explain the facts. Secondly, if chorea be not the expression by muscular disorder of a disturbance primarily mental, how else is such disturbance signified? That the muscular system responds to such impression always, yet least readily in old age, is certain. Mature life at its period of greatest stability easily acquires habits which withdraw certain muscles from the control of the will in "nervous twitchings," peculiarities of gait, and facial grimace—disorders which, if they happened earlier, would not escape either the nosologist's classification or the physician's treatment. Adolescence has its modes of overflow in all the varieties of mental emotion and muscular spasm which we call hysteria. What is to be given to childhood? Is this period of life alone, where the muscular control is so obviously inefficient and precarious, to know of no motor perturbation sufficiently marked or continuous to obtain notice and name? Or to put it otherwise, Do the purposeless muscular movements which always accompany emotion, and the emotion of children most, never so far exceed as to assume the proportions of disease; or, if they do, what is the disease like?

In conclusion, I have but a few words to add in reference to treatment. These arise inevitably out of the views just expressed, but are founded as well upon experience and generally admitted facts.

1. The duration of chorea is not to be measured by its violence. Whether severe or slight, it is never very short, and—except for the rare accident of counter-shock or the intervention of acute illness—never ends abruptly. Duration and severity being thus independent, it is very difficult to adduce satisfactory evidence that the course of the affection is favourably influenced by drugs. So far as appears to my own observation, cases treated without medicine yield as good results as those treated with whatever medicine.

2. No treatment of chorea, whether medicinal or otherwise, can be fairly judged of unless by reference to the existing phase of the disease. Chorea has its ebb and flow. Remedies given during its natural decline are apt to be regarded as beneficial, while those taken during its natural rise are regarded as harmful; neither conclusion being, in fact, justifiable.

3. As chorea is a mental affection its cure is to be sought through a mental appeal. The measures likely to be immediately harmful or useful are indeed indicated by the symptoms. Chorea is aggravated by emotion and close inspection; it ameliorates with mental and bodily repose and preoccupation; it ceases altogether in sleep and during intervals of musing. Here, then, are the materials for its cure. Any method of treatment which places the child under obvious surveillance, and thus makes it attentive to itself, must tend to aggravate the complaint and aid in its development. There is this grave objection to all formal attempts at muscular discipline, to systematic giving of medicine and the regular visits of a doctor. It is one great aim to draw the child from itself, and to cultivate that frame of mind which at all ages alike is most friendly to bodily stillness—to steady the limbs by steadying the mind. At the same time, we have to regard the disorder as tending each day to become more fixed. It is most necessary to keep in memory the old habits of order which the new have in a measure displaced. To accomplish at once with any completeness the two desired ends of drilling the muscles and diverting the mind is impossible. Gymnastics, games for the fingers, extension motions, etc., are all apt to fail, because the good to the muscles is more than counterbalanced by the harm to the mind. The best working rule is that which aims to divert the mind in the first place, and re-educate the muscles in the second. Chorea at the starting must have its way. From its first discovery its extension from limb to limb must be regarded as probable, and accepted with good grace without apparent notice. To rest the overworked and tired limbs; to secure a large measure of sleep; to make the time pass evenly, yet without the weariness of monotony; to save the voluntary muscles the mortification of failure by anticipating the child's wants;—these, as I believe, are the most serviceable duties which can be rendered at the outset of chorea. Yet they must be done without ostentation and without the child perceiving that he is being tended and watched and treated as one sick.

Active measures must come later. When the first signal of improvement is recognised, simple limb-movements may be devised, so that the patient may gather confidence from the observation of his own improvement. It will be less difficult now to disguise the intention of such exercise by making a game of it. Failure is never to be noticed and success always praised, the love of applause being a hardly less powerful motive with the child than with the man. At the same time the petulance and irritability which chorea is apt to gender need precisely the same correction as heretofore. Any special leniency towards such faults, on the ground that the child is ill; anything that would tend, as it is said, to "spoil" the child, must tend also to weaken that self-control which it is our main object to strengthen. In this respect all that has been said of the moral treatment of hysteria is equally applicable to chorea.

4. Much has been written of the importance of improving general nutrition—an injunction which, in the case of children, is thought to be fulfilled by means of cod-liver oil and steel wine, with an ample supply of nitrogenous food. In regard to such treatment, I think it may be said that neither iron nor cod-liver oil is of better or other use to children that are choreic than to others. The patients likely to benefit by these agents are recognised by signs with which we are all familiar. Chorea in itself affords no indication for the use of such remedies. So also with nutrition. It is true that a large number of choreic children, as of hysterical girls, show by their furred tongues and disordered excretions that digestion is disturbed, and that they need careful dieting, and sometimes medicinal treatment on that account. But I do not find that choreic children as such require more food, or other food, than their companions. "Improved nutrition" is not accomplished, as some seem to believe, by excessive feeding. In the great majority of instances, indeed, the capacity of digestion is precisely satisfied by the amount of food actually taken. You do not nourish *pari passu* with the food you put down. The powers of assimilation are much less variable than our popular theories would imply, and even children cannot eat to order. By high feeding (especially with excess of nitrogenous food) nutrition is not improved, but impaired. With the children of the poor, no doubt, and sometimes with the children of the rich, where some theory has prevailed to keep them hungry, more food may be usefully given. The appetite, after all, is the great and imperative regulator.

5. As regards drugs in chorea, I repeat that I have not seen patients improve under their use in such way as would justify the belief that the good (which it is to be remembered is pretty sure to *come* in its time) was due to the means. The gradual improvement of a chorea that has lasted some time (and how seldom is chorea recognised at the first as coming within the province of the doctor!) is no proof whatever of any virtue in the medicine that is being taken. It is the natural course of the complaint. I have a belief, sufficiently strong to induce me to make trial of it on occasion, that arsenic sometimes changes the current of the disease and hastens the time of improvement; yet even this measure of success has been so partial and equivocal that the statement of Dr. Begbie, that "he has never known arsenic fail in an experience of thirty years," strikes me as amazing. The asserted efficacy of such medicines as arsenic and antimony in what are called "high doses," must be taken in conjunction with the fact (of which examples are numerous in this hospital) that it is the habit of chorea to retreat before general illness. These drugs given in disturbing doses may stop chorea in virtue of their poisonous properties. Some such explanation

seems almost necessary to account for the discrepancy between those who never knew arsenic to fail, and those with whom it fails habitually.

Of sulphate of zinc I have made repeated trial, increasing the dose sometimes to as much as half a drachm three times a day, with no result that I could perceive of any kind. Children soon get to receive this nauseous dose with perfect tolerance and indifference. The same may be said of the juice of conium.

Of the just now popular method of feeding nerve-tissue by means of oil and phosphorus I have made no trial. It seems more certain, indeed, that phosphorus is a mischievous poison than that it is an available nerve-food. And if it be an available nerve-food, I know of no evidence that the nervous structure of choreic children is deficient in this respect.

There is another drug, which is also a poison, commended on the high authority of my friend and colleague Dr. Radcliffe. It is alcohol. For this child's disease, "for various reasons theoretical and practical," Dr. Radcliffe advises the free use of alcoholic drinks, "pushing them," as he explains, in severe cases, "until they produce drowsiness." For my own part both theory and practice seem opposed to such treatment. The effect of alcohol upon co-ordination and strength of will would not predispose me in its favour, while, speaking practically, instances of chorea threatening life and suddenly arrested are not sufficiently numerous to establish a claim in that respect for *any* drug upon empirical grounds. I can conceive of no reason for giving alcohol half so strong as the very obvious ones for not giving it, nor of any doctrine more dangerous to the poor than that their children's limbs are to be made steady by drink.

6. But while the nature of chorea, no less than the result of experience, forbids us to expect direct aid from the use of drugs, it is idle to place reliance in mere conduct-rules and mental discipline in that severe and sometimes fatal form of the disorder which chiefly calls for medical interference. This extreme condition is happily rare. Succeeding as it does the common and more moderate chorea with which we are all familiar, it may indicate, as I have said, the commencement of irremediable organic changes due to the functional disorder. And if this be so, the same motor disturbance may by its continuance extend the mischief it has once provoked. In such extremity it becomes desirable to still the limbs by force. It is matter of experience that the movements of choreic children may sometimes be forcibly restrained without suffering. I should not hesitate to employ such restraint in the violent cases in such measure and manner as the sensations of the patient should seem to dictate. I must add, however, that I have not made such trial of this plan as to justify my commending it on other than hypothetical grounds. For the rest, although the conclusion will seem lame and impotent to those who "love remedies," and are consequently slow to distrust them and disconsolate in their absence, I would repeat with the fullest concurrence the concluding sentence of a paper upon this subject by Drs. Gray and Tuckwell, to which, had time permitted, I should have referred at length: (c)—

"An isolated ward, a good nurse, a large crib well padded round, plenty of nutritious food without stimulants,—on these we shall feel inclined to rely in the treatment of severe chorea, till we obtain more conclusive evidence than has yet been adduced that the disease can in the slightest degree be favourably influenced by any drug as yet discovered."

Albuminous Urine in Intermittent Fever.—At the Caucasian Medical Society, Dr. Schoskovski read a paper on this subject, in which he stated that he had treated for intermittent fever 154 soldiers in the military hospital at Kussan, which is surrounded by marshes, and where 80 per cent. of the affections are due to malaria. He found—1. That more than half of the whole number of cases of intermittent fever exhibited occasional albuminuria. 2. In cases in which there have been frequent relapses, and cachexia has become developed, albumen is almost always found. 3. In recent cases, or if only a few relapses have occurred, albumen is seldom met with. When it is found it coexists with depression of power, consequent on extreme severity of the attack, accompanied by a higher temperature or preceded by other "infectious" disease. Albumen is especially met with in the remittent type, and oftener in quotidian than in tertian fever. —*St. Petersburg Med. Woch.*, April 14.

(c) "The Expectant Treatment of Chorea," *Lancet*, November 13, 1876.

ORIGINAL COMMUNICATIONS.

ON CATARRHAL LARYNGITIS.

BEING THE SUBSTANCE OF SOME CLINICAL REMARKS DELIVERED AT ST. GEORGE'S HOSPITAL.

By T. WHIPHAM, M.B.,
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In exceptional seasons, such as that just past, when the rainfall has exceeded, or very nearly so, that of all past records, catarrhal affections of the throat are especially prevalent, and more so perhaps among children than in adults. Such patients become the subjects of simple catarrhal laryngitis, as distinguished from croup or diphtheria. This affection of the larynx, though usually of less serious import than croup, may, under adverse hygienic conditions or neglect, be equally productive of fatal results.

Simple catarrhal laryngitis may assume either a mild or an intense form, and the one may pass rapidly into the other. It may be traced to a variety of causes, which have been summed up by Niemeyer as follows:—

1. "Local irritants acting on the larynx: for example, cold air, dust, loud screaming, etc., which cause friction, by the air being forcibly driven through the glottis"; and by the increase in the number of the vibrations of the vocal cords in a given time.

2. "Chilling of the skin—*e.g.*, by leaving off warm clothing."

3. "Catarrh may extend from neighbouring organs."

Under the first head (local irritants) is included the respiration of air charged with irritating vapours, smoke, etc.—conditions which especially occur during the prevalence of the dense heavy fogs in thickly populated cities.

Sudden variations of temperature are perhaps more productive of the disease in question than a long-continued exposure to cold air; and this statement seems borne out by the fact that the children of the poorer classes, who are constantly during the winter months exposed to cold currents of air, both by day and night, do not appear to be more especially liable to catarrhal affections of the larynx than those of the more affluent members of the community. Nothing, in short, is more common than to find children in the higher classes suffering from what is popularly called croup; or to find that many of them suffer repeated attacks, perhaps one or two in the course of the winter or early spring. Such children are not much exposed to cold, but they are frequently exposed to sudden alternations of heat and cold.

The results of exposure to cold or to sudden changes of temperature were vividly impressed upon my mind in the winter of 1873, when fogs of extreme density prevailed in London about Christmas; and again during the month of April, 1874, when unusual variations in temperature occurred. It will be within the recollection of all who were in London at the time how dense and continuous were the fogs, and how irritating to the eyes and air-passages. So injurious were they, that it was stated that many of the beasts exhibited at the Islington Cattle Show died from their effects.

Again, on April 14 and 15, 1874, the wind was most changeable, and its influences were most trying, even to the strongest. On April 14 the wind, to the best of my recollection, changed no less than three times during the day. In the morning it was keen, and blew strongly from north-east; in the course of the forenoon it was shifted to west or south-west; in the afternoon it again blew from north-east, and was westerly again in the evening. Similar, but less numerous, variations occurred on the 15th. Both at Christmas and in April a marked increase took place in throat affections of patients, both old and young, who came under my notice.

Such alternations of heat and cold, however, to produce catarrhal inflammation of the mucous membrane of the larynx, must be prolonged to a certain extent. "We are seldom," says Sir Thomas Watson, "the worse for a momentary sensation of cold, however lively it may have been; whereas slight feelings of chilliness, if long protracted, are apt to terminate in some form of disease" ("Principles and Practice of Medicine," lecture vii.). These observations are more especially pertinent in the case of young children, for reasons upon which it is needless to dwell on the present occasion. Children are constantly, either by the negligence of their parents or the

carelessness of their nurses, allowed thus to expose themselves to such dangers, and the result is too frequently an attack of laryngitis. They are allowed during their daily exercise to rest and become cool after a profuse perspiration, and this perhaps in a cold east wind; or are permitted to loiter in draughty places, having previously spent their time in rooms which have, as is often the case, been maintained at an unduly high temperature. They are, in consequence of the enervating effects of the heat, ill-nourished and weak; "and among the circumstances which favour the morbific effects of cold, and relate to the condition of the body itself, is to be included whatever has the effect of weakening the system, and so diminishing the capability of evolving heat. . . The bad effects of cold upon the system depend partly upon the intensity of the sensation it produces, but still more upon the duration of the sensation." Such sensations are not verbally expressed by children, and are therefore frequently overlooked, until the child has contracted a chill, which may terminate in inflammation of the larynx. The debility produced by the excessive heat of their dwellings renders them unfit to withstand any great reduction in temperature, especially if accompanied by wind. They are, in fact, placed under circumstances peculiarly favourable to the morbific effects of the cold.

2. Chilling of the skin produces similar results. "Difficult as it may be to give a physiological explanation of the occurrence," observes Niemeyer, "a genetic connexion between the two events is not to be denied." He, however, at the commencement of his text-book of practical medicine points out one cause of catarrh which seems to offer a partial explanation of the fact. "Catarrh," he says, "may arise from a purely mechanical hyperæmia of the mucous membrane: for example, the gastric and intestinal are not unfrequently the result of compression of the portal vein; the bronchial, in consequence of embarrassed flow into a diseased heart from the bronchial or pulmonary veins." Thus cold, especially if exposure to its influence be prolonged, by arresting the circulation in the cutaneous vessels produces hyperæmia of internal organs, and notably of such a part as the larynx, where its effects are more readily and rapidly induced by the general laxity of its tissues. If moisture be added to cold, "its injurious operation," as Niemeyer points out, "is augmented"; and in this fact we have an ample explanation of the evil results arising from neglect in changing damp clothes, or from exposure to a cold and foggy atmosphere.

3. Catarrh may extend from neighbouring organs to the larynx. In children this is frequently the case. A slight "cold in the head," if not duly cared for, may rapidly involve the laryngeal mucous membrane, and a serious complication result from what is otherwise, and comparatively speaking, a trifling ailment.

Having thus briefly alluded to the more prominent causes of the affection, it may be profitable to review the more obvious means at our disposal for its prevention. It is a fact of almost daily observation that strong and robust children are extremely liable to catarrhal laryngitis, or croup as it is often and, as I think, erroneously termed. Not that I would be supposed for one moment to dispute the fact of croup being a disease of common occurrence, but I should wish to protest against every affection of the larynx in which a "brassy" or "barking" cough is a symptom being regarded as a case of true croup.

The reason that such children are thus frequently attacked may be due to some idiosyncrasy which renders them especially liable to catarrhal affections of the mucous membranes, and that this idiosyncrasy does exist may be inferred from the fact that many adults are liable to such inflammatory affection on the least exposure to cold or sudden change of temperature. At the same time I cannot but think that another cause often operates in the case of strong and hardy children; that their danger lies in their strength. They are supposed, by reason of their robust health, to be able to withstand any vicissitudes, and so, insufficiently clad, they are taken out or, if old enough, are allowed to run in and out of doors with little or perhaps no additional clothing. They thus catch cold, and laryngitis often follows.

On the other hand, the habit of overclothing children is no less injurious. If the child is made to take a proper amount of exercise when out of doors, a woollen cape or coat is all the extra clothing that will in ordinary seasons be necessary for its protection; and the custom which prevails with many parents, of winding thick comforters round the throat, makes him uncomfortably hot, unless he walks sedately by his nurse's side. It is then removed, perhaps with a keen wind blowing, and this at once gives him cold. Further, if a child who is in the general way thus wrapped up be at any time exposed in inclement weather, he runs far more risk of catarrh than one who is always suitably dressed; his throat and his body have habitually been covered up, and if either be suddenly exposed a chill is the natural consequence. A child, if taking exercise in a natural manner, is in a constant state of activity, and in no way resembles the mail-coachman of old, who, in his comparatively inactive life on the box, needed a multiplication of wraps to prevent that chilling of the surface of the body which, as has been shown, is so often followed by evil results. Placed in similar circumstances—*e.g.*, when driving in an open carriage,—the child should be protected in a somewhat similar manner.

It is, of course, impossible to define the exact amount of clothing for any child of a given age. Parents must study the dispositions of their children, whether active or lethargic, robust or delicate, and should bear in mind that over-wrapping and insufficient clothing are equally productive of harm.

It remains now very briefly to touch on one or two points in the treatment of those early stages of the affection. Confinement to one apartment as soon as the first "brassy" cough is heard is of the first importance, and it will be better if that apartment in the early stage of the complaint be one of such size that its atmosphere can be readily rendered moist and warm by a steam jet from a kettle placed on the fire and the water constantly boiling. In many cases no further treatment is necessary, and I have lately had under constant observation an extremely robust boy of five or six years who is liable to such attacks of laryngitis, due usually to imprudent exposure to cold, and in whom confinement to his nursery for twelve or twenty-four hours has never failed to relieve the symptoms.

In more urgent cases it may be necessary to have recourse to further treatment, and hot poultices to the throat have, in my experience, produced excellent results. The poultice may be made of linseed-meal simply, or of linseed and mustard in the proportion of about one part of the latter to eleven of the former. Many children, however, rebel against even so small a quantity of mustard; but, as a rule, this poultice is tolerated for many hours. Latterly, however, I have used a poultice made of oatmeal and vinegar, and I was induced to try it in order to combine the warmth of the external application with the sedative action of the acetic acid on the laryngeal mucous membrane. The results have been extremely satisfactory. The throat being enveloped by the poultice, the child of necessity inhales the vapour charged with acetic acid which arises from it, and there is no need for the use of an inhaler; in fact, such contrivances usually frighten young children, and positive harm is done by the screaming which any attempt to force them to use it excites.

Should the pulse be frequent, the skin hot and dry, and other symptoms of fever be present, a purge composed of calomel and rhubarb may be advantageously administered, together with a mixture composed of diaphoretics, depressants, or diuretics; while the thirst which is usually a prominent symptom may be satisfied by copious draughts of cold water. By this means both diuresis and diaphoresis are powerfully augmented.

If, however, the inflammation be not thus subdued, subsequent treatment must be adapted to the exigencies of the case, to discuss which would unduly protract a communication which is intended to deal rather with preventive than curative measures.

One word must be added, lest it should be inferred from the foregoing observations that the diagnosis between the incipient stages of simple and membranous inflammation of the larynx is considered as being unattended with difficulty. The distinction between the two in their early stage is a matter of the greatest difficulty, or perhaps absolutely impossible, even with the aid of the laryngoscope. For the use of this instrument, supposing it to be practicable (and this is extremely improbable in the case of very young patients), would not materially aid the practitioner in an early stage of croup, before the membrane had formed; it would merely reveal a hyperæmic condition of the laryngeal mucous membrane, and would afford no guide as to the future course of the disease. On the other hand, if a membrane were detected the diagnosis would at once be set at rest.

So far, then, as our present knowledge extends, our efforts in either case must be directed towards placing the patient under conditions which experience has taught us tend to bring about a resolution of the inflammatory process.

CASE OF

LOCOMOTOR ATAXY, WITH UNUSUAL VISUAL TROUBLES.

By R. ATKINSON, B.A.,
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I. K., AGED thirty, a patient now in the London Hospital under the care of Dr. Hughlings-Jackson, is supposed to be suffering from locomotor ataxy, though he presents several features not commonly seen in that disease. In the following account attention has been chiefly directed to these points:—

The patient has been a ship's steward, and until overtaken by his present malady was always a strong, healthy man. He is unusually intelligent, and is able to give a reliable account of his symptoms. He says he has never been addicted to sexual or other excesses. In 1871, when at sea, he discovered accidentally that his right eye was almost blind. At this time he could see quite well with the left eye, being able readily to decipher even the smallest type; and he had hitherto experienced none of the symptoms of the disease which was so soon about to attack him. A year later he began to have a distressing sensation of fatigue in his legs and arms, though his work was not unusually severe. At the same time he had difficulty in walking, the right leg being more affected than the left. In 1874—that is, three whole years after his discovery of the blindness of his right eye—he began to have difficulty in seeing with the left. He experienced this first in reading. He could still see fairly well any given word at which he might be looking, but at the same time he could see nothing of the preceding word, and having finished a line he had difficulty in finding the first word in the next line. It may be mentioned *en passant* that these visual troubles resemble closely those complained of by certain hemiopic patients. He noticed himself that he could not see well to the left, and that his visual field was becoming gradually smaller. As he puts it himself, "it crept in and in." He found also that he could not distinguish colours so well as before, dark colours appearing to him the same as black.

The difficulty in walking gradually increased, so that in October, 1874, he could not walk a greater distance than 400 yards without great fatigue. His body seemed to go too fast for his legs, so that the latter had, as it were, to hasten in order to keep pace with the former. A stick was of no use as an aid to progression. He would drop it, and his hands had become so numb that he only knew when this had occurred by falling himself or by hearing the stick strike the ground. In December, 1875, the disease had so far progressed that he could scarcely stand, and was no longer able to walk at all.

All this time he had severe boring pain in his shoulder-joints and also in his ankles. He had, in addition, pain in his abdomen—severe twisting, griping pain as though his intestines were being knotted into a ball.

We venture to add one more trait of the disease. At an early stage of the affection he found that he could no longer guide his pen; but by lashing a stout rough piece of wood to his penholder he was for a time able to overcome the difficulty. Soon, however, this ingenious device failed, and he could no longer write at all. Perhaps this poor man's experience may be of service to others in a similar strait.

On admission, in April, 1877, his condition was briefly as follows:—No paralysis of any ocular or cranial nerve. Speech, voice, and articulation good. Pupils equal in size, but larger than normal, and contracting but sluggishly under a strong light. His optic discs were of papery whiteness, and equally so, their surfaces presenting a delicate wavy striation, and their margins being sharply defined. The arteries were somewhat small, but without any obvious thickening of their coats. The veins were not at all tortuous. There was no naked-eye change about the yellow spot. When the patient wished to see the whole figure of anyone standing at his bedside he would direct his visual axis not directly towards him, but towards a point on the floor a little to the left (patient's left) of his feet. Should he wish to observe the face more closely he would direct his eyes towards the top button of the waistcoat or thereabouts. On testing his visual field, it was seen that with his left eye fixed on the observer's right eye he could see well large objects in his (the patient's) right upper quadrant, but that he could not see anything in the right lower quadrant, nor in the left half of the visual field, except in a small portion of the left upper quadrant, where he could see indistinctly.

With the right eye he could not see a brightly burning lamp when he was looking directly towards it, but when he looked a little to the left of the lamp he had perception of light. This, it will be seen, coincides, though indeed roughly, with the condition of the left eye. His arms were extremely ataxic. With his eyes shut he could not touch the tip of his nose until after repeated attempts, nor could he with certainty transfer a coin from one hand to the other. Nevertheless, in the performance of coarse movements he showed considerable force. Tactile sensibility was greatly impaired, and he could not feel a gentle touch on either arm. Sensibility to pain was considerably increased, the prick of a pin which a healthy person would scarcely feel at all being to him very painful. He could readily diagnose between heat and cold, and extremes of either affected him very painfully. It was easy when his eyes were closed to confuse him as to the relative positions of his legs, which, as to sensibility, were in much the same condition as the arms. He could not walk even a step, but when supported by the back of a chair could stand for a little while.

I have not attempted to enter fully into many of the details of this case except where they differ from what is seen in most cases of locomotor ataxy. Everyone who is at all familiar with ophthalmology knows that it is not at all uncommon for amaurosis to be the first symptom of locomotor ataxy, and that one disc may become atrophic years even before the other is affected. Patients thus suffering most usually present themselves for advice to the ophthalmic surgeon rather than to the physician, and it is one of the common tasks of the former to decide whether he has to deal with a case of incipient ataxy or with one of the other forms of optic atrophy.

M. Charcot, in speaking of the visual troubles of ataxics, says that in the amaurosis of ataxy there is a concentric and unilateral limitation of the visual field. M. De Wecker also remarks, "Le rétrécissement du champ visuel s'opére par secteurs." Nevertheless, cases like the present seem to have escaped almost entirely the attention of English writers. Without the ophthalmoscope this case resembles greatly what is seen in hemiopia, though Dr. Hughlings-Jackson mentions one case of hemiopia which terminated in atrophy of the disc. It is the rule, however, to find no coarse change in the hemiopic eye.

It is now universally allowed that in ataxy we have a grey degeneration of the posterior columns of the cord; and if the degeneration can attack the posterior columns, leaving almost intact the rest of the white matter of the cord, it seems quite possible that it may also attack certain sections of the optic nerve in preference to the others.

DISPENSING OINTMENTS.—Dr. van Harlingen, Clinical Chief of the Skin Clinic at the Philadelphia University Hospital, observes that in the ordinary mode of dispensing ointments in boxes, gallipots, etc., so large a surface is exposed to the air that the ointments become decomposed and act as irritants. This is the case with what he considers as perhaps the most valuable application of its kind—viz., Hebra's ung. diachyli, which unless prepared afresh each time rapidly decomposes. Dr. van Harlingen, acting upon the suggestion of M. Jacques May, of Paris, now employs a receptacle for ointments which, while it allows the substance free egress, excludes the air. This is a soft metal tube, such as is used by painters for containing moist colours. It is cylindrical, open at one end, and closed at the other by a top of stiffer metal, having a neck like that of a bottle, around which a thread has been cut. Over this fits a cap, which can be screwed down so as to exclude all air. It is even fitted with a little bit of cork at the top, like the lid of a traveller's inkstand. The ointment, in a melted condition, is poured in at the open end of the tube, and when filled this end is pinched together and folded over, the soft metal enabling it to be perfectly sealed by this means. When needed for use the cap is unscrewed, and by rolling up the flattened end of the tube a sufficient quantity of ointment may be forced out in the form of a plug, and taken off by the finger, the cap being then screwed on again. When the ointment cannot be melted, it may be placed in the tube with the aid of a spatula. At first the tubes employed for rose-ointment and shaving-paste were employed, but recently empty tubes of various capacity from two drachms upwards have been prepared for sale.—*Philadelphia Medical Times.*

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

CASES OF LOCOMOTOR ATAXY.

HOSPICE DE LA SALPÉTRIÈRE.

Locomotor Ataxy in Women, with Extensive Disease of the Bones and Joints.

(Under the care of Professor CHARCOT.)

[The two following cases are recorded by Dr. Allen Sturge, with Professor Charcot's approval, to whom also we are indebted for the valuable illustrations which accompany this report.]

Case 1.—Hortense B., aged sixty-one. No family history of nervous disease. Previous health fairly good, but she has had rheumatism in the lower extremities from time to time, and when fourteen years old she had an attack of rheumatic fever. Her present illness began about twelve or fourteen years ago, with sharp lightning pains in the limbs, the stomach, the bladder, the head, and the lower jaw; and she began to have some difficulty in walking. Six years ago the right hip became dislocated without the application of any force, and it has remained so ever since. The hip-joint at the same time swelled up very considerably and she was treated at the Hôpital Lariboisière, where a puncture was made into the swelling, but nothing came out excepting a little blood. The swelling afterwards subsided. Since the dislocation of the hip she has been confined to her bed. For the last three years the patient has been unable to feel the position of her legs in the bed, and general sensibility has also become much lessened in the trunk and all the limbs. For two years she has been growing very deaf in both ears, and for the same length of time her sight has modified in a rather curious way: she sees things very much larger than normal. Thus, she says that her little finger looks to her as long as a forearm; the little piece of wood suspended over her head to pull herself up by, which is of the ordinary size used for such a purpose, looks to her as large as a litre bottle, and the cord by which it is suspended looks like a thick cable. There has never been ptosis nor strabismus. She suffers from lightning pains in the eyes, which appear red and injected. There is a more or less constant overflow of tears. For between two and three years she has had violent attacks of pain in the stomach—the *crises gastriques* mentioned by Dr. Charcot. These have been unaccompanied by vomiting. There have been also severe burning pains in the rectum, with frequent desire to go to stool. The bowels have, however, been constipated, and a motion is accompanied by increase in the pain. She has for a long time been unable to retain her water, and micturition has been accompanied by insupportable burning pains in the bladder and urethra. From an early period there has been a sensation of tightness round the waist. The movements of the arms have a very marked ataxic character. If the eyes are opened she can carry her right forefinger to the tip of her nose, but with the eyes shut this is not possible. Distinct cracklings can be felt in the right shoulder when it is moved, but there is no swelling. The left shoulder is, however, very greatly deformed. In the front of the joint there is a large tumour, the size of a cocoa-nut, which pushes up the pectoral and the deltoid. The tumour is soft and fluctuating. With the hand in the axilla it is possible to feel the upper part of the glenoid cavity. The head of the humerus has disappeared, and the upper end of the shaft is very freely movable, and can be pushed up so as to touch the anterior wall of the tumour. The disease of the right shoulder-joint began to come on about three years ago, and was very rapid in its progress. It began with cracklings in the joint, which were soon followed by swelling, and within a month the shoulder was dislocated. There has been for many years disease in the left knee, coming on slowly. For a long time it manifested itself simply by cracklings in the joint, but these were eventually followed by swellings and deformity.

Case 2.—M. J. A., female, aged seventy-four. The patient's illness began as long ago as 1847, with formication in the soles of the feet. This extended up the legs; soon after which she had lightning pains and feelings of constriction in the legs, and a sensation of compression in the abdomen. These were followed by the onset of lightning pains in the lumbar region, and a very marked sensation of coldness and numbness in the lower limbs. She began to experience difficulty in walking, which has gradually increased, and for some years she has been unable to move her left leg. There has never been diplopia, amblyopia, or ptosis.

On admission into M. Charcot's service in May, 1876, the patient was unable to stand alone owing to the condition of the left leg. The muscular power of the right leg, as tested in bed, was found to be entirely preserved. The upper extremities were healthy. She was able to feel touches, pricks, and pinches in the lower extremities, and to distinguish heat and cold. There was very little ataxy of movement in the right leg, but the left she was unable to move voluntarily. There was a shortening of this leg to the extent of between one and two inches, but no twisting outwards of the foot. A great deal of bony crepitation could be felt on moving the hip-joint; there was also considerable swelling of the right wrist, without luxation—this had existed for three years. She could not retain her water.

On May 24, 1877, she began to suffer from very violent attacks of pain in the left leg, from the toes to the knee. There had been no blow or fall to account for this. On May 29 there appeared on the front part of the leg, at its lower third, a diffuse swelling, very painful and tender to the touch. The skin was of a livid red, and there was some puffiness over nearly the whole of the anterior part of the leg. The swelling looked just like that resulting from periostitis or ostitis.

On examining the patient on May 31 it was found that there was a deformity of the leg, and that in the position of the above-mentioned swelling the leg was bent so as to form a sharp angle between the upper two-thirds and the lower one-third of the leg. There was abnormal mobility and well-marked bony crepitation—in fact, there was fracture of both tibia and fibula. There had been nothing to account for the fracture. The patient had lain quietly in bed the whole time, and the fracture must have been produced by some very slight movement. The leg was put up in a light plaster splint.

HÔPITAL TEMPORAIRE.

Locomotor Ataxy with Spontaneous Fractures.

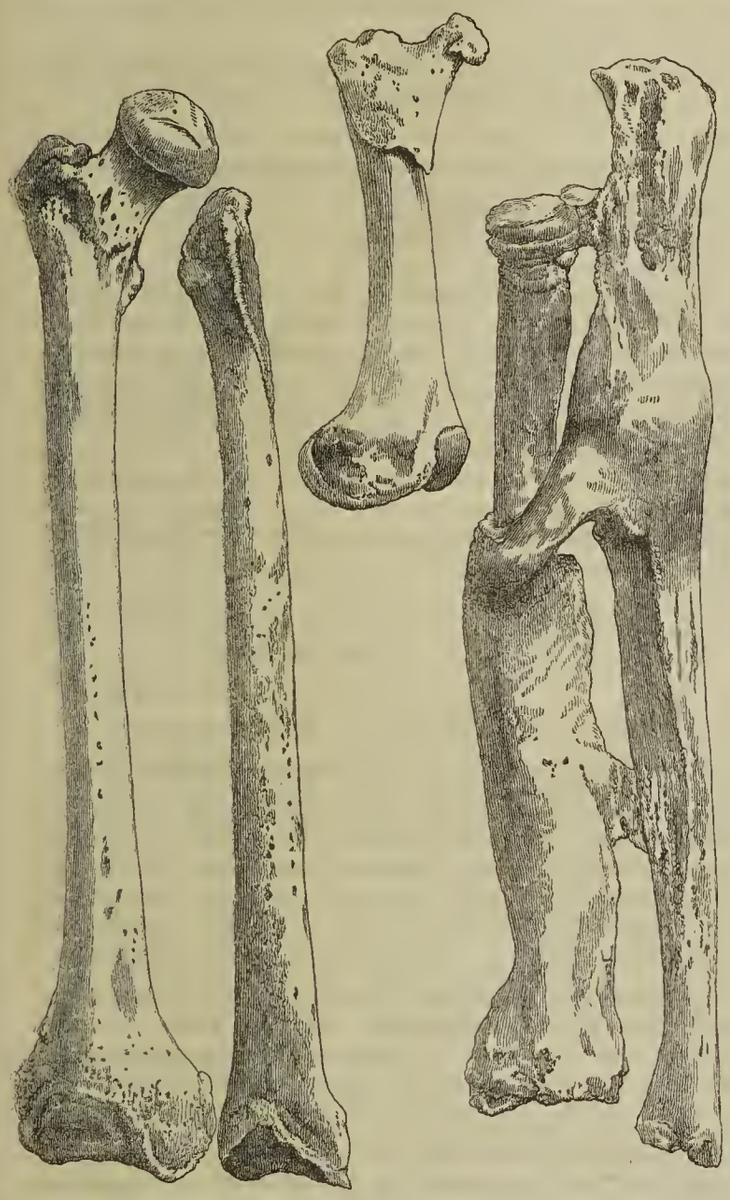
(Recorded by Dr. ALLEN STURGE.)

D., male, aged thirty-two, shoemaker, was admitted into M. Lépine's service in February, 1877.

History.—Previous health good. Present illness began in 1869 with shooting pains in both legs, which were extremely acute and frequent. At that time there were no other symptoms. He was a Garde Mobile during the siege of Paris, and was much exposed to cold and wet and mental anxiety. The pains in the legs became worse in consequence, and he began to experience difficulty in walking on a dark night. He did not, however, experience much difficulty in the daytime until 1874. He has never had pain in the back, nor sensation of tightness round the waist. His sight is unaffected; has never had ptosis or strabismus, nor trouble in hearing. No affection of bladder. Bowels constipated, and there is pain when he goes to stool. In July, 1875, he was putting on his right boot when he felt something give way in the thigh, and found he could not stand on that leg. When examined it was found that the femur was fractured at about the middle. He was admitted at the Hôpital la Charité, and in six weeks the two portions of the bone had united, and he was able to bear some weight on the limb. Between four and five months afterwards he was getting out of a bath, when he felt something crack in the left leg. The whole leg from the middle of the thigh to the ankle became so much swollen that it was impossible at the time to say what had happened, and when the swelling went down he was treated for hydrarthrosis of the knee-joint. This treatment lessened the swelling in the joint, and it was then found that he had sustained a fracture of the tibia and fibula just below the knee. These fractures united, but in very bad position, and he has been unable since that time to walk without an apparatus to take the weight off that part. There is now a large mass of callus in the middle of the right thigh, occupying the whole of the middle one-third of the bone. In the left leg the ends of the fractured bone have united so as to form nearly a right angle with one another, the angle pointing backwards. There is crepitation in the left knee, and the joint is exceedingly mobile, as though the ligaments were elongated or partially absorbed, but there is no dislocation. There is great incoördination of movement

in the left arm, and also, but to a much less extent, in the right. No disease of the joints in the upper extremities.

Remarks.—These three cases illustrate very fully the lesions of nutrition of the bones and joints which are sometimes met with in locomotor ataxy. A considerable number of cases of joint disease has now been put on record, but only very few cases of spontaneous fracture. At the Salpétrière there is a collection of bones taken from the bodies of ataxic patients, and there is a still larger collection at the Musée Dupuytren at the Faculté de Médecine of Paris. These exhibit the kind of change which takes place in the articular ends of the bones, and also the great thinning of the compact tissue of the shaft which precedes spontaneous fracture. Several of them were taken from one patient whose case has been recently published in the appendix to the fourth fasciculus of Dr. Charcot's work on "Diseases of the Nervous System." In this case there was complete ilio-pubic luxation of the left hip-joint, with



shortening of the left femur and fracture of its anatomical neck; complete ilio-sciatic luxation of the right hip-joint; sub-coracoid dislocation of the left shoulder-joint; fracture of both bones of the left forearm, which became subsequently united by an irregular callus; chronic arthritis of the right shoulder-joint; and reunited fracture of both bones of the right forearm. The bones taken from this case, which are at the Salpétrière, are—1. Left femur. The upper half of the shaft has been absorbed, and the head has in great measure disappeared. It exists as a little nodule, having a rough and worm-eaten appearance, attached to the upper end of the existing bone, this union having evidently taken place after the fracture of the anatomical neck spoken of above. 2. Right femur. The head is absorbed; there is great thinning of the compact tissue throughout the shaft—in places it is little thicker than ordinary writing-paper. 3. Left scapula. Exostosis of acromion and coracoid, with worm-eaten appearance of the new bone. The glenoid cavity has partially disappeared, but a cavity has been formed below and inside the glenoid, encroaching on the sub-scapular fossa. This evidently received the luxated head of the humerus. 4. Ulna and radius. Double fractures of both bones, which have reunited; the callus extending from one bone to the other in each case. 5. Humerus. Diseased in its upper half; the head has almost disappeared; the bone is thickened, rough, and has a worm-eaten appearance. Photographs of the bones mentioned under Nos. 1, 2, and 4, have been published in Dr. Charcot's work, and we are enabled by his kind permission to reproduce figures of them. There is also among the bones at the Salpétrière a scapula which has undergone spontaneous fracture of the body; the fracture reunited; the bone is very thin, but otherwise apparently healthy. Locomotor ataxy has been generally looked upon in England as a disease much more common in men than in women. Trousseau and Duchenne de Boulogne also both remarked the comparative immunity of women, Trousseau having only seen the disease in three women out of fifty cases which came under his notice. In France at the present day, however, this distinction of sex is not nearly so prominent. There are now nearly 100 cases of ataxy in the Salpétrière, which is devoted solely to women; and in the general hospitals it is so common to find the disease in women, that attention is but rarely called by physicians in their teaching to the difference between the sexes in this respect. *Apropos* of this disease we may mention that Dr. Fournier, the Clinical Professor of Syphilis at the Faculté, has recently written a *brochure* with the view of showing that locomotor ataxy is, in a large number of cases, of syphilitic origin. In this work he cites eighty cases gathered from different sources in which ataxy occurred in syphilitic subjects. In a certain number of these cases specific treatment produced a marked amelioration, which in a few patients amounted nearly to cure. There is at present in the Hôpital St. Louis a patient who contracted syphilis ten years ago. This man has periostitic nodes on both tibiæ, and he has for two or three years been the subject of well-marked locomotor ataxy. The typical lightning pains have been very severe from the first. He has been placed under specific treatment, and already the pains have almost wholly disappeared. Dr. Fournier states that in a large number of cases of ataxy associated with syphilis, specific treatment relieves the pains in a very short time. We believe that this is nearly the first time that attention has been particularly called to the relation between ataxy and syphilis. Whether or not this relation exists to the extent which Dr. Fournier believes, it is of great interest to find that in a certain number of cases specific treatment has produced so great an effect in a disease generally considered to be beyond the reach of therapeutics.

Note.—Few cases of arthritic change in locomotor ataxy have been recorded in this country, but a well-marked case was shown about four years ago by Dr. Gowers at one of his clinical demonstrations at the National Hospital for the Paralysed and Epileptic. The patient was a man aged forty-five, who presented very characteristic symptoms of locomotor ataxy, incoördination of movement of the legs, and paralysis of one third nerve. The ataxy commenced two years, and the oculo-motor paralysis three months, before. Soon after the onset of the latter both knee-joints became swollen, the swelling depending partly on effusion into the joint, and partly on a puffy thickening of the tissues about it. There was no redness or tenderness. Both knees were affected, the left being rather more swollen than the right. Dr. Gowers pointed out the absence of any constitutional cause to which the joint-change could be ascribed, and that the resemblance of the condition to that described by Charcot left no doubt of the connexion between the arthritic and ataxic troubles. The joint-change, we learn, lessened, but did not entirely subside, during the few months more during which the patient continued under observation.

HOSPITAL FOR EPILEPTIC AND PARALYSED, QUEEN-SQUARE.

CASE OF MERCURIAL TREMORS.

(Under the care of Dr. HUGHLINGS-JACKSON.)

[Reported by Dr. W. ALLEN STURGE, Resident Medical Officer.]

W. H., aged forty-two, has worked for six years in a telegraph factory. At first he was employed in stretching copper wire; afterwards in mixing paints containing white lead and Scheele's green. During the two years preceding present illness he was mainly employed in amalgamating zinc plates with mercury. Previous health good. No gout and no colic.

Never remembers to have had sore gums or loose teeth. In the summer of 1874 he began to shake in both arms and both legs. "If he took up knife and fork it was a long time before he could put them down again." His wife noticed that he was "pale and yellowish." He complained of sharp pain in chest and belly, lasting for several hours at a stretch—relieved by rubbing. Bowels sometimes relaxed, sometimes confined; but his wife cannot say how they were at the times of the above attacks. At this period nothing was noticed wrong with his mind. Without any medical treatment, at the end of two months (his occupation being varied) there was considerable improvement, though the trembling did not entirely leave him. His wife could not say whether he had again returned to the "amalgamation" work or not. Two months before admission the trembling became a great deal worse. Now, for the first time, it was observed that he had difficulty in getting his words out; also he could not remember things which had happened recently. He had had some giddiness for several months, but now it became worse. Off work for six weeks.

On admission, April 23, 1875, old-looking for his age; thin and pale; sallow, but not to an extreme degree. Has a slight blue line along lower gums. Teeth; Lower incisors pegged, flattened at the top, the centre brown, enamel everywhere deficient. Upper teeth presenting similar but less marked features. All of them chipped and decayed. Mental condition defective. He cannot give a history of his illness. To every question about it answers only "Mercury." When pressed about it, says "Too much is expected of him," and he begins to sob and cry. Cries with the least excitement. He cannot remember his age to within ten years. Speech very thick; the words are drawled out, but he often fails to complete them: in this respect it is exactly the opposite of the "staccato" speech of disseminated sclerosis. After he has been talking a little time, articulation becomes less and less distinct, apparently from defective control over the muscles. Tremors: When he is not talking the face is tranquil, but directly he begins to speak all the face-muscles become tremulous. When told to open mouth he gets marked tremor of muscles of mastication. Tongue very tremulous when protruded; no nystagmus. Eyes natural. Coarse tremor of whole of right upper limb elicited on movement. No tremor in left upper limb. Grasp fairly good in both. No wasting, and no modification in sensation. Lower Limbs: Able to walk a mile fairly well, but not more. No trembling of legs when he stands or walks. Staggers when eyes closed; would fall unless prevented. When sitting in a chair, and told to raise the right leg off the ground, there is coarse tremor in the whole of the limb. There is no tremor in the left lower limb, and he can raise it easily. Sensation in both natural. Bowels and bladder normal; appetite good; urine natural. Patient was ordered pot. iod. gr. viij., ext. cinchon. liq. ℥xv., sp. chlorof. ℥x., aquam ad ℥j. ter. Full diet.

July 15.—Since admission there has been considerable improvement: the giddiness has disappeared; the tremor is markedly less, especially in the leg. Less emotional disturbance, speech slightly improved, but memory and reasoning powers very little better.

Statistical Society.—The eighth ordinary meeting of the present session will be held on Tuesday, the 19th inst., at the Society's Rooms, Somerset House-terrace (King's College entrance), Strand, W.C., when a paper will be read on the populations of Russia and Turkey, by E. G. Ravenstein, F.R.G.S.; after which, diagrams illustrating the accounts of the banks of England, France, Germany, Belgium, Holland, etc., will be submitted, and remarks made thereon, by Ernest Seyd, F.S.S. The chair will be taken at 7.45 p.m.

The Doctors' Black-Book.—The *Union Médicale* of the city of Ghent has come to a resolution that is deserving of imitation. It has agreed to institute a "black-book," which is to contain the names of all persons who, from bad disposition (*mauvaise volonté*), refuse to pay their doctors. Every member engages to refuse to attend, except in cases of urgency, any person whose name is found in the black-book. The members of the union have to furnish the secretary with lists of their bad paymasters, with exact indications of their occupations, addresses, etc. From these he constructs an alphabetical table, and forwards a copy of it to every member of the society. This black-book began its career on January 15 last. —*Lyon Méd.*, June 3.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JUNE 16, 1877.

THE EVOLUTION OF NERVES.

Mr. Romanes' recent discourse at the Royal Institution upon the Evolution of Nerves and Nerve-Systems will excite the greatest interest amongst biologists, not only on account of the facts which the lecturer brought forward, but also because of the confirmation which these may be thought to supply of certain physio-psychological theories. In the evolution of nervous structures by the differentiation of nerve-tissue from protoplasm, Mr. Herbert Spencer's theory is that, in a specific-shaped mass, waves of contraction, and with them waves of stimulation, proceeding more frequently from the more exposed parts than they do from the less exposed parts, cause a polar arrangement of the protoplasmic molecules lying in the lines of the most frequent passage, and so convert these lines into tracts offering less and less resistance to the waves of *stimulation* as distinguished from the waves of *contraction*. By constant use these tracts begin to perform the essentially nervous function of conveying impressions to a distance, irrespective of the passage of a contractile wave. Such a tract fully established is visible as a nerve-fibre; but, before it is sufficiently differentiated to be distinguishable microscopically, Mr. Spencer calls it "a line of discharge."

Following up an important anatomical research on the *Medusæ* or jelly-fishes, Mr. Romanes proceeded to study the phenomena of the nascent nervous system in this group of animals—the lowest in which a nervous system has as yet been demonstrated, and one, therefore, peculiarly fitted for this investigation. While the animal is composed of a transparent non-contractile jelly, the whole surface of the polypite or stalk, and the whole concave surface of the bell, are covered with an exceedingly thin layer of contractile

tissue; and the margin of the bell is provided with ganglia. The margin must accordingly be removed in order to destroy spontaneity, before experiments can be made upon the excitability of the protoplasm; and when this has been done it is found that a *contractile* wave spreads in all directions from any seat of stimulation. This wave may manifestly be due to either of two modes of passage—to simple conduction by continuity as in muscle, or to conduction by nerve-fibres; or, if a third mode be possible, to passage along "lines of discharge." To determine which of the three arrangements is present, Mr. Romanes made a large number of experiments by section of the bell, testing the effect of this upon the conduction of impressions. He found that, when the bell was cut in a spiral direction, the visible or contractile wave from a point of stimulatiou was, in some cases, conducted through the whole length of the ribbon-shaped body into which the animal was converted, while in other cases it was interrupted, and this suddenly. The first of these results suggests muscular or simply protoplasmic substance as the wave-conductor; the second, nerve-tissue which is interrupted by section. Mr. Romanes holds that it may therefore be concluded, with some confidence, that the conducting substance is intermediate between nerve and muscle—a differentiated "line of discharge." This "result" is apparently confirmed by several further experiments. The marginal ganglia being preserved, the effect was carefully ascertained of reflex stimulation of the bell through them, both before and after section; and it was found that irritation of any part in the perfect animal is followed by violent action of the whole bell, by a wave of *stimulation* through the ganglia; while after section the same result ensued, and "blocking" of the wave was as difficult as blocking of the ordinary wave of *contraction* in the previous experiments. Thus the wave of contraction may be assumed to depend upon the progressive passage of a wave of stimulation.

An interesting phenomenon which was occasionally observed in the course of these experiments may also be assumed to furnish another "greatly foreshortened" view of the process of evolution of nerves. When a spiral section of *Aurelia* causes blocking of the contractile wave, this blocking, although usually permanent, is sometimes temporary only; and Mr. Romanes explains this fact by the stimulus selecting another "line of discharge," which, although at first unfitted to conduct the impression, becomes permeable by repeated trial, and by "advance of structure" due to increased function. Further, in another species of medusa, which possesses the power of moving its polypite to the seat of any stimulation in the bell, this movement could be rendered disorderly, but was still performed, when a stimulus was applied in the course of a severed line. Lastly, in a species called *Sarsia tubulosa*, Mr. Romanes succeeded in detecting actual nerve-fibres.

On the whole, if Mr. Romanes' facts are facts, and his inferences and assumptions are admitted, it may probably be concluded that the link between ordinary contractile protoplasm and excitable nervous tissue has been found by him in those "lines of discharge" in the *Medusæ*. And this research would then be an important contribution to more than physiology; for, as those of our readers who may be interested in psychology will perceive, Mr. Romanes' "results" support the theories of Bain and Herbert Spencer on the physical basis of mind and the growth of the intellect.

PROFESSOR TYNDALL ON GERMS.

At the end of January last we noticed at some length the "combat" in which Professor Tyndall had been for months engaged with an infective atmosphere. We pointed out the strong support brought by his results to the germ theory of putrefaction, as well as their practical importance to the hygeist and surgeon. In Professor Tyndall's discourse at the Royal Institution on the 10th inst. (of which an abstract will be found in another column), we have an account of the continuation of his struggle with putrefactive germs, and of the means by which he is now able to encounter them with confidence of complete success.

Driven from his laboratory in Albemarle-street by the condition of the air, which was thoroughly polluted by previous experiments, to a shed erected on its roof, at a distance of thirty feet, the Professor was there equally unable to prevent putrefaction, in infusions subjected to moderately prolonged boiling, until he had thoroughly disinfected the place and prevented all communication between it and the infected laboratory. With his well-known acuteness, Professor Tyndall asks, at this point in his history of the research, "Shall we, then, infer that at one end of a rod thirty feet long the infusions possess the power of spontaneous generation, and at the other not?" or is it not that the one atmosphere is filled with germs—germs that can be seen by the electric beam; that cling to ward-walls and the wounds of living men?

The next series of experiments were on the effect of *discontinuous* boiling of infusions; and certainly furnish remarkable evidence of an analogical kind in favour of the germ theory of putrefaction. Pondering on the great differences of resistance offered by different specimens of peas and similar bodies to boiling—some rapidly becoming soft, while others remain tough for a length of time; knowing the life-history of bacteria; and being acquainted with the observations of other workers on the resistant power of the germs of certain putrefactive and septic organisms (the *Dauersporen* of the Germans), the Professor devised the ingenious experiment just mentioned. He boiled a given vegetable or meat infusiou for a few minutes only, and repeated the heating for the same short period of time every ten or twelve hours; and he was rewarded by finding that after a sufficient number of heatings the fluid was rendered perfectly sterile. By this means, he believes, he destroyed the successive crops of soft plastic and extremely sensitive organisms springing from the indurated germs, until, after sufficient repetition, the last living germ had disappeared.

That the agent of putrefaction is an organised germ was further rendered extremely probable by the two next experiments, which demonstrated that the process, like plant-life, cannot be maintained either in an infusion from which air is perfectly excluded, or in an infusion under oxygen compressed by ten atmospheres.

These are the principal facts of a new or novel character which Professor Tyndall, after fresh experiments extending over several months, is able to add to his previous very full account of the process of putrefaction. It will be seen that they confirm very satisfactorily the conclusions at which he had already arrived; and the whole form a most valuable contribution to this subject, and certainly furnish evidence of the most convincing kind, in favour of the germ theory of putrefaction. But beyond this conclusion we must be careful not to pass. Strong though the analogy may be, we must not substitute the word *disease* for the word *putrefaction*, or consider that the "germ theory of disease" has received any special confirmatiou from Professor Tyndall's results. And, on the other hand, it must not be inferred from a number of successful experiments of a positive character that the negative result is impossible, that putrefaction cannot occur without germs, that spontaneous generation is a myth. If Professor Tyndall has shown that under favourable conditions germs do produce putrefaction, and even that the process flourishes in proportion to the number and vigour of these, he has still struck but an indirect blow at the position of the abiogenesists, which he so vigorously assails.

THE WEEK.

TOPICS OF THE DAY.

At a meeting of the Council of the Metropolitan Hospital Sunday Fund, held at the Mansion House last week, Mr. T. Hankey, M.P., in the chair, Bishop Claughton expressed a hope that the Council would ask the Lord Mayor to support the Fund again this year by his presence in state both at St. Paul's Cathedral and at Westminster Abbey; and it was resolved to do so. A conversation ensued as to the best method of approaching those who at present do not contributo to the Fund, with a view of gaining their future co-operation, but no resolution was put to the meeting, as it was felt that the obstacles which at present stood in the way of some of the clergy would in time wear away.

A somewhat singular verdict was recorded last week by a jury which assembled to investigate the cause of death of a young man drowned in the Thames. The evidence showed that the deceased with three friends engaged a small skiff for a row on the river. The weather was very boisterous, and on their arrival at Hammersmith they got athwart the tide, and the surf capsized the boat. The skiff sank stern foremost, and the whole of the occupants were thrown into the river, and were drowned before a man who rowed after them could render assistance. At the timo of the accident there were no steamers near the spot. The coroner, in summing up, said it was a lamentablo case that younng men should lose their lives on the river Thames through not having a knowledgo of the navigation of the river. The jury then decided "That the deceased was found drowned in the Thames; but there was no legal evidence to show how he met with his death"!

In reporting the death of an imbecile which recently took place in the Bristol Workhouse, the Chairman of the Board of Guardians there told a curious story. The deceased's idiosyncrasy was to put anything he could get hold of into his mouth. For years past he had exhibited a special appetite for the blankets and rugs supplied him as bed covering. The deputy chairman said the deceased had consumed upon the average a large woollen rug every three weeks, and, in consequence of this, the Guardians had directed that a supply of bread should be always kept alongside him, so that he might indulge his propensity of eating in a legitimate way; but in the intervals between meal-times he rejected the bread and persisted in eating his blankets! Query: What was the cause of death? Was it blanket poisoning? And why was blanket-eating permitted?

A deputation from the Canal Association had an interview with Mr. Sclater-Booth, last week, at the office of the Local Government Board, on the subject of the Bill now before Parliament dealing with the sanitary and other matters affecting canal populations. They were desirous that the Bill should pass this session, and were adverse to its reference to a Select Committee. Mr. Sclater-Booth, in reply, said that the proposed amendments in the Bill were so extremely moderate, and of such a reasonable character, that they would receive every attention from him. On the question whether the Bill should go to a Select Committee, he must be guided by the circumstances of the case. He was inclined, however, to think that a Select Committee would satisfy their wishes. The Government was most desirous of meeting any reasonable objections to anything that would be unjust towards the industry of the canal populations. The deputation then withdrew.

At a meeting of the Birmingham Town Council, held last week, the Finance Committee reported that arrangements had been made for an advance to the Corporation by the Bank of England of a further loan of £500,000, at 3½ per cent. interest, upon the security of the borough rates, for the purchase of lands for the purpose of the improvement scheme about to be effected in the town under the Artisans' Dwellings Act. The report was approved.

Her Royal Highness Princess Christian, upon her last birthday, sent a valuable present of clothing and toys for distribution to the children in the "Helena" ward of the Hospital for Sick Children, Great Ormond-street. The "Helena" ward is entirely occupied by little girls of from two to ten years of age, and bears the name of the Princess by special permission. The patients have on several previous occasions been honoured with gifts sent by her Royal Highness. A new wing forming the second portion of the enlarged Hospital is nearly completed, and will shortly be opened for public inspection.

Vasts sums of money are, it is stated, being collected in Russia on behalf of the sick and wounded. The stream of charity shows no signs of slackening, and subscriptions are being received quite as remarkable as those previously recorded. Besides the large amounts sent direct to the Secretary of the Red Cross Society, the Chancellerie of the Empress is reported to receive about £20,000 a week. The Communal Bank at Astrakan has sent the accumulated profit of five years —viz., £6000—to the Red Cross Fund. The *noblesse* of the Government of Tamboff have followed the example of their order at Nijni by subscribing £12,000. In other provinces the *noblesse* have given sums ranging from £1000 to £10,000. Offers to provide 100, 200, or 300 beds come in shoals from the provincial towns, and a great number of private persons have expressed a desire to receive the sick at their own homes for treatment. No account is rendered of the donations of linen, etc., received at the depôts, but information from private sources states them as being enormous. Five hundred ladies are employed in the palace of the Grand Duke Nicholas at St. Petersburg preparing *matériel* for the ambulances. According to the reports of those who have visited the Russian armies in the field, these preparations are likely to be by no means too ample. The camps are not regulated with that extreme attention to sanitary details which is enforced, and wisely so, with so much rigour among the troops of an English army. English soldiers would assuredly suffer if their camps were as little cared for in matters of cleanliness as those seen in the Russian army. The hot sun is fast drying the country by exhalations from the sodden earth; and those exhalations will surely contain gases from decaying animal and vegetable matter, which will sow the germs of disease and death amongst the hosts of men exposed to their influence.

Dr. John Whitmore, Medical Officer of Health for the Parish of St. Marylebone, in his report for the month of May last pronounces the health of the district under his supervision to have been satisfactory. The prevalence of east and north-east winds, together with a low temperature, during the greater part of the month, caused a somewhat high death-rate from bronchitis and other diseases of the organs of respiration; and but for this the mortality would have been unusually low. With the single exception of small-pox, all other contagious and infectious diseases were below the average. Three deaths were registered from small-pox in the parish during the month in question, one of which was certified as vaccinated and one unvaccinated. Twenty-nine small-pox patients were sent to the Asylum Hospitals from the parish during the month, and the number of deaths in these institutions amongst those sent from St. Marylebone during the same period was nine.

The *Times of India* calls attention to the fact that cholera in Bombay has not yet disappeared, although it has not shown any marked increase. On May 18 there were fourteen cases in the island, six of which were fatal, one of them being in the fort. On the following day there were thirteen cases, seven o

which were fatal. On Sunday there were nine attacks, of which five proved fatal. The Corporation are taking every precaution to prevent the spread of the disease by distributing lime-wash, disinfectants, and medicine. Considerable difficulty is experienced by the Health Department, especially among the Parsees, who refuse to allow any inspection until after their funeral ceremonies. Several members of the Parsee community have sent in a requisition to the authorities on the subject, offering to afford the health officer every assistance in their power. It is satisfactory to learn that up to the present time there is nothing peculiarly alarming in the cases which have taken place.

A report on the recent outbreak of scarlet fever in the East Barnet Valley has recently been published. Between April 29 and May 4 there were 117 persons attacked. Of these 100 obtained their milk from one dairyman; and in one case some members of a household who used condensed milk escaped, the remainder of the family being attacked by the malady. Several other facts are mentioned, showing the connexion between the outbreak of the fever and the milk supplied from this particular dairy. The medical officer states that the milk became infected through an "accident," but the nature of this is not explained. One of the sufferers from this outbreak, writing to the *Times*, complains that it has not been officially stated how many deaths have occurred, nor is it known how many families have suddenly deserted the neighbourhood to avoid infection; but he argues that the number of those attacked in such a limited area in four days is surely sufficient to call for some more thorough inquiry, and some more satisfactory conclusion.

Some little time ago we described the manner in which the men of our Army Hospital Corps were instructed at Aldershot in bringing in wounded men to hospital, etc., and it would appear that the Germans are turning their attention to the same subject. Lately, at Dresden, detachments of troops have been sent out almost daily, deployed into attacking formation, and ordered to advance against an imaginary enemy. In rear of them followed parties of sick-bearers, for whose especial instruction the drill was carried on, while further to the rear a number of ambulance-waggons, distinguished by the Red Cross, were drawn up, together with some country waggons specially prepared for the transport of sick and wounded men. As the assaulting lines moved forward, certain men were ordered to fall down from time to time as though wounded. After a while the field was searched by the sick-bearers, the wounded men were taken up, their injuries temporarily and hastily attended to, and they themselves transported to the conveyances in attendance. Each sick-bearer was provided with an album, in which were plates showing how dressings should be applied in various cases, and also how means for carrying wounded men can be improvised out of swords, rifles, branches of trees, and other articles.

The President and Fellows of the Royal College of Physicians have issued cards for a *conversazione* at the College on Wednesday, June 20.

The Harveian Oration will be delivered by Dr. Sieveking on Wednesday, June 27, at five o'clock.

THE NEWCASTLE-UPON-TYNE LUNATIC ASYLUM.

The Twelfth Annual Report of the Newcastle-upon-Tyne Borough Lunatic Asylum for the year 1876, which has recently been published, calls for no particular comment at our hands. We must, however, notice some remarks of the Medical Superintendent, Mr. R. H. B. Wickham, F.R.C.S., which deserve attention. In alluding to the admissions for the year 1876, he says:—"There was the usual amount of feeble and debilitated cases, of which it may be said with confidence that they would have had a fair chance of recovery in some cases, and of longer life in others, had they been sent to the Asylum sooner. The dread of having to acknowledge to one's self that a relation has gone insane continues to operate, even with those who are to all appearance possessed of average intelligence, as a powerful motive for putting off the time of placing him under proper care and treatment, and so the days pass by, and the time comes when his recovery is as hopeless as his speedy death is certain. Asylum physicians are generally charged with having what is called 'asylum on the brain,' which means, I understand, that they are too apt to consider asylum treatment as the only means of dealing with lunacy. The charge would be absurdly false were it not also noxiously so; but even if it were true, it might be fair to retort by asking what other form of treatment reformers are prepared to suggest. It would be difficult to point out a better system than that which the Commissioners of Lunacy, aided by magistrates and medical officers, have year by year established for public asylums in England and Wales. Those who are continually harping upon the supposition that the minds of asylum medical officers, who have spent their lives in the study of insanity, are necessarily warped by prejudice, would do well to remember that prejudice is born of ignorance rather than of knowledge, and that agitators are generally more bountifully supplied with the former than with the latter. It is in much the same spirit that certain people charge the whole medical profession with being prejudiced in favour of vaccination."

THE HEALTH OF CAMBRIDGE.

The Report on the Sanitary Condition of Cambridge for the year 1876, by the Medical Officer of Health for the district (Mr. Bushell Anningson, M.A., M.B.), shows that the public health of the town during the period under notice has been on the whole satisfactory, and the death-toll less than it has been in several years past. The total number of births registered has been 989, and the total number of deaths 592, showing an excess of 397 births over deaths. The deaths of infants under one year were 168, or 28·4 per cent. of the whole number. This is a somewhat larger proportion than in some previous years: the increase is due in great part to the excessive mortality from infantile diarrhœa during the third quarter of the year, which carried off thirty-three victims. The diseases which have destroyed most lives have been—those affecting the respiratory organs, other than phthisis, 77; phthisis pulmonalis, 75; heart disease, 56; diarrhœa, 43; wasting diseases of infants, 41; and cancer, 34. The deaths from phthisis might be made fewer, Mr. Anningson thinks, if more heed were given to the underdraining of the sites of the houses, and if the Board were to procure a by-law to compel builders to properly prepare the ground, as well as to maintain certain distances between the houses, and make house-drains, etc.

THE LAST CONJOINT EXAMINATION SCHEME FOR IRELAND.

Conjoint examination schemes do not seem to flourish on Irish soil. The fourth and latest proposed scheme has just fallen through. The first proposal included all the Irish licensing bodies—it was the quinary scheme. Then came the quaternary, which left the Apothecaries' Hall out in the cold. Then the Queen's University voluntarily withdrew, leaving the ternary scheme, which embraced the University of Dublin and the Colleges of Physicians and Surgeons. To it the action of the Council of the Royal College of Surgeons proved a death-blow. Lastly, some months ago, as our readers may remember (see *Medical Times and Gazette*, March 31, 1877, page 344), a proposal was started by the College of Surgeons for a binary scheme. It too has just been given its *coup de grâce* by the College of Physicians, for at the meeting of the College on Friday, June 8, the consideration of the report of the "Combined Examination" Committee was postponed *sine die*.

SMALL-POX IN LONDON.

The fatal cases of small-pox in London, which in the four preceding weeks had slowly but steadily declined from 78 to 61, were only 58 in the week ending June 9, of which 29 were certified as unvaccinated, and 12 as vaccinated; in the remaining 17 cases the medical certificates gave no information as to vaccination. Twenty-five of the fatal cases occurred in private dwellings, and 16 of the 58 were of children under five years of age. The Registrar-General again calls attention to a misuse of the term "vaccinated." He observes—"The word 'vaccinated' is ambiguous; for it is applied—(1) popularly to the operation of puncturing the skin and inserting vaccine lymph, without reference to its effect; and (2) scientifically to vaccination that induces cow-pox. Two words are needed, and the word 'vaccinised' might be used with advantage in the second case, where cow-pox is induced and distinct marks are left. Should the word vaccinised not be used, a child must not be described in the medical certificate as 'vaccinated' unless it had distinct marks of cow-pox before the appearance of the small-pox eruption."

IRISH MEDICAL ASSOCIATION.

At the annual meeting, held on Monday, June 4, the following members were elected to the undermentioned offices for the year ending May 31, 1878:—*President:* Dr. Darby, Bray. *Vice-Presidents:* Leinster—Dr. Hudson, Dublin; Ulster—Dr. Samuel Browne, Belfast; Munster—Dr. Brodie, Limerick; Connaught—Dr. Nolan, Gort. *Council:* Drs. Baggot, Enniskillen; Charles Benson, Dublin; H. G. Croly, Dublin; Drapes, Enniscorthy; G. F. Duffey, Dublin; Faussett, Clontarf; Gray, Armagh; Grimshaw, Dublin; Hayes, Naas; A. H. Jacob, Dublin; D. Jacob, Maryboro'; J. Bellew, Kelly, Drogheda; J. E. Kenny, Dublin; Longworth, Moate; Lyster, Kilkenny; Macnamara, Dublin; James Martin, Portlaw; Mayne, Ballybrack; Molony, Tulla; J. W. Moore, Dublin; Perceval, Stradbally; Pollock, Blackrock; George Porter, Dublin; T. Purcell, Dublin; Sharkey, Ballinasloe; H. J. Smith, Donaghmore; Speedy, Dublin; Spencer, Ahascragh; Tagert, Monkstown; Usher, Dundrum; A. J. Walsh, Dublin; Whistler, Bray. *Auditors:* Dr. Morrogh, Dublin, and Dr. Nugent Duncan, Ballybrack.

ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council of the College will take place on the 5th prox., when three vacancies will be declared, caused by the decease of Sir William Fergusson, and the retirement in the prescribed order of Messrs. J. E. Erichsen and John Gay, who, however, offer themselves for re-election. Three new candidates will be brought forward—viz., Messrs. William Adams, Surgeon to the Great Northern Hospital; William Scovell Savory, F.R.S., Surgeon to St. Bartholomew's Hospital; and Timothy Holmes, Surgeon to St. George's Hospital. Both of the latter are members of the Board of Examiners, and ex-Hunterian Professors respectively of Comparative Anatomy and Physiology, and of Surgery and Pathology.

THE CHAIR OF SURGERY AT KING'S COLLEGE.

Mr. Henry Smith, F.R.C.S., has just been appointed Professor of Surgery in King's College, in succession to Professor John Wood, who, it will be remembered, resigned the chair of Systematic Surgery to take that of Clinical Surgery, which had become vacant by the death of Sir William Fergusson. Mr. Henry Smith, who has been for upwards of sixteen years Assistant and full Surgeon to King's College Hospital, has won for himself a well-known reputation; and old "King's men" in particular will be glad to see that his claims have been thus recognised by his *Alma Mater* after his devotion for so many years to her service.

PROFESSOR BENJAMIN BALL.

As our readers are aware, the question of expanding the Paris Faculty of Medicine by the creation of several new chairs, and by other measures calculated to keep it more abreast with the advanced state of medical knowledge, has several times been under the consideration of that learned body; and an able report from the pen of Professor Gavarret recommended not long since that this course should be adopted. Thus far, however, only one such chair has received the approval of the Faculty and the sanction of the Government—viz., that of "Mental Pathology and Diseases of the Encephalon." In order to enable the Minister of Public Instruction to select a fitting occupant for this chair, the Faculty furnished him with a list of four candidates, arranged in order of merit—viz., Dr. Ball, *professeur agrégé*, Dr. Magnan, Dr. Voisin, and Dr. Foville. When noticing (May 5) the selection of the first of these candidates, we omitted to state—what must be a fact of some interest to our readers—that Dr. Ball, who has pursued a very distinguished career in the Paris schools and Faculty, is an Englishman by birth: showing that the highest honours of that Faculty are attainable by men of all nations who can bring proof of distinguished talent and acquirements. Dr. Ball's *thèse* "Des Embolies Pulmonaires" (1862), and his *thèse de concours* "Du Rheumatisme Visceral" (1866), are well-known and esteemed productions.

UNIVERSITY COLLEGE.

The Council have elected Mr. G. D. Thane Professor of Anatomy for two years. This is in the room of Professor Ellis, who recently resigned the post he had held so worthily for many years.

MEDICAL PARLIAMENTARY AFFAIRS.

Public Health.—The Public Health Bill for the Metropolis was read a second time on Monday without debate.

Sanitary State of the Metropolis.—Mr. Baillie Cochrane gave notice that he would call attention to the disgraceful state of the metropolis, and would ask the Home Secretary to introduce a Bill giving the Government greater control over the vestries, and to compel the publication of their revenue and expenditure accounts, so that the public may know how much of their money is expended on sanitary arrangements.

Vaccination Prosecutions.—Mr. James drew attention to the case of Joseph Abel, who had been eleven times before the magistrates for refusing to have his child vaccinated. Mr. Sclater-Booth explained the circumstances of the case, and said that though frequent prosecutions were undesirable, yet the magistrates must use their discretion. There may have been good grounds for the decision at which they had arrived.

Canal Boats.—This Bill passed into Committee on Tuesday.

Aponeurotic Fibromas.—The following are the conclusions which M. Guyon arrived at in a paper read at the Academy of Medicine, entitled "Intra-parietal Aponeurotic Fibromas, and especially those of the Cervico-Dorsal Region": —1. These fibromas form a well-defined pathological group. 2. They have been almost exclusively observed in the anterior abdominal parietes, and in the cervico-dorsal region. 3. To the present time they have been met with exclusively in females. 4. They have been always observed at the period of life corresponding to sexual activity. 5. Their progress is irregular, and appears to be much influenced by the genital functions—menstruation, pregnancy, etc. 6. These tumours may rapidly attain an enormous size, but they always continue included in the region in which they have originated. 7. They have no direct insertion in the bones, and are of an aponeurotic, not a periosteal, origin. 8. They are amenable to operation at all periods of their growth, and the operation is usually easy and rapid. 9. In the abdominal wall they may secondarily acquire attachments to the peritoneum, requiring the excision of a portion of this during the operation. 10. These tumours do not seem to be liable to relapse, or, at all events, are not reproduced on the same part. 11. Extirpation is the sole rational treatment that can be employed.—*Bull. de l'Académie*, May 22.

NOTES OF

LECTURE BY PROFESSOR TYNDALL, F.R.S.,

AT ROYAL INSTITUTION, JUNE 8, 1877.

IT is a well-known fact, that infusions of vegetable or animal substances, which when made are transparent, become in the course of a few hours, if kept at a proper temperature, turbid, and their sweet smell becomes putrid. This is owing to swarms of minute organisms which from their appearing in infusions are called Infusoria. The lowest class of these are called Bacteria.

There are two theories as to their origin. One, that they are developed from eggs or germs like the higher forms of animal and vegetable life; the other, that they arise spontaneously.

The chief advocate of the latter theory is M. Pouchet, of Rouen. His writings show how he arrived at his conclusions. He convinced himself by "meditation" that spontaneous generation was one of nature's modes of action, and then set to work to find evidence in support of his theory. His works are partly scientific, partly teleological, and partly satirical. He twits the "ovarists" with the difficulties of their theories. If there is a vast number of germs floating about in the air, as alleged by them, why cannot we see them? From their accounts they should form a thick dark cloud obscuring the sky. These theories were inconsistent with the idea of a creative wisdom.

However, Professor Tyndall said, it was an established fact that the blue of the sky, as seen from the highest elevations and above possibility of contamination with earth, was caused by vast numbers of foreign bodies floating in the atmosphere, so so small as to be undistinguishable by a microscope magnifying by 1500 diameters. This had been the highest power available until Dallinger (to whom Professor Tyndall referred in terms of eulogy as a microscopist worthy of a far wider reputation than he had attained) had produced a power magnifying 15,000 diameters. This, however, failed to distinguish these minute germs. The only means of discovering their presence in the atmosphere was the electric light.

During his investigations or "battle with the germs," which occupied him for six months in 1875-76, he had found it to be a rule without exception that an infusion of turnip, cucumber, beef, or mutton, which had been boiled for a period of five minutes, would not putrefy in an atmosphere in which all germs had been allowed to subside. But during the continuance of these investigations in the autumn of 1876, he found that infusions apparently the same as those prepared in the previous year were not sterilised by boiling for fifteen minutes. There was no opposition, to his mind, between these results; the only question was, whence did the difference arise? Either these infusions had, in October, 1876, a power of spontaneous generation which they had not in 1875, or there was a more obstinate contagium present in these which the former had escaped.

Acting on the assumption that the latter was the correct interpretation, he transferred his experiments from the Laboratory at the Royal Institution to the Jodrell Laboratory at Kew, in hopes of obtaining a purer atmosphere. The result was that five minutes' boiling at Kew was sufficient to sterilise infusions which had withstood boiling for 200 minutes at the Royal Institution. Either the infusions had lost a generative power at Kew which they possessed in the Laboratory, or there was a special contagium in the air of the latter place. Next he erected on the roof of the Royal Institution a shed in which he put his chambers. The infusions were carefully prepared in the shed, but the result was failure—the atmosphere in the shed was as bad as that in the Laboratory. It occurred to him that the shed might have been infected by his assistants passing to-and-fro between it and the Laboratory, and bringing the contagium with them. He therefore disinfected the shed by washing it with carbolic acid and water and caustic potash. He and his assistants wore proper uninfected clothes, and the result was that the infusions again became sterile after five minutes' boiling. A rod thirty feet long would connect the shed with the Laboratory. Had the infusions a generative power at one end of the rod, which they had not at the other end; or was the difference caused by a special contagium present in the Laboratory and not in the shed?

After exhibiting some specimens of infusions to illustrate the results of his experiments, the Professor pointed out the parallel between the spread of infection from the Laboratory to the shed, and the spread of infectious diseases in hospitals and other places by means of the passage to-and-fro of attendants.

The Professor then exhibited, by means of the electric light, the contagium in a sample of old hay brought from Heathfield, in Sussex, clouds of fine particles being seen to arise from the hay when shaken beneath the ray of light. This contagium was far more infectious than that ordinarily found in common air, and far more obstinate. The particles were extremely fine, and able to pass unaltered through 300 layers of filter-paper. This was the contagium which had infected the Laboratory, and was so remarkable for its resistance to heat.

If these were its effects on infusions of turnip or beef, what might its effects not be on open wounds in a hospital? This was a matter now being taken up by the followers of the Antiseptic School of Surgery, and was well worthy of the attention of all surgeons.

This difference between the powers of resistance of various species of contagia was of great moment with regard to the artificial preservation of meats and vegetables. He was not aware of any actual instance, but could imagine great financial reverses occurring to those engaged in these trades by infection from a contagium which would withstand the ordinary means of preservation from putrefaction. He knew that brewers were sometimes liable to checks from causes apparently inexplicable, and he thought that much might be traced to the special form of contagium. It would be possible to cause a great disaster by carrying a truss of hay like that which he had just exhibited through a preserving establishment or a brewery.

The Professor then referred to some tables exhibited on the boards above, giving a summary of the different periods for which he had subjected infusions of old hay, of turnip, and cucumber infected with hay dust, and of beef prepared in an infective atmosphere. The result appeared to be that the turnip and cucumber infusions could stand boiling for 180 minutes and yet putrefy. The beef putrefied after boiling for 300 minutes, and the old hay after boiling for 240 minutes. In one instance a sample of the hay infusion showed life after it had been boiled for 480 minutes—eight hours.

Boiling does not destroy the power of putrefaction possessed by any substance; it destroys, or is intended to destroy, the germs that are in the infusion or substance at the time. The germs that make an infusion putrefy are those in it, and not those in the air above. This the Professor had established by using a special form of bulb, which he was enabled to fill with purified germless air before he introduced the infusion. The infusion nevertheless putrefied, showing that it was the germs in it, and not any outside it, which were the cause of its putrefaction. When an infusion has been sterilised it may again be made putrefactive by introduction of fresh germs.

It was a grave error to confuse the germs of infusion with the adult forms. Heat destroyed the adult organisms, but the germs from which they sprang were comparatively indestructible. This was illustrated by the results of Professor Koch's researches on that dangerous and fatal disease, *Milzbrand*. He had found that an animal might with impunity take the adult organisms after they had been subjected to a very small amount of heat, but that the germs would withstand a lengthened period of boiling without losing their power of development. One minute's boiling will kill the adult, while eight hours is insufficient to kill the germ. It was not even necessary to raise the heat to boiling-point, for a heat of 145° Fahr. would kill the adult.

One result of his (Professor Tyndall's) experiments had been the method of disinfection by discontinuous heating. The substance to be disinfected should be subjected for one minute to a temperature of 140° Fahr.; this would kill all adult organisms. After a few hours' intermission, during which the substance is kept at a proper temperature, to enable the indestructible germs to arrive at a sufficiently sensitive stage of existence the substance should be again subjected to a mild heat. By this method an infusion would be more perfectly sterilised by an amount of heating which would in the whole amount to five minutes only, than by boiling for many continuous hours.

In one instance Professor Tyndall had noticed that an infusion contained in a sealed flask partially putrefied: a thick scum formed on the top, and the lower parts remained clear. From this and other reasons it had been inferred that bacteria resembled higher organisms in their dependence on oxygen for

existence, and that in the present case the bacteria had crowded to the top of the liquid infusion to follow the air, and had thus stifled those beneath. He also showed an instance of a small quantity of a putrefying infusion which had quite exhausted all the oxygen in the large sealed flask in which it had been kept for some time.

Infusions from which air had been perfectly exhausted by means of the Sprengel air-pump had also remained sterile.

On the assumption that the mode of life of these lowest forms was the same as those of the highest, and knowing that it had been proved by experiment on the higher animals that an excess of oxygen acted as poison (an experiment which the Professor had never performed, and was not likely ever to perform, but of which he took occasion to say that he did not see how science was to make progress, and how diseases were to be combated without such experiments), he tried the experiment of subjecting infusions of highly putrefactive matter such as cucumber and turnip to pressure of 200 atmospheres of oxygen, and found that they remained quite sterile. This result was not due to the mechanical pressure, but to the poisonous effects of the oxygen, for infusions subjected to a like pressure with common air had putrefied.

In conclusion, the Professor said that he hardly thought it necessary to summarise what had been there brought before his audience. In fact, the whole discourse was but a summing up of eight months of incessant labour. From the beginning to the end of the inquiry there was not, as had been seen, a shadow of evidence in favour of the doctrine of spontaneous generation: there was, on the contrary, overwhelming evidence against it; but he warned his hearers not to carry away with them the notion sometimes erroneously ascribed to him, that he deemed spontaneous generation impossible, or that he wished to limit the power of matter in relation to life. His views on that subject ought to be well known. But possibility was one thing, and proof was another; and when in the present day he sought for experimental evidence of the transformation of the non-living unto the living, he was led inexorably to the conclusion that no such evidence existed, and that in the lowest, as well as in the highest, of organised creatures the method of nature was that life should be the issue of antecedent life.

FROM ABROAD.

Prof. Dittel on Lister's Method.

At a meeting of the Vienna Medical Society (*Wien. Med. Woch.*, April 28), Prof. Dittel stated that he had employed Prof. Lister's method in 129 cases, strictly according to the indications of its inventor, and had arrived at the following conclusions respecting it:—1. This mode of treatment exerts a very beneficial effect upon the arrest of hæmorrhage, the general sensibility, and the reaction of the wound. 2. In many cases healing by complete or partial union by the first intention is attained; but in other cases this does not take place, and the method has to be changed for a comparatively open mode of treatment. 3. For the treatment of wounds of some tissues the method appears to be absolutely unfitted. This is the case in wounds in which thick fatty flaps have to be united together, and when the removal of a tumour has left a large cavity in the panniculus adiposus. In such cases decomposition of the fatty tissues easily gives rise to erysipelas. Also in diseases in the substance of bone this method is almost always attended with unfavourable results, because in these diseases healing occurs by granulation and cicatrisation, which is more rapidly brought about by the open method of treatment. 4. It exerts a favourable influence upon the process of granulation when it fails to procure union by first intention. 5. It serves as a protection against accidental wound-diseases, eczema and pyæmia occurring seldomer; but, on the other hand, erysipelas is more frequently observed, because the dressing being occlusive easily gives rise to the retention of pus. 6. Lister's method should be replaced by some other (*a*) when complete union by the first intention is completed; (*b*) when this has entirely failed; and (*c*) when the surface of the wound is covered by a diphtheritic deposit, which is not removable by means of a solution of chloride of zinc. 7. The duration of the application is not, upon the average, great; but it is to be observed that such average is very much influenced by the rapid course of the fatal cases. Several cases required more than from 100 to 200 days, and one of them 400 days. 8. This method of treating wounds is one of the best which we possess, and will well reward the trouble of learning its exact mode of application, and of understanding in what cases and for how long a period its employment will be suitable.

The Recent Death from Nitrous Oxide Gas.

Dr. Lutaud (*Gaz. Hebdom.*, May 18) subjoins to an account of the death of Mr. Harrison some judicious reflections on the freedom with which the gas is now administered. After observing that the case only confirms what was already known from other fatal cases—that when the gas is given in an impure state, or to individuals with organic disease of the heart, death from asphyxia may take place instantaneously, it being recognised, however, that such deaths are of very rare occurrence,—Dr. Lutaud goes on to observe:—

"If we cannot draw any scientific conclusions from the case, this is not so with respect to the practical point of view, in relation to the conditions under which this gas ought to be employed by medical men, and especially by dentists. We find by the inquest on Mr. Harrison that the administration of the gas in his case was not accompanied by necessary precautions. What can we say, in fact, of a dentist who, assisted only by a servant, plunged his patient into a deep anæsthesia without knowing anything about the state of his heart? This is a grave matter, which would entail upon the dentist a responsibility that would bring him before the tribunals, if he were not sheltered by that insurmountable rampart which we call "custom," which in America, in England, and even in France allows protoxide of nitrogen to be daily administered by thousands of dentists who have no medical knowledge, and who are even ignorant of the poisonous properties of the agent which they employ, and the conditions which may render its employment dangerous. What the most skilful surgeons do only with the greatest precautions, an unqualified individual undertakes without the slightest apprehension. That there are very skilful dentists we readily admit; but we must be allowed not to feel too confident of the lot of those who are subjected to operation, when we recollect that the first comer who chooses may arrogate to himself the right to prepare, or buy, and administer, unaided, the protoxide of nitrogen. But, supposing the operator be qualified, and possessed of all the knowledge requisite, we are of opinion that *in no case* ought he to administer this gas without having examined the heart of the patient, and, above all, without the assistance of a colleague. All who are familiar with the practice of the dentist's art know that the administration of this anæsthetic requires the employment of relatively complicated apparatus, and that the same individual cannot give the gas, watch the pulse, and perform the operation. The attention of the operator is necessarily divided by these multiple occupations, and dangerous symptoms may arise at a moment when it is impossible to combat them. It is well known, in fact, that the protoxide is especially formidable by the rapidity of the phenomena which it induces—phenomena the watching of which is very difficult, because they are not progressive, but almost always instantaneous and unforeseen."

Dr. Lutaud also insists upon the great care necessary for the preparation of this substance, which is by no means so easy as is generally imagined, the protoxide being easily converted into a deutoxide. When properly prepared and administered with proper precaution, it may be stated to be absolutely without danger; so that Drs. Marion Sims and Rottenstein have by its aid been able to maintain patients in the anæsthetic condition for nearly an hour.

Hot-Water Injections in Uterine Hæmorrhages.—In confirmation of the utility of this practice as described by Dr. Runge (*Medical Times and Gazette*, May 12, page 510), we may adduce the following short article published by M. Ricord in the *Union Médicale*, June 5:—"Hæmorrhages in general, and metrorrhagias in particular, whatever may be their proximate cause, are, as is well known, very frequently difficult to arrest. Hæmostatics given internally, astringent injections of every description, plugging, etc., generally fail. But one means has almost had infallible success in my hands—viz., the injection of hot water at 50° C. (122° Fahr.), carried directly against the cervix uteri by aid of the tube of an irrigator from which the caoutchouc canula has been removed."

REVIEWS.

Lectures on Surgical Pathology and Therapeutics. By Dr. Theodor Billroth. Translated from the eighth German Edition. Vol. I. London. New Sydenham Society's Edition. 1877. Pp. 438.

The New Sydenham Society seems to be extending its area and plan of operations. Its original aim, if we remember rightly, was to publish new editions of old and valuable works, not usually accessible, and also to translate foreign works of merit which would not be otherwise within the reach of English readers. On this occasion, however, the Society has published a volume of which an American translation already exists, which has sold largely in this country as well as in America. On this account, therefore, we venture to question the propriety of the choice of the Council in deciding on another translation of Billroth, popular though the work is; for not only will a considerable number of the members of this Society be already in possession of the volume, but it will give rise to some *concurrence* with the American translation, which in works of this kind is not altogether desirable or just.

Furthermore, we are not sure that a work does not deteriorate after a certain amount of popularity. Its author is seldom in a position to devote to the later editions that time and labour which the continued advance of science demands and renders necessary if the book is to be kept thoroughly up to the time; and for this reason, therefore, we should question whether the New Sydenham Society has acted wisely in undertaking a book which is in its eighth edition, and yet is radically the same as when in its first. No doubt there are many additions, alterations, and improvements, but this eighth edition does not strike us with the same force as did the earlier editions. We have before us an early (second) German edition, the new eighth German edition, and the New Sydenham Society's translation. In contrasting the German editions we can, of course, see great alterations; but the new work looks, as it really is, like patches upon the old; and the result is certainly less pleasing, if not less profitable, than new work. We should venture to recommend that the next edition be entirely rewritten and recast. As to the peculiar style in which the Lectures now appear, we have little to say. A book which has run through so many and so large editions in so few years must be popular and must be appreciated. We venture, nevertheless, to believe that there are limits beyond which the colloquial style of writing ought not to be carried; and that, however desirable it may be to popularise scientific subjects in order to make them more easily understood, there can be no doubt that when carried too far this style leads to obscurity, to inaccuracy, and even to misconceptions. It is not given to every man to write in the classic style of Hyrtl of Vienna, of the late Trousseau of Paris, or of Watson, or West, or Paget in this country; but it should be, all the more on this account, the endeavour of authors to make their writings thoroughly clear and precise. Now, although for the moment we are speaking of the original German—of a language, therefore, which is not our own—we assert, without any fear of contradiction, that the style of the eighth German edition leaves very much indeed to be desired; and we can only hope, should the distinguished and greatly gifted author be called upon for another edition, that he will submit his book to thorough revision. We are sure that students will all be greatly indebted to him, and that any foreigners who may be obliged to translate his work will also add their most hearty thanks and approval.

After these preliminary observations, we pass on to the translation before us. As no name is appended to it, we cannot be accused of harshness if we say that, like the original, it is rather obscure now and then, and once or twice to a degree that verges on the unintelligible. This obscurity is by no means cleared up by reference to the original. We would especially draw attention to the following passage, in which the theory and cause of inflammation is discussed (page 124):—"In order not to allow the abstraction of blood or of water, or the injection of water or of blood, to count as pyrogenic causes in the widest sense, he introduces between the last-named inflammatory products and the nervous centre (which corresponds with the diseased parts) an always uniform putrescent condition of the blood (*itio in partes*), which is itself the real pyrogenic cause, the very essence of fever." This is a most involved sentence even in English; the translator has, nevertheless, in our opinion, given a fairly good translation of the original. We should like to have the author's opinion, both as to his own sentence and also as to the English one we have just quoted. Of course one catches dimly at the meaning, but it is only after having studied the sentence for a long time. It would be useless to pick out the weak points of a book which contains so much that is good. It is about the only work which treats at all fully on this subject, and it should be in the hands of every practical surgeon. In justice to the English translator, we are bound to say that this new volume is far superior, as a translation, to the American edition; and besides this it includes the very latest additions which have been made to the eighth German edition, which is only just published. We believe the second and concluding volume is, or shortly will be, in the press. We wish the Society continued prosperity.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, June.

Neglect of Hygiene in the Hospitals—Mortality after Operations—Great Prevalence of Erysipelas—Non-Isolation of Cases of Contagious Fevers.

One of the things which strike an English visitor in the Paris hospitals most forcibly is the singular neglect displayed in them of some of the most ordinary hygienic rules and precautions. This defect is sometimes the result of niggardliness on the part of the Central Administration; but more frequently it is due to a want of attention to the subject of hygiene by the medical authorities themselves. Attention has been recently called to some of the anti-hygienic conditions I shall mention, by the Special Commissioner appointed by the *Lancet* to report on the hygiene of Paris; but the evils resulting from them are so great that until some remedy is provided it cannot be superfluous to expose them repeatedly.

First and foremost among these is the almost complete absence of all idea of isolation in the French medical mind, one great result of which is that erysipelas runs riot in some of their hospitals. They are rarely, if ever, free from it; and yet it may be said that no attempt whatever is made to prevent its spread. The hospitals are without isolated or private wards, and the general wards are, as a rule, very large. The great male surgical ward at the Hôtel-Dieu contains about seventy beds, and at the Hôpital Temporaire there are wards with as many as 130 beds. Into these crowded wards are deliberately brought cases of erysipelas from outside, and placed side by side with other patients who have been recently operated upon. After this it is needless to say that when erysipelas arises in a patient already in the hospital, not the least attempt at isolation or at disinfection is made; the patient is allowed to remain where he is; and the surgeon, after handling the erysipelatous parts, passes on to the next bed, as a rule, without even washing his hands.

All this must sound almost incredible to anyone who has seen the extreme care taken to isolate cases of erysipelas in the English hospitals, and to prevent its introduction into a surgical ward; but that the defect is one that is everywhere present in the hospitals of Paris is proved in the most conclusive manner by some comparative statistics published in the *Progrès Médical* of June 2. There will be found in that number a review of the last volume of the *Guy's Hospital Reports*. In the Report of the Surgical Registrar is given a table of statistics of the mortality after the different major amputations. The writer in the *Progrès Médical* quotes this, and compares with it the mortality after the same amputations in the Paris hospitals. The result is so instructive that I quote the figures in full:—

Amputations.	Mortality. Guy's Hospital.	Paris Hospitals.
Thigh . . .	35·6 per cent.	67·2 per cent.
Leg . . .	35·7 ,,	61·9 ,,
Arm. . . .	26·3 ,,	54·0 ,,
Forearm . . .	16·7 ,,	33·3 ,,

The mortality, then, in the hospitals of Paris is in the case of each of the amputations nearly or quite double what it is at Guy's Hospital; and when we consider that these results are representative of the whole of the Paris surgery, it shows a

really appalling waste of life from some cause or other. The writer of the review in the *Progrès Médical* remarks upon these figures with some *naïvété*—"The perusal of these tables shows us that the results of the practice at Guy's Hospital are favourable to their system of surgical therapeutics,"—the word therapeutics being meant to include the method of operation and the subsequent dressings. Who, however, can believe that, if other things were equal, any method of surgical dressing could have such an enormous influence over results as would be indicated by the above figures? No; the writer of the review is altogether silent about the real cause of their want of success in Paris, and yet this cause is one which is so within the power of man to remove, that a table such as that quoted above, and which is a perfect disgrace to Paris, ought to be brought prominently under the notice of every member of the hospital staffs and of the hospital administration in Paris. There cannot be the least doubt that the great cause of this tremendous mortality is the non-isolation of erysipelas. Several cases of the kind have come under my own observation. At one of the best-known hospitals in Paris I witnessed the excision of a fatty tumour, the operation being as simple an one as possible. The man was put to bed, and next day a case of facial erysipelas was taken into hospital and deliberately placed in the next bed. Needless to say, the patient who had been operated upon took the disease and died of it. In another hospital a case of erysipelas was introduced from outside and placed between two patients who were convalescent from acute diseases. They both took the disease and died, and in addition several other patients in the same ward took the disease. As no disinfection or isolation was practised, it was long before the ward was free from the infection. These cases are only examples of what is taking place almost every day in Paris. It is really incredible that such a state of things should exist in a great town like Paris, which prides itself upon being the home of surgery, and boasts that it has some of the finest surgeons of the world.

I have hitherto spoken about erysipelas only, but there is the same want of isolation in the case of most of the other infectious diseases. Quite recently the French physicians have begun to recognise the necessity for isolating small-pox, though even now there are one or two hospitals where small-pox is admitted into the general wards. At none of the hospitals, however, is it considered necessary to isolate measles, scarlet fever, or diphtheria. This is the case even in the Hospital for Children, which I may mention specially as one of the hospitals where small-pox is not isolated; and at this Hospital it is common to see some or all of these diseases side by side with children suffering from other and non-infectious maladies. As there is no day-room for convalescent children, these spend their time in an atmosphere of infection, and, when able to run about, can go freely from one bed to another, and come into close contact first with one infectious disease, and then with another. It is not surprising, then, to learn that a child admitted into hospital under such conditions is frequently attacked by two or even three of these diseases before leaving it. In other hospitals, moreover, from the way in which a scarlet fever patient in the stage of desquamation is allowed to mix with the other patients in a large general ward, and physician and students handle him and then pass on to other patients without washing their hands, one would imagine that contagion is a thing unheard of in France.

To make the picture complete, I have only to add that in more than one hospital there is a department for lying-in patients, where there is the same absence of all idea of isolation in cases of necessity as elsewhere. At one of the hospitals a large surgical ward and a large medical ward have each a portion partitioned off partially only for lying-in patients, these patients being in consequence exposed to just the same conditions as they would be in the general ward itself. I need scarcely say that no care is taken to keep erysipelas or other infectious diseases out of these any more than out of the other wards. On one occasion small-pox was deliberately introduced, the result being that every one of the babies then in the ward took it and died. If puerperal fever breaks out, it is allowed to run its own course. No fresh patients would be admitted, and the wards would be, if necessary, altogether closed after a time, but no attempt would be made to prevent its spread amongst the patients already in them.

Who is responsible for this fatal neglect of the most ordinary hygienic precautions—the medical men, or the Administration? Despite the fact that there is here and there a surgeon or physician who is thoroughly alive to the evils of the present system, and who says, if spoken to on the subject, that it is the Administration which is obstinate, and which refuses to aid in reforming the existing state of things, I cannot but consider that the blame must be laid at the doors of the medical staff. They it is who alone can form a scientific judgment in such a question. If they were really alive, as they should be, to the dangers incurred by their present system, they could not rest without protesting in the strongest terms against it; and though the Administration may be very obstinate and difficult to move in any matter which is likely to cost money, yet it would not be able to resist a combined attack made upon it by the united staffs of the hospitals, and the result would be that proper means for isolation would be supplied. The real fact is, that the great majority of the doctors here are perfectly indifferent in the matter, or, if not perfectly indifferent, they confine themselves to individual word-of-mouth complaints to visitors, or an occasional protest to a hospital director, who is a mere servant and has no power in the matter. It is impossible to conceive that the callousness of the leaders of the medical profession here is due to ignorance; and in so far as it is not due to ignorance, it must be looked upon as culpable neglect, which must cast a stigma upon the whole hospital system in Paris. Such strange negligence amongst a body of men who in most other respects will compare with any similar body in Europe must be taken as a consequence of one striking feature in the character of the whole French nation—a dislike to take the initiative in reform, to do anything which will bring odium upon the individual, or to become the champion of an idea which involves much disinterested labour and patience to carry into effect.

I shall hope in another letter to treat of some other points of hospital hygiene in which the French are in a very backward condition.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 16.

C. Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Investigation of Chronic Bright's Disease.

The President announced that the Committee appointed to investigate the condition of the arteries in chronic Bright's disease consisted of Professor Burdon-Sanderson, Dr. Bristowe, Dr. Gowers, Mr. Schäfer, and Dr. Charles.

Lympho-Sarcoma of the Prostate.

Dr. Cayley read the report of the Morbid Growths Committee on Dr. Coupland's specimen of sarcoma of the prostate (see *Medical Times and Gazette*, April 21, page 431). The growth consisted of round cells, resembling leucocytes, in a stroma like that of lymphatic-gland; but no nodal points were seen.

Leprous Nerve-Disease.

The Medical Secretary read a communication from Dr. Vandyke Carter on this subject. It was recognised that the nerve changes in leprosy were of the nature of a neuritis, and that this was the direct cause of the leprosy; but there were certain new facts to be described beyond the inflammation. In more than one-half of the post-mortem examinations seen by Dr. Carter last year in India, several of the nerves supplying the hands and feet presented a deep tint and expanded contour; and such nerves could be traced into leprous spots in the skin. It was believed that the change commenced in the skin and spread as a neuritis. The coloration of the nerves was due to the presence of small granular, ovoid, coloured bodies, and these gave rise to the inflammation that accompanied them: they probably spread from the skin along the lymphatic channels around the nerves. Dr. Carter believed that careful examination would probably reveal these peculiar appearances in all cases of the disease, though they might possibly be absorbed in very old specimens, leaving only their effects. Since such a large proportion of cases of leprosy were old-standing, the pigmented bodies were less frequently observed.

Cystic Disease of the Testicle.

Mr. Warrington Haward showed this specimen. A man of thirty, who had had syphilis six years previously, and for

two years enlargement of the left testis with enlargement and induration of the glands, presented on admission to hospital the following condition:—The left testis was as large as a lemon; and the tunica vaginalis contained some fluid; the glands in the left groin were enlarged and hard; and there were some indurated glands in the right groin also. The patient was treated for syphilis, but the glands ulcerated, projected, fungated, and became, in a word, cancerous. Death happened in two years and a half from the first appearance of the disease. Post-mortem the pelvic and lumbar glands were also cancerous; and nodules were found in the lungs. The right testis, liver, and other viscera were healthy. The left testis seemed almost purely cystic in a fibrous capsule, the cysts being of the size of a pea, separated by fibrous tissue and some cartilage. Their wall was chiefly clear; their contents were fluid or granular. The intercystic tissue was either fibrous or cartilaginous, or composed of epithelioid cells in a fibroid network. Some of the cysts presented fibrous walls; others were manifestly dilated tubes, being lined with epithelium; the contents were irregular mucus cells or *débris*. The cartilage in some places was evidently intercystic. The disease, therefore, closely agreed with that described by Curling. It was evident that the original disease in the testis had remained quiescent, while the glands corresponding proceeded rapidly to a fatal issue.

Morphœa.

Mr. Morrant Baker showed a living specimen of morphœa. It was a well-marked case, in a married woman of fifty without family taint. The disease had begun five years ago with itching near the root of the nose, and had gradually spread, involving the brow and the scalp.

Bromide of Potassium Eruption.

Dr. David Lees brought forward a living subject with eruption due to bromide of potassium, in an infant of nine months. It was found that the child had been treated with very large doses of the drug for fourteen days, on account of convulsions, and that the latter symptoms had disappeared as the eruption came out. Each spot of skin disease seemed to have commenced as a papule of acne. This enlarged and spread, and the elevated spots became united in areas. On these areas peculiar yellowish points then were developed, beneath the surface, and neither coalescing nor bursting. On the surface a crust appeared, which seemed due to dried secretion; and, where this was subjected to friction, the surface became peculiarly papillated. Especially characteristic were the yellowish points described. An interesting fact was that the rash did not make its appearance until four days after the drug had been given up. Altogether nine drachms of bromide of potassium had been taken in fourteen or fifteen days.

The President said it was remarkable how different the effect of large doses of drugs was upon different individuals. He had known 120 grains of bromide of potassium taken daily by a gentleman for many months without any eruption being produced.

Mr. Morrant Baker suggested that age might have an important influence in bromism.

Dr. Powell inquired whether Dr. Lees could offer any explanation of the appearance of the eruption after the administration of the drug had been stopped. Bromide of potassium was believed to be rapidly excreted.

Dr. Mahomed described a somewhat similar case.

Dr. Barlow believed that very young children were more likely to present bromide eruption. He mentioned a case of an infant, in which three grains of bromide of potassium given three times a day produced it. He had also observed the appearance of the eruption after the stoppage of the drug in a young woman with hysterical laryngismus. In that case also the peculiar villous appearance of the spots on the neck was presented at the seats of friction.

Dr. Williams referred to a similar case of bromide eruption recorded by Dr. Cholmeley in the *Transactions of the Clinical Society*.

Cirrhosis of the Liver.

Dr. Griffiths, of Swansea, exhibited a typical case of cirrhosis of the liver, which had simulated enlargement during life, from its relation to the abdominal wall. The case had been watched for about two years. Eighteen months from the first, the liver was believed to be small, but soon afterwards it presented, on examination through the abdominal walls while the patient was lying in bed, the appearance of enlargement extending down to the pelvis. Post-mortem it was discovered that the increase of size was only apparent, and had been simulated by displacement of the organ, which had suffered semi-rotation on its horizontal axis, thus bringing the upper surface against the anterior abdominal wall. Such a result would be most likely to happen in old women who had borne many children.

Melanotic Sarcoma of the Choroid.

Mr. Spencer Watson showed this specimen, about which there were two points of special interest—namely, the size and position of the tumour, which had been diagnosed by means of the ophthalmoscope; and, secondly, the fact that after fifteen months from the date of operation the disease had not returned.

Chondroma of the Submaxillary Gland.

Mr. Butlin exhibited this specimen, from a girl of fifteen, in whom a tumour had been growing for four years after commencing as a small nodule without apparent cause. When seen a large mass projected under and over the jaw, from the position of the submaxillary gland. It was easily removed by operation, being encapsulated; and was then found to be cartilaginous in structure, like the ordinary growths from the parotid gland, containing also bundles of fibrous tissue and remains of acini and apparently of ducts. The growth was therefore in all probability a specimen of cartilaginous tumour of the submaxillary gland, from its position and from the remains of gland-tissue it contained. No similar case had been recorded in the *Transactions* of the Society; and although Virchow spoke of cartilaginous tumours as uncommon in salivary glands except the parotid and submaxillary, Mr. Butlin could find but four recorded examples of the disease in the latter situation. Virchow believed that these tumours had their origin in an injury to the gland; and for this reason they ought to be most common in the parotid, and least common in the sublingual glands. In the lachrymal glands cartilaginous tumours were very uncommon indeed.

Mr. Rushton Parker, of Liverpool, spoke on the position and origin of these tumours, and on the acinous structures which they were believed to contain. He had found true gland-structure in a specimen from the parotid region. In another example of the disease a small tumour was removed by operation from the neighbourhood of the angle of the jaw. Although this simulated a submaxillary tumour in position, the submaxillary gland was found in its place, and the wound revealed a portion of the parotid which had evidently been dragged down into this unusual situation by the weight of the tumour connected with it. With respect to the origin of these cartilaginous tumours of the glands, some pathologists had referred them to displacement of the cartilage of Meckel; but they more probably arose from the connective tissue of the gland, and an intermediate tissue between the latter and cartilage might be sometimes found in a kind of myxomatous element in them.

Mr. Doran said that the cartilage of Meckel could hardly be the source of these enchondromatous tumours, for the former was derived from the mesoblast, while the gland-elements were derived from the epiblast. Further, if derived from the cartilage, the tumours should appear at an earlier period of life.

Mr. Butlin replied, and remarked that the theory of the origin of these tumours in Meckel's cartilage was first raised by Luschka.

Pericardial Omental Hernia.

Mr. Morrant Baker showed this specimen, which was considered perfectly unique. It was taken from the body of a man of fifty, who died of stricture of the urethra and cystic and renal complications. The chest had been repeatedly examined by the house-surgeon *intra vitam*, without any abnormal phenomenon having been observed. Post-mortem, the urethra, the ureters, and the pelves of the kidneys presented the appearances usual after stricture. When the pericardium was opened it seemed at first as if there had been acute pericarditis; but the appearance was found to be due to the presence of a portion of the omentum in the pericardial sac, covering the heart, and continuous with the abdominal viscera through an opening in the floor. This opening in the diaphragm was well defined, and admitted a finger. Both the omentum and the surface of the pericardium appeared natural in structure; the adhesions were moderately firm around. When the surface of the chest-wall was carefully examined, a scar was found on the skin, near the nipple; and, corresponding with this, a part of the fifth rib was detached: these two appearances were exactly such as

would have been caused by a stab, if it had passed into the pericardium. Evidently the parts had long been healed. Besides the preceding lesions, the last dorsal vertebra had almost disappeared by disease. The first of the many questions suggested by this case was—What was the mode of occurrence of the hernia? The materials for answering this from the man's history were wanting; he was friendless, and his history was a blank; all that was known of it was that he had beeu several times in America, aud had served as a Canadian voluuteer. No record of any wound remained. Had no scar been discovered, the case might have been counted congenital; but such an example of congenital diaphragmatic hernia had never been recorded, and there was no other evidence ou the body of developmental defect. On the other hand, Dr. G. Reid had many years ago recorded in the *Edinburgh Medical Journal* a case where intestinal hernia into the left pleural cavity, following a stab fifteen months previously, was associated with a scar on the integuments, and was decided to be traumatic in origin. Dr. Reid had quoted at the same time cases showing how life might be prolonged after such an accident. The absence of pericarditis was remarkable. And, lastly, there was the question how such a large hernia followed such a small wound. Under any circumstances a small opening might give passage to a large omentum; but the special conditions in this case had to be remembered. There was normally a negative pressure or suction-force in the pleural cavity, and so in the pericardium, tending to cause a vacuum on the upper side of the diaphragm. Further, there was a second tendency to vacuum at the pericardium at each systole. Thus a pericardial hernia commencing after injury would be increased in size by the great abdominal pressure (especially in the subject of dysuria); and this effect would be aggravated by the negative pressure iu the pericardium.

Mr. Wagstaffe spoke upon the influence of pressure on the size of herniæ in other situations.

The Nerve-Centres in Hydrophobia.

Dr. Gowers showed a series of microscopical sections exhibiting the changes in the medulla oblongata and spinal cord in four cases of hydrophobia. For two of these, which occurred at Sheffield and Hertford respectively, he was indebted to Dr. Lockhart Clarke; and for the opportunity of examining the other two, from cases at St. Bartholomew's Hospital, to Dr. Wickham Legg. The changes found resembled in the main those which have been described by Benedikt as occurring in the convolutions in the dog, and by Dr. J. Coats, in the lower centres in man. In all four cases the vessels of the grey matter were greatly distended, the distension being greatest in the medulla near the grey nuclei in the lower part of the fourth ventricle. In three of the cases the larger veins in this position presented aggregations of small cells within the perivascular lymphatic sheath. These were iu some cases as a single layer, in other cases densely packed, so as to compress the vessel they surrounded. In most parts similar cells were scattered through the tissue among the nerve-elements, and in some places, chiefly in and near the hypoglossal nuclei, there were dense collections of these cells, constituting, in fact, "miliary abscesses." Adjacent to many vessels were areas of granular degeneration. In two of the cases many of the larger vessels (chiefly veins) contained clots, parts of which were evidently of ante-mortem formation, portions of the clot being different from the rest—darker, granular, and spongy in aspect. By some of these the appearance of embolism was closely simulated. Attention was drawn to the indications of formation *in situ* afforded by the gradation between the normal and the altered clot, and by the curved lines of pressure to which the clot had beeu exposed immediately after its formation. One specimen presented thickening of the inner coat of a vein opposite the older part of a clot; and the clot was reduced in size correspondingly, as if formed secondarily to the change in the inner coat of the vein. In this vessel there were round cells in the perivascular sheath, and leucocytes within, accumulated in the old clot and within the substance of the swollen inner coat, affording strong evidence that the cells outside were also migrated corpuscles. The nerve-cells presented comparatively slight changes, being merely slightly swollen and granular in some places, and surrounded with granular degeneration here and there. These changes were most intense in and about the hypoglossal, pneumogastric, and glosso-pharyngeal nuclei; slighter in the nuclei of the auditory, facial, and fifth nerves; slight also in the cord; and still slighter in the upper part of the pons. Dr. Clifford Allbutt had also found less definite changes most distinct in the medulla. In Dr. Gowers' cases the change reached its maximum in the region of the "respiratory centre" in the medulla, which included that prolongation downwards of the facial nucleus which subserved the movement of the lips. The paroxysms of spasm of hydrophobia were paroxysms of respiratory spasm. In the case in which the change in the respiratory centre was most intense the paroxysms consisted of spasm of the diaphragm and an inspiratory effort in which the clavicles almost touched the lower jaw and the lips were pressed against the teeth. Further evideuce of the action of the hypoglossal nucleus, in which the changes were so marked, was afforded by one case in which a noise as of the tongue being smacked against the roof of the mouth occurred at the commencement of each spasm. Dr. Gowers concluded by alluding to the difficult question of whether these vascular changes were the initial lesion in the nerve-centres, or were secondary to the action of the nerve-elements. It was certain that embolism played no part in the process. The coagulation in vessels was also not essential, while in one case the absence of cell-infiltration showed that dilatation might be the only morbid state of the vessels. On the other hand, the changes in some of the clots, in cases in which the symptoms lasted only three days, showed that considerable vascular changes must have occurred very early in the disease.

Dr. Crisp remarked that he did not suppose that Dr. Gowers considered that at present any characteristic appearances were known in hydrophobia.

Lymphoma of the Intestine.

Dr. Frederick Taylor exhibited a specimen of lymphoma of the intestine from the body of a child of six years. The patient had been wasting for several months, while the abdomen had recently been enlarging, its right half being almost entirely occupied by a tumour, which could be separated from the liver. The symptoms were not peculiar: the temperature was not very high; there was no excess of white corpuscles in the bloood; diarrhœa was occasionally present. Death occurred from exhaustion about eight months from the commencement of the disease. Post-mortem, the peritoneal cavity contained half a pint of serous fluid; the abdominal mass consisted of a tumour on the left side, involving the mesenteric glands, and a growth on the right, involving the intestines in its substance. The intestinal wall for a distance of two inches was as much as seven-eighths of an inch in thickness, and its calibre in some places was considerably increased. The kidneys and other organs were free from growth. Dr. Taylor said that, as Dr. Moxon had latcly pointed out, the intestine was dilated in adenoma, and intestinal obstruction was an unusual symptom. The structure of the growth was lymphatic.

Cysto-Sarcoma.

Dr. Lyell exhibited a specimen of this nature, removed by operation from the thigh of a man, under the care of Mr. Nunn. It had arisen without evident cause; had been growing for two years; was situated over the left common femoral artery; and pulsated with that vessel. The patient was seen on two occasions at an interval of eighteen months, during which time the tumour increased from the size of the fist to be an enormous mass, painful, and causing œdema of the limb below. At its removal, by a long vertical incision, it had to be dissected from the femoral sheath. The patient recovered from the operation in seven weeks; but two months afterwards was again admitted into hospital with a return of the disease. The tumour removed weighed nearly four pounds; and, although to the naked eye presenting some of the characters of myxoma, proved to be a round-celled sarcoma, the elements of which were undergoing mucoid change.

Epiphysial Disease in Congenital Syphilis.

Dr. Goodhart showed specimens of this form of disease of the bones in congenital syphilis, as examples of the condition described by Mr. Warrington Haward at a previous meeting. (See *Medical Times and Gazette*, June 9, page 626.) The infant was seven weeks old wheu it was first seen, and was ten weeks under care, with broncho-pneumonia and enlarged spleen. The swellings about the joints were observed only six days before death. Post-mortem, the epiphyses were found separated, and the periosteum and the shaft of the bone thickened, and an abscess presented itself externally. The disease was symmetrical. The spleen proved to be perfectly healthy.

Ovarian Tumour.

Dr. Crisp showed this specimen, taken from the body of a woman of fifty, who had been treated for "liver disease." The tumour was fibrous, and attached by a small band to the left ovary.

Specimens of Comparative Pathology.

Dr. Crisp also showed several specimens of diseased structures from the lower animals. The first was one of a calculus from the urethra of an ox, which, with five others, died of ruptnre of the bladder, secondary to blocking of the urethra. The animals had been fed on rice-meal. Another specimen was an inflamed lung from a bird.

Shawl-Pin embedded in the Pharynx.

Dr. James Dunbar showed a shawl-pin in two pieces, which had been spontaneously expelled from the pharynx nearly twelve months after being "swallowed." When the pin was accidentally drawn into the pharynx the only symptom was a pricking pain in the right side of the neck, but the man continued snbject to fits of cough of several minutes' duration. Ten months after the accident the patient attended hospital, with cough and a slight red swelling on the right side of the neck. Eleven months from the first he coughed up half of the pin with the head, and shortly after the other half; meanwhile the swelling in the throat had disappeared. The first portion was three-quarters of an inch in length, and presented a head as big as a boot-button. With respect to the situation of the pin during so long a time, it had probably lodged under healthy mucous membrane in the glosso-epiglottidean fold.

Cancer of the Prostate.

Dr. Coupland showed this specimen for Mr. Nunn. It occurred in a young man of twenty, who had suffered from vesical symptoms for not more than two months. The whole of the prostate was involved, and bound to the surrounding structures. The lymphatic glands were invaded, and nodules were found in the pleuræ. Microscopically the cells were unusually small and very uniform in size; and between them there was an appearance of stroma. The early age was especially noteworthy.

Tumours of Ovaries with Secondary Cysts.

Mr. Knowsley Thornton related this case, which was of interest in connexion with the etiology of malignant growths. An ovarian cyst ruptured during treatment, with relief to the patient; but the woman returned later, and ovariotomy was performed. The peritoneum was then found to be covered in every part with the small growths so common after rupture of an ovarian cyst; and one of the young cysts, growing from the omentum, already presented a distinctly multilocular arrangement.

Fibrinous Clot in Heart.

Dr. Munro showed this specimen, taken from the heart of a child of seven years, which had died after a few hours' illness. Post-mortem the lungs were crepitant and dark, and the heart healthy; but in the right auricle and ventricle was a firm fibrinous clot. Otherwise the blood was dark and fluid. The other viscera were healthy. Dr. Munro was inclined to believe that the child had been poisoned by sewer-gas.

Investigation on Pyæmia and Allied Diseases.

The President read the names of the Committee appointed to carry out this investigation.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, May 18.

Dr. Buchanan, President, in the Chair.

As soon as the minutes of the previous meeting had been read and confirmed, Dr. Buchanan rose to present, in the name of the Society, a testimonial consisting of a set of massive silver jug and goblets to Dr. Vinen, who had been acting as Honorary Secretary to the Society for the past fourteen years—*i.e.*, from its foundation.

Dr. Buchanan narrated the circumstances of Dr. Vinen's recent illness and his fortunate resumption of official duties. During Dr. Vinen's absence it was resolved to present this testimony of appreciation for the services so willingly rendered to the Society. All members in association with the Society for any length of time had contributed.

Dr. Vinen, in returning thanks, said that he should value the gift most of all as an evidence of their great kindness and appreciation.

Dr. Corfield then drew attention to the case of Wilson *v.* Hatton, decided in the Court of Exchequer, with reference to the liability of a person taking a furnished house which was not in proper sanitary condition for habitation. The landlady by order of the local sanitary authority had the drains "put right," and three weeks after the date of taking "possession" Lady Winchelsea could have gone in and resided for the remainder of the term, the house being pronounced in a fit sanitary condition, had she been so disposed. Her refusal to do so gave rise to the action at law. After a protracted trial, first before two judges, and then before three in the Court of Exchequer, Justice Quain's ruling was confirmed, to the effect that – 1st. Any house taken for a short period should be in a state of sanitary fitness for occupation; 2nd. That such house must be ready for habitation on the day of agreement. Under such ruling doubtless any agreement for taking a house, or part of it, where infectious disease has prevailed recently, without proper precautions for disinfection, would become void.

Dr. Bond considered that this ruling ought not to have effect in all cases where the drains, etc., are out of order. For instance, a trap may get dry, and hence a bad smell. If the proper remedy is not carried out within a reasonable time, then, he thought, the agreement might become void.

Typhoid Fever caused by Milk-Supply.

Dr. Stevenson read a paper on the above subject, of which an abstract is subjoined:—In the early part of the present year the north-east of the parish of St. Pancras, Middlesex, was visited with an epidemic of typhoid fever. About one-half of the area covered by the epidemic was in St. Pancras, and one-half in Islington. Up to the end of the year 1876 the area under notice contained a few sparsely scattered cases of typhoid. In February the occurrence of many cases of typhoid was brought under notice almost simultaneously by three medical men. There can be no reasonable doubt that the milk supplied from a particular dairy was the vehicle by which the fever was disseminated. Firstly, of thirty-five cases of typhoid fever, thirty had used a particular milk-supply, and five only were in the walks of other milk vendors. Secondly, during five days no less than twelve fresh cases appeared in eleven separate houses, and all the persons attacked had used the above-mentioned milk-supply. Thirdly, the epidemic was conterminous with the walk of a particular milk vendor, radiating from the milk-shop as a centre. In only three houses were any sanitary defects found which might reasonably be assigned as the proximate cause of the dissemination of the typhoid poison. Of the five cases of typhoid deriving their milk-supply from other sources than the one referred to, two were cases imported into the district; two had been exposed to powerful emanations of sewer-gases, and in one only of the cases beginning in the district was there no obvious cause for the disease. The supply was drawn from three farms in the home counties. On two of these farms the water-supply was obviously contaminated with ordinary forms of filth, and on the third farm the water was reported to be good. On all the farms the cows were healthy. At two of them there appeared to be no likelihood of the milk becoming contaminated with human excreta. My information as to the third farm was less explicit; but no typhoid was known to exist on or about any of the farms. How, when, or where the milk became the vehicle of typhoid is at present unexplained, and, so far as I can see, will remain a mystery. Two of the thirty patients specially referred to in this report died. From the dairy to which this report particularly relates, about 400 families were supplied with milk. Of these, twenty-two, or $5\frac{1}{2}$ per cent., have been attacked with typhoid fever. The number of families attacked was much fewer in proportion to the number of families supplied as compared with other epidemics. Some explanation of this may be found in the fact that here we have three milk-supplies, and though there was some reason to suppose that these supplies were kept distinct, the fact is not certain; and there appeared to be no special nursery milk. No large number of children were attacked, but it was equally clear that among adults the milk-drinkers were especially attacked when there were both milk-drinkers and those who drank no raw milk in the same household. The opinion that typhoid can be caused by milk polluted by ordinary forms of liquid filth has perhaps few supporters, and there is a want

of accurate positive evidence to support such a view. Even where no actual pollution of water, and subsequent introduction of that water into milk, can be substantiated, as was the case in the epidemic the history of which I have just related, there is still a possibility, and even a high degree of probability, that such infection may have actually occurred. The casual excrement dropped by some tramp with the disease upon him by the wayside pond is sufficient to account for the outbreak. If, as some high authorities hold, typhoid fever may be generated *de novo* by the ingestion of or exposure to the emanations of ordinary forms of putrefying filth, we cannot deny the possibility of the *de novo* generation of typhoid from the ingestion of ordinary filth through milk as a vehicle. But assuming, as the weight of evidence induces me to do, that typhoid spread through milk must have had a specific source, can the ingestion into the stomach by the cow of infected water cause the animal to yield infective milk, the animal itself not being affected with the disease? Cases seemingly bearing this interpretation at first sight merit good and close investigation, and should certainly be recorded. The following seem to be possible means by which typhoid may be either propagated or generated, and where milk may become the vehicle for the dissemination of the disease:—1. Water specifically polluted with typhoid infective matter, and used either for rinsing the milk-cans, or fraudulently or accidentally added to the milk; these cases are now matter of common and repeated observation. 2. Milk may have been exposed to typhoid emanations from the atmosphere having been charged with the typhoid material; or sewers may have been befouled with typhoid excreta, and the milk have been exposed to the emanations from such sewers. 3. The milk of the cow may be itself capable of propagating typhoid, though receiving no ready-formed typhoid material *ab extra;* and this possibly in three ways at least: (*a.*) The animal may itself be suffering from some form of disease, which, if not itself typhoid, may be closely akin to it. We know but little of some of the contagious diseases of animals. It is only recently that we have become acquainted with the fact that the pig suffers from typhoid, the deposit in the intestines being microscopically identical with that in man. There appears to be some reason to believe that the dog also suffers from this disease, and may even give it to man. (*b.*) The cow may have drunk water infected with typhoid matter, and passed it through the glandular system into the milk, without the animal itself suffering from the specific disease during its passage through the system. (*c.*) Assuming that decomposing non-specific filth may, when drunk under certain conditions, produce the specific disease, it must be granted that a cow having drunk filthy, but not specifically polluted, water, may yield a milk capable of producing the specific disease typhoid. It is well known that cows will drink very filthy water indeed, such as would be rejected by nearly every other domestic animal. Typhoid fever may be generated by milk in the following manner:—A cow drinks water filthy with ordinary forms of sewage contamination. An infant which lives nearly entirely on the milk of such a cow will receive into its system a quantity of readily and rapidly decomposing matter, liable to fermentation, and hence capable of irritating the bowels. It is known that such milk is very prone to rapid decay, and that it may have the peculiar odour of the polluting material. Inflammation of the bowels is thus set up in Peyer's patches, and afterwards extends into other organs, producing a disease which, if not actually typhoid, may be undistinguishable from it.

In the debate following the reading of this paper,

Dr. Jacob said that it was important to know whether the farms were carefully inspected by Dr. Stevenson, or a gentleman equally skilled in making such inquiries and conducting analyses on the spot. The difficulties of proof are almost insurmountable in many cases of infected milk.

Dr. Tidy regretted to say that there is such a thing as fashion in medicine. At the present time, amongst sanitary physicians, when an epidemic of typhoid occurs, there is a great tendency to trace it to infected milk. If we were to rely upon newspaper reports, epidemics of this "milk typhoid" occur weekly. It was remarkable that only 5½ per cent. of the population drinking the milk were attacked with the disease. This seemed a strong argument against "the fact" that it was typhoid due to milk-contamination.

Dr. Tripe said that though partially agreeing with Dr. Tidy in his remarks, yet it had been proved in many recent outbreaks that bad water had been the vehicle for propagating the disease. It is now generally considered that the germs are conveyed by fluids rather than by gases. The statement of Dr. Stevenson was that 5½ per cent. of houses supplied with a certain milk were infected, not 5½ per cent. of the milk-drinkers.

Dr. Bond suggested that the person milking the cow may have carried the infection from a house where the disease existed.

Dr. Netten Radcliffe objected to be charged with a disposition to attribute the propagation of typhoid through the agency of milk. It seems undesirable, with the facts before us, knowing how easily milk may become the carrier of infection, that we should go beyond the evidence before us. In Dr. Ebenezer Duncan's case the pollution was clearly traced to milk mixed with water that had been contaminated with the stools of typhoid patients. It is with extreme difficulty that one gets to know the habits of farmers and their *employés*. It is almost necessary to live among them in order to trace efficiently the source of the pollution.

Dr. Stevenson, in his reply, said that though unable to visit the farms himself he had applied to Dr. C. Saunders, who had carried out a most skilful and careful examination of the premises and water-supply. We must not conclude that typhoid has anything but a specific origin.

Dr. Buchanan said that from 300 to 500 distinct cases of epidemic typhoid had passed under his notice. In sixteen of these the milk was proved to be the focus for conveying the disease.

The Water-Supply of London.

Mr. Whitaker then made some remarks upon this subject. He mentioned the fact that towns and villages have always sprung into existence directly dependent upon the quality and quantity of the subjacent water-supply; *e.g.*, Ewell, Cheam, etc., are towns of which the site was chosen because the water was near the surface and abundant. The stratum immediately subjacent to Old London is gravel overlying clay, which yields a fair quantity of water. With the growth of population wells had to be sunk, and deeper artesian wells were required. In the basin of the Thames between Hampstead and Sydenham the well-sinker had to pass through the lower London tertiaries of sand, gravel, and plastic clay, and then to come upon the chalk, which usually contains an abundance of water in the fissures between the strata. Where the clay and chalk crop out at the surface there the water rises, and, being plentiful, towns are rapidly built all around. The chalk beds are very thick, and uncertain in their yield of water. Sometimes a well has to be sunk 100 feet deeper than a neighbouring well before coming upon water. At Barclay's brewery water is got from the chalk in abundance, but Meux's brewery, being situated on a rise of the chalk, the water cannot be reached though they have bored the strata for 1000 feet. Subjacent to the chalk is the upper green-sand. Between the upper and lower green-sand is the gault, or clay, of 150 feet in thickness. At a depth of 1150 feet those working at Meux's came upon a mixed shale of pebbles and red sand with ammonites and belemnites. It might be that these latter had fallen from other strata. At Meux's brewery the boring went through 160 feet of chalk. He showed some of the cores removed from the lower green-sand, and of a stratum through which they passed, the structure of which showed fossiliferous remains similar to those found in Devonshire below the carboniferous strata, proving that they had gone deeper than any previous boring. It would appear from the examination of cores derived from the lower green-sand—1. That it would be fallacious to suppose it possible to derive a large quantity of water from the lower green-sand because the structure is tolerably loose, and the water gets through it; the chalk, though firm, is permeable. 2. That if the water will not rise we must bore for it in the valleys; there are plenty of wells in the course of the Lea, where water is abundant. In the valley of the Thames, as at Kingston, the water flows away into the river very fast. By a careful selection of sites an abundant supply of water may be found, perhaps illimitable in quantity. The oolitic limestones may be found ultimately to yield sufficient water for London. Mr. Whitaker then traced out on a large geological map the various surface-strata of England, showing that the red sandstone covers the largest area of the Midland counties, and yields a good supply of water. This may be found to dip under the chalk of the London basin, and might be tapped at a convenient spot. He concluded by saying that, while we must mainly depend upon the chalk for our London supplies, it

may be quite possible to supplement the present supplies by deeper borings.

Mr. Liddle and Mr. Lord, of Hampstead, proposed a vote of thanks to the author of the paper.

Mr. Greaves said he must differ from Mr. Whitaker in his idea of abundance in any of the three strata referred to by him. Both chalk and green-sand are very capricious. There are no caverns or fissures, as a rule, where the water may collect. Vacuities will often be found to exist where the chalk is mixed with flint, and fissures will form. In the neighbourhood of Charlton the water from the chalk is abundant; elsewhere, as at Epsom, the quantity is very small, and does not repay any effort to collect it. One of the difficulties in well-sinking is to gauge the supply. The store of water may be abundant, but the flow very small. He had calculated that not more than 25 per cent. of the rainfall gets into any stream or collection of water. In our climate three-fourths of the rainfall disappears by evaporation or absorption.

CLINICAL SOCIETY OF LONDON.

Friday, May 25.

Geo. W. Callender, F.R.C.S., President, in the Chair.

Some Misplaced Testes.

Mr. Edmund Owen brought before the Society an infant from the Hospital for Sick Children, Great Ormond-street, whose right testicle was situated in the perineum. He considered that no operative interference was advisable; that, if the gland were to be eventually useless, it might as well be left alone; whilst, if it were to undergo perfect development, it would be protected, in the sitting posture, by the ischial tuberosities. Mr. Owen next gave an account of the dissection of the generative apparatus of a cryptorchid. The subject was forty-eight years old at the time of his death; he had never been married; but used to live in common lodging-houses. His voice was known to have been high-pitched and harsh. The face was sleek and feminine, and the trunk and limbs, though well developed, were thickly encased in fat. A large amount of fat lay over the pubic symphysis. The external organs of generation were puerile, and no testes could be made out until dissection showed them lying just outside the external abdominal rings. They were small and flabby, and their proper tissue was represented by yellow fat. Filiform vasa deferentia led to slender seminal vesicles. The bladder was large, and the prostate extremely small. Mr. Owen considered that the dissection supported the inference drawn by John Hunter, that the penis, urethra, and all the parts connected with them, would not have existed had there been no testes in the original construction of the body. In a well-known case of a cryptorchid who committed suicide, it was shown by Sir Astley Cooper that the testes were nearly of the same size as healthy testes. Allusion was also made to a case related by Mr. Poland, of a young man whose testes had never descended, but whose penis was well developed, and who had all the other signs of virility. The man married at twenty, had two children by his first wife, and married again. Mr. Owen quoted Mr. Curling's opinion as being in favour of the sterility of such men; and the late Mr. Coulson's (given in 1859), as being not absolutely against their power of procreation. He then placed cryptorchids in three classes: those who have neither the desire nor power of sexual intercourse, but resemble animals whose testes have been early removed; secondly, those who, like many eunuchs, have the desire, but whose power of fertilisation fails, resembling animals which have been emasculated late in life; and, lastly, those whose testes, though undescended, may be well formed (as in Cooper's case), and secrete seminal filaments (as in Poland's case). He was of opinion that, if the subject were fat, had a puerile or harsh voice, a small penis, much adipose tissue over the pubes, a scanty amount of thready hair in that neighbourhood, and little or none on the face, no spermatozoa would be discoverable by the microscope. In answer to Mr. Callender, Mr. Owen said that the testes in the dissection were covered in the ordinary way as regards the tunica vaginalis.

Dr. Farquharson, in alluding to the case of the infant, said that he had seen an inflamed testis in the groin of a guardsman, which presented many of the appearances of an enlarged inguinal lymphatic gland.

Microscopic Appearances of the Skin of a Patient whose Case was described by Mr. Morrant Baker in the Eighth Volume of this Society's Transactions.

Dr. George Thin read this report. The child who presented the peculiar eruption described by Mr. Baker died in March of this year of emypema. The spots on the skin were still visible after death. The morbid appearances found, on microscopical examination, consisted essentially in the presence in the corium of cells which were not found in the healthy structure, and in the disintegration and subsequent disappearance of the bundles of connective tissue. The cells were rounded, oval, or polygonal, the smallest being of the same size and appearance as white blood-corpuscles, whilst others were much larger, their diameter being double that of the former. There were transition cells between the extremes of size, and they had all a single spherical nucleus. The cellular infiltration began in the superficial stratum of the corium immediately surrounding the bloodvessels. Thence it spread downwards, following the bloodvessels, hair-follicles, sweat-glands, and arrector pili muscles, and by extending along the spaces between the bundles which were nearest the vessels. It had not extended directly to the deeper parts of the corium, a considerable thickness of the connective tissue being unaffected; only in the vicinity of the hair papillæ it had reached the most superficial projections of the panniculus adiposus. In some parts the cell-infiltration ascended along the bloodvessels into the papillæ. Wherever the cells were found, the gelatinous connective tissue was disintegrating, or had entirely disappeared. The elastic fibres resisted longer. There were thus patches in the superficial portion of the corium and in the contiguous papillæ in which the fibrillary substratum had been replaced by the so-called granulation cells suspended in a fine reticulum of elastic fibres. Amongst these cells, small arteries and capillaries could often be seen entire, and of the normal calibre. The disintegration had in some parts advanced to such an extent as to show that, at the time the child died, superficial ulceration was imminent. The epidermis was normal. The appearances were identical with those described by Virchow as being characteristic of lupus, but could be distinguished from the other morbid conditions which were known to be accompanied by cell-infiltration.

A Case of Undescribed Eruption occurring in a Tuberculous Child.

Dr. T. Barlow described and exhibited the case, which was first under the care of Dr. Lee at the Children's Hospital. The child, who was two years old, had been under observation for a year. The eruption first appeared when she was about four months old as circular brown patches on the chest; they increased in size until the child was a year old, since when they had remained stationary. They existed as pigmental patches over the front and back of the chest and abdomen, and over the front and back of the arms, forearms, thighs, and legs; were very slightly raised; varied in size from the area of a split pea to that of a shilling; and were of a uniform olive-brown colour. The face, hands, and feet were free, and the child had not had jaundice. The skin lesion was very similar to that in Dr. Tilbury Fox's case of xanthelasmoidea and in Mr. Morrant Baker's case of undescribed eruption, both published in the *Clinical Society's Transactions*. Scratching the child brought out well-marked wheals: and Mr. Hutchinson and Mr. Baker, in a former discussion, considered a similar skin affection as allied to the erythemata, more especially to urticaria perstans. Other eruptions had appeared in this child. On the back of the neck, one ear, and the chin an impetiginous rash had formed and scabbed over. Beneath the scabs deep ulceration had occurred, leaving punched-out sores, where there was very little suppuration, and for some time no attempt at granulation, the floor of the ulcers being covered with a thin serous discharge. Ultimately, the sores healed with considerable loss of substance. The cicatricial tissue at the back of the neck now manifested a slight tendency to outgrow the level of the surrounding skin. The child, whilst the ulceration was in progress, was pyrexial and had obstinate diarrhœa. For months she had also suffered from strumous ophthalmia. Altogether, she appeared to be tuberculous. Such ulceration of the skin as this child had, Dr. Barlow had seen in four cases associated with acute tuberculosis, verified post-mortem; and it was described by Hardy in his Scrofulides. There was no suspicion of congenital syphilis in the family; but there was phthisis on the father's side, and two of the patient's brothers had died of

rapid acute tuberculosis. The ulceration of the skin and the child's diathesis were, said Dr. Barlow, in harmony with Dr. Thin's views as to the nature of the skin disease in Mr. Baker's case. But the secretion of the skin did not appear to bear any distinct relation to the pigmental patches, and it must still remain a question whether recurrent vaso-motor disturbances of the skin were not a factor in their causation.

Mr. Morrant Baker remarked that the Society was much indebted to Dr. Thin, whose observations had now made one of these cases complete. As regarded his facts, there was no doubt the disease was one of the corium extending deeply. Mr. Baker did not, however, think the case was one of lupus, or that it resembled lupus. With microscopical appearances alone on one side, and clinical facts on the other, it was *tant pis pour le microscope*. Dr. Tilbury Fox had two years ago, in describing cases of the kind, said they were instances of xanthelasmoidea. There was, however, no jaundice. If asked in what class to place these cases, he (Mr. Baker) would be somewhat in doubt. They seemed to be allied to urticaria; were not exactly cases of urticaria perstans, but might, perhaps, be called uticaria permanens.

Dr. R. J. Lee said that Dr. Barlow's case was certainly not syphilitic; it had certain symptoms allying it to the scrofulide of Hardy. The skin on the back of the shoulders first began to ulcerate and was impetiginous; and this scrofulous ulceration led to considerable destruction of the skin, resulting in permanent cicatrices. The ulcers were irregular, painless, depressed, with yellowish bases and irregular margins. Some parts healed in the course of weeks, whilst other edges of the ulcers were spreading. The scars were now different from what they had been at first. The pigment had disappeared from them. There were some prominences now in the skin which were almost fluctuating, as if about shortly to break down and become ulcers. In some of Dr. Thin's admirable sections the cells were approaching the skin, and they would soon have broken down if that child had lived. The disease seemed to be the scrofulide of Hardy, or the tubercular disease of the skin of English dermatologists. The urticaria seemed to be due to irritation of the skin, the child's skin having been much handled at the meeting. In Mr. Baker's case, the mother had had a distinct fright when she had carried the child six months. Such cases were not rare. In another that he remembered, the child had one leg pigmented, the mother having witnessed a surgical operation during her pregnancy.

Dr. Sangster thought the pigmentation should not be lost sight of. Multiple lupus was well known. The distribution of the disease in this case was not against its being of that nature; but the fact of the disease existing for so long without ulceration was opposed to the opinion that it was lupus. He did not think it resembled urticaria, which was an acute inflammatory œdema, and had not been described as a cellular growth.

Dr. Thin said that many acute and chronic affections of the skin were characterised by cell-growth; such growth in the case examined by himself had lasted for years, and was yet comparatively localised. The disease was one of slow destruction of the skin, and of cell-growth; but which was cause and which effect was doubtful. Had the child lived, ulceration would have occurred.

A Case of Small-pox alleged to have originated from the Contagion of Chicken-pox.

Dr. Farquharson read notes of this case. Referring to the identity formerly believed to exist between variola and varicella, and to the labours of Heberden in apparently disproving this, the author drew attention to the opinion of Hebra, that no essential difference existed, and that, under favourable conditions, a severe epidemic of the major might arise from the infection of the minor disease. In illustration of this, he brought forward some cases recently under his observation in the Belgrave Hospital for Children. Three mild cases of varicella occurred in surgical patients there during the month of May, and, after the regular period of incubation, a fourth made its appearance, so much more severe in type as to give rise to a suspicion of small-pox. But this view was negatived, on the ground of the source of infection from a varicella patient in the next bed, of the character of the eruption, and the perfect success of a primary vaccination, which became developed whilst the pustules were fully matured on the skin. About three weeks later, the nurse in attendance on this patient was seized with vomiting, pain in the back and chest, violent febrile symptoms, and a rubeoloid rash, on which the true variola eruption subsequently became developed. The case was removed to St. Thomas's Hospital, and ran a very severe course, the secondary fever being strongly pronounced, and all the symptoms being those of the disease in an unmodified form. The question naturally arose, whether a direct line of infectious sequence could be traced between this and the fourth case of varicella; and although absolute proof was, of course, impossible, circumstantial evidence pointed strongly in this direction; because—1. The wards were at this time closed to visitors, and the chances of accidental outside infection were thus materially lessened. 2. Because the nurse's own absences from the hospital were, for the same reason, much limited, and probably stopped. 3. Because the nurse herself was thoroughly convinced that she had derived the source of her illness from the little boy whom she had faithfully tended for so many days. And granting the integrity of this chain of evidence, the conclusion seemed undoubted that one must allow that Hebra's teaching might be right after all, and small-pox might actually breed itself, under duly favourable conditions of soil and atmosphere, from chicken-pox.

The President said the point urged by Dr. Farquharson was very important, for, if it went forth to the public that it was held by the Clinical Society of London that varicella led up to variola, a panic would ensue in many families to which chicken-pox gained admittance.

Dr. Murchison thought the non-identity of varicella and variola had been fully settled forty years ago by Dr. Gregory's observations at the Small-pox Hospital. The crucial test was, that cases of varicella, mistaken for variola and sent to the hospital, took variola from going there. Cases of varicella could be easily vaccinated, and three of Dr. Farquharson's cases had been vaccinated before having varicella. The case of the nurse was one of small-pox; but whether the illness of the child who had been last ill was one of small-pox he had not quite gathered from the description. In practice, one ought to be able to distinguish varicella from modified variola. But even if all the children had varicella, and the nurse true variola, the evidence did not seem sufficient to show that she had taken it from either of them. He (Dr. Murchison) had seen cases of scarlet fever and of typhoid both come from the same house. Moreover, seeing that the small-pox poison was so widely diffused at present in London, it was difficult, perhaps, to say exactly how she caught her illness. But she was not even kept at home; though, had she been, she might have contracted the disease from outside the hospital.

Mr. Pugin Thornton inquired if the house-surgeon of the hospital was not attending at St. George's Hospital, where the small-pox was then raging.

Mr. M. Baker inquired what proof there was that the boy had caught the varicella from the other patients.

Dr. Thin said that, when he was at Vienna, he never saw cases of varicella; and an American physician who met him there had confirmed the remark. A young dermatologist in that city had, in Dr. Thin's presence, handed round to his class two cases, one as being typical variola, the other as varicella; but Dr. Thin had recognised the latter as modified small-pox, not true varicella as seen in England.

Dr. Greenhow mentioned the case of a child at a seaside town which had caught small-pox from the clothes supplied to it. He did hope it would not go forth that the members of that Society supported Dr. Farquharson's views on this question. He had seen in a house four sisters ill with typhoid, and then a fifth in the house have typhus. She had been brought there to nurse her sisters, and came with the typhus already upon her. In her case the typhus had not been caught from the typhoid patients, but was freshly imported from without.

Mr. G. Brown said that a case of chicken-pox, if carefully watched, could scarcely be mistaken for variola.

Dr. Farquharson said that the fact that a thing had been believed for a hundred years was no reason why it should not be reconsidered. Replying to the different speakers, he said the house-surgeon had had no communication with St. George's Hospital, and indeed there were no cases of small-pox at St. George's at that identical time. He acknowledged, with Dr. Murchison, that there were some weak points in his case, and that he could not absolutely say where the nurse caught the disease.

A Case of Enteric Fever treated by Salicylate of Soda.

Dr. Murchison communicated this case. The patient, a labourer aged twenty, who had always enjoyed excellent health, came under treatment on the eighteenth day of his illness; he

had then had no diarrhœa, nor delirium, and no medical treatment. He had headache, sleeplessness, furred dry tongue, loss of appetite, great thirst, slightly distended abdomen, and slightly enlarged spleen. The bowels were acting about once daily. There were rose spots over the abdomen; the skin perspired freely; the temperature (1.30 p.m.) was 102·5° Fahr.; pulse 100, regular; respirations 26. At 8.15 p.m. the temperature was 104·8°; at 9.30, 104°; and at 10 p.m., 104·4°. He was then ordered the salicylate, twenty grains every two hours, increased, after the second dose, to thirty grains every two hours. At midnight the temperature was 105·6°. At 2 a.m. of next (the nineteenth) day it was 99·6°. At noon, when eight doses had been taken, the patient was rather deaf, and the medicine was ordered to be given every four hours. That day the temperature never exceeded 101·2°; on the whole, the patient was better. At midnight he took the eleventh dose of the medicine. Next day (the twentieth) he took the twelfth dose at 4 a.m.; his temperature was then 99·8°, and his feet felt cold. Shortly afterwards he felt "muddled in the head." At 8 a.m., his temperature being 98°, he took the thirteenth and last dose. An hour afterwards he vomited; his temperature that day never exceeded 100·4°; towards the afternoon he became delirious, and at 7 p.m. was very violent, shouting "murder," and insisting that his throat was about to be cut. He had to be restrained by two hospital porters. At 8 p.m., no urine having been passed for twenty-four hours, a catheter was introduced, but only a few ounces of urine came away. This contained one-fourth (in volume) of albumen, with granular epithelial casts and salicylic acid. At midnight he was sleeping soundly and perspiring profusely. On the twenty-first day, at 9 a.m., he was rational; temperature was 103·4°; urine still scanty. At 7.30 p.m. the temperature was 103·6°, and at midnight 104·4°. On the twenty-second day, in the morning, the patient was better, and had no headache nor deafness; he passed only seven ounces of urine in twenty-four hours. There were no rose-spots visible. At 7.30 p.m. the temperature was 105·2°. Twenty-five ounces of urine had been passed in ten hours; the latter portion contained no albumen, but salicylic acid was still found in it. During the next few days the pulse was about 84; the temperature varied from 101·2° to 104·3°. The salicylic acid gradually disappeared from the urine, but a trace of albumen was again found, and then was lost. There was slight diarrhœa. On the thirty-third day the evening temperature was normal. The appetite gradually returned; and the patient left the hospital quite well on the fifty-eighth day. Dr. Murchison remarked that the case was a good one for testing the drug, as there was high temperature without any complication. The effect of the drug was to reduce the temperature as rapidly as it did in rheumatic fever; but when the drug was discontinued the pyrexia returned, and the case subsequently progressed as might have been expected if the salicylate had not been given. The drug induced violent delirium whilst the patient was under its influence; and the delirium ceased as the pyrexia returned, and the effect of the drug passed off. The salicylate further caused albuminuria and almost suppression of urine. Temporary albuminuria had also been frequently seen in patients suffering from acute rheumatism whilst under the influence of salicylate of soda. Probably the cerebral symptoms were due to the suppressed elimination by the kidneys of the nitrogenous detritus of the blood and tissues. The salicylate of soda used in the case had been examined by Dr. Bernays, who had found it to be quite free from carbolic acid. The cerebral symptoms could not, therefore, have been due to any admixture of the drug with carbolic acid.

Dr. Barlow said that, as regarded the albuminuria which was present in the patient, it had yet not been much noted in cases treated with the salicylate. He had recently seen a paper, by a Swedish physician, on the treatment of all pyrexial attacks in children with salicylic acid, and in some of those cases acute nephritis had been induced. In a case of rheumatoid arthritis, similarly treated by himself, albuminuria ensued, with vomiting and some delirium, which latter symptom he had thought was due to the albuminuria. A woman, with a large cancerous wound treated locally with salicylic acid, had also albuminuria produced.

Dr. Whipham had, since January 1 of this year, treated four cases of enterica by salicylate of soda, given every two hours. The temperature fell in these cases. If delirium came on he reduced the doses in quantity and gave them less frequently. In one extremely bad case the salicylate was discontinued, and ether and ammonia were given. The cases was complicated with pneumonia, and the patient died. In another case the salicylate was at first given every two hours; the temperature then fell, and the drug was subsequently administered every six hours. A gentleman, treated with the salicylate, had uncomfortable nervous symptoms. A good dose of whisky being given, the nervous disturbance at once ceased. Another patient treated with salicylic acid, after two days became violently delirious; a good dose of alcohol being thereupon given, took away the delirium at once.

Dr. Murchison said that, as to the effect of alcohol given with the salicylate, he was not prepared to speak. In such a case as the one he had described—one of delirium, with almost suppression of urine—he did not think one could have expected much good to come from a dose of alcohol. Besides, there was one particular fallacy possible. In his case the patient was violently delirious, requiring two porters to keep him in bed, and yet, in half an hour afterwards, was quietly sleeping without having taken alcohol or drug of any kind. If the salicylate of soda had been kept up, the temperature would probably not have risen. But Dr. Murchison had wished to see if the disease was shortened by the drug, and he had found that such was not the case. After the temperature had been reduced to the level of health, it rose again at once directly the salicylate was discontinued, as if that treatment had never been adopted.

The President hoped that the case so admirably recorded by Dr. Murchison would be a type of the cases of which more would be prepared by the members for their meetings during the next year.

Excision of Elbow-joint.

Mr. Maunder said most surgeons present were aware that, a few years ago, he had drawn attention to his method of excising the elbow-joint, by which a most important function of this articulation (active extension of the forearm) could be secured. A gentleman, upon whom he had operated some eight years ago, had just returned from abroad, and was present and willing to show his arm. The patient stated "he had travelled all over the world, and, taking an interest in surgery, had shown his arm to surgeons in all parts; and the general opinion expressed was that 'it was the best arm in the world without a joint.' He could perform almost every movement with it, and could compete successfully with the best at billiards, quoits, 'the gloves,' wrestling, and other trials of strength." The arm was examined, and the power of the triceps proved in several ways.

In the recent case which has been reported from Liverpool, where fatal effects followed the operation of transfusion of blood, some mistake appears to have been made by a portion of the London press in announcing Mr. Alfred Higginson, M.R.C.S., consulting surgeon at Liverpool, as the operator. Mr. Higginson, who is an authority on the subject of the transfusion of blood, was present in the coroner's court as a spectator only, and had no connexion with the case under inquiry; but, at the request of the coroner, he explained to the jury his mode of operating in transfusion; and hence, probably, the mistake arose.

Revaccinations.—In a communication to the Paris Hospital Medical Society, M. Lereboullet furnishes the results of 1290 revaccinations performed at the Val-de-Grâce in February and March. Most of them were made with virus taken from infants, but in some the virus of adults, which seemed of excellent quality, was used. Of the 1290 revaccinated, 886 were examined a week afterwards, and in 237 the vesicles were completely developed (*i.e.*, 1 in 3·7). An analysis of these figures shows that—1. Of 42 men arriving without manifest traces of prior vaccination, and not knowing whether this had been performed, 20 were vaccinated with lymph from infants with 5 successful results, and 22 with lymph from adults with 4 successful results. 2. Of 844 men who had been already vaccinated or revaccinated, 613 were vaccinated with lymph from infants with 172 (1 in 3·5) successes, and 231 with lymph from adults with 56 (1 in 4·1) successes. It follows, therefore, from this experiment that lymph from infants should be preferred whenever obtainable; and not only does this succeed oftener, but the pustules are better developed and fuller with lymph. M. Lereboullet also having vaccinated an infant on one arm with the lymph from an infant, and on the other with that from an adult, found that the former gave rise to magnificent pustules, while the latter either failed or produced very poor pustules.—*Gaz. Hebd.*, June 8.

OBITUARY.

DEPUTY SURGEON-GENERAL T. MOORHEAD, M.D.

We have to record the death of Dr. Moorhead, which took place at Tonbridge Wells, on the 26th ult., aged fifty-five years. He had recently been employed at Hong-Kong. He entered the Medical Department of the Army as Assistant-Surgeon in October, 1845, served in the Crimean campaign from November, 1854, and was Surgeon of the 7th Fusiliers at the capture of the Quarries on June 7, and assaults of the Redan on June 18 and September 8, for which he was awarded the medal with clasp and the Turkish medal. He served also as Sanitary Officer to the British Troops in Abyssinia during the campaign of 1868, and for this also he received the medal.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following Members of the College having undergone the necessary examinations at the recent half-yearly meeting for the Fellowship, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at a meeting of the Council on the 14th inst. were duly admitted Fellows of the College, viz.:—

Alexander, William, M.D. Queen's University Ireland, Liverpool, student of the Belfast School, *not* a Member of the College.
Bennett, William Henry, L.R.C.P. Lond., James-street, Buckingham-gate, diploma of Membership dated July 21, 1873, of St. George's Hospital.
Birch, Edward Arnold, L.R.C.P. Lond., Manchester, April 23, 1873, of the Manchester School.
Colgate, Henry, M.D. and B.S. Lond., and L.R.C.P. Lond., Eastbourne, July 23, 1872, of University College Hospital.
Duncan, Andrew, M.D. Lond. and L.S.A., Henrietta-street, Covent-garden, July 22, 1872, of King's College Hospital.
Edmunds, Walter, B.A. and M.B. Cantab., Fairfax-road, Hampstead, of St. Thomas's Hospital.
Gould, Alfred Pearce, M.B. Lond. and L.R.C.P. Lond., Gower-street, July 22, 1873, of University College Hospital.
Harries, Thomas Davies, L.R.C.P. and L.S.A. Lond., Aberystwyth, May 24, 1873, of Guy's Hospital.
Hobson, Lewis John, M.B. Lond., Bedford, July 21, 1875, of University College Hospital.
Ottley, Walter, M.B. Lond. and L.S.A., Nottingham-place, W., July 24, 1872, of University College Hospital.
Pratt, William, M.D. Liége, Newtown, Montgomeryshire, July 25, 1876, of the Liége University.
Ransohoff, Joseph, M.D. Ohio, Cincinnati, April 24, 1877, of the Ohio University.
Rendall, John, L.R.C.P. and L.S.A. Lond., Southampton, April 20, 1874, of Guy's Hospital.
Southam, Frederick Armitage, B.A. Oxon., L.S.A., Manchester, April 18, 1876, of the Manchester School.

Six candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve month.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 7:—

Burgess, William Milner, Harlesden.
Giles, Bernard Furaday, Canonbury, N.

The following gentlemen also on the same day passed their primary professional examinations:—

Macdonald, Henry Murray W., St. Thomas's Hospital.
Patterson, George Henry, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Banks, W. Mitchell, F.R.C.S.—Honorary Surgeon to the Liverpool Royal Infirmary, *vice* James Hakes, resigned.

Daniel, Jacob, L.R.C.P. and L.R.C.S. Edin., Assistant Medical Officer to the Perth District Lunatic Asylum—Assistant Medical Officer to the Derby County Lunatic Asylum.

Gowers, W. R., M.D. Lond., M.B., M.R.C.S. Lond., etc.—Professor of Clinical Medicine, University College, London.

Roberts, Frederick T., B.Sc., F.R.C.P.—Professor of Clinical Medicine, University College, London.

Smith, Henry, F.R.C.S.—Professor of Surgery at King's College Hospital, *vice* Sir William Fergusson, Bart., deceased.

MILITARY APPOINTMENTS.

War Office.—Medical Department.—Surgeon-General Thomas Longmore, C.B., retires upon half-pay; Surgeon-Major Thomas Robert Williams, M.B., retires upon temporary half-pay; Surgeon-Major Alexander Jennings, M.D., retires upon temporary half-pay; Surgeon Denis Joseph Canny, from half-pay, to be Surgeon; Surgeon-Major John Anderson Cox, Madras Army, to be granted the honorary rank of Deputy Surgeon-General on retirement.

Militia Medical Department.—The undermentioned Assistant-Surgeons of Militia to be Surgeons of Militia, under the provisions of the Royal Warrant of July 12, 1876:—Leonard A. Lawrence, Hampshire; James Walter Cavanagh, 2nd Royal Lancashire. The undermentioned Surgeons of Militia to be Surgeons-Major of Militia, under the provisions of the Royal Warrant of July 12, 1876:—Leonard A. Lawrence, Hampshire; James Walter Cavanagh, 2nd Royal Lancashire; William Rose, Bucks. The second and third Christian names of Surgeon Harrison, Royal Montgomery, commissioned as Surgeon-Major in the *Gazette* of April 20, 1877, are Thompson David, and not Thomson Devereux, as therein stated.

BIRTHS.

Eves.—On May 14, at Chikalda, Berar, India, the wife of Surgeon-Major C. T. Eves, M.R.C.S. Eng., of a son.

Gimson.—On June 2, at Witham, Essex, the wife of W. Gimson Gimson, M.D., of a son.

Miller.—On June 6, at The Close, Basingstoke, the wife of F. D. Miller, L.R.C.P. Lond., of a son.

Palmer.—On June 5, at 363, Old Kent-road, S.E., the wife of Frederick J. Morton Palmer, M.B. Lond., of a son.

MARRIAGES.

Alliott—Bevington.—At the parish church, Croydon, Alexander John Alliott, M.B. Cantab., of Sevenoaks, to Florence, sixth daughter of the late Alexander Bevington, of Palace-road, Streatham-hill.

Cobb—Marriott.—On June 7, at St. Margaret's, Whalley Range, Manchester, Charles Davison, youngest son of Frederick Cobb, M.D., of Frensham, Surrey, to Clara Elizabeth, eldest daughter of Henry R. Marriott, of Whalley Range, Manchester.

Coombs—Tyrer.—On June 5, at St. John's, Bootle, Graham Lowe Coombs, M.R.C.S.E., of Ince, near Wigan, to Alicia Emma Bland, eldest daughter of David John Tyrer, Esq., of Springbank, Bootle.

Deshon—Gray.—On April 10, at Hawthorne House, Beechworth, Victoria, Australia, Frederick P. Deshon, M.R.C.S. Eng., of Melbourne, to Marie Agnes, only daughter of the late John Henry Gray, Esq.

English—Crisp.—On June 6, at St. Luke's, Chelsea, Thomas Johnston English, M.R.C.S., only son of Thomas English, M.D., of Fulham-road, Brompton, to Eliza, eldest daughter of Edwards Crisp, M.D., of Chelsea.

Saunders—Phillippo.—On May 23, at the parish church, Kingston, Jamaica, W.I., Arthur Rich Saunders to Emma Louise, daughter of J. Cecil Phillippo, M.D. Edin.

Treharne—Jones.—On June 7, at Canton, Cardiff, John Llewellyn Treharne, M.R.C.S. and L.S.A., to Maria, second daughter of Alderman D. Jones, J.P.

DEATHS.

Alison, Somerville Scott, M.D., F.R.C.P., at 85, Park-street, Grosvenor-square, on June 11, aged 64.

Cowell, William, M.D., at 38, Loudoun-road, St. John's-wood, on June 6, aged 75.

Coward, Mary Jane, wife of Christopher T. Coward, M.R.C.S. Eng., at 284, Burdett-road, Limehouse, on June 10.

Stacpoole, Richard C., eldest son of G. C. Stacpoole, M.D., at San Antonio, Texas, on May 21, aged 28.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Brighton and Hove Dispensary.—Resident House-Surgeon. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Society of Apothecaries of London, and registered under the Medical Act. Diplomas and testimonials, under seal to the Chairman of the Committee of Management, at the Institution, Queen's-road, Brighton, on or before July 2.

City of London Lying-in Hospital, City-road.—Consulting-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, stating qualifications, etc., to the Secretary, on or before June 19.

East Riding Asylum, Beverley.—Assistant Medical Officer. Candidates must be under thirty years of age, unmarried, and have at least one registered qualification. Applications, with testimonials, to the Medical Superintendent, not later than June 23.

Macclesfield General Infirmary.—Junior House-Surgeon. Candidates must have a double qualification, and be duly registered. Applications, with testimonials, to Mr. A. Cooper, Clerk, on or before June 23.

Parish of Lismore and Appin.—Medical Officer. A knowledge of Gaelic desirable. Testimonials and private references to be lodged with Dr. Laurie, of Drimneil, Appin, on or before June 25.

Ripon Dispensary and House of Recovery.—Resident House-Surgeon and Dispenser. Candidates must be single. Applications, with testimonials as to professional ability and moral character, to the Hon. Secretary, on or before June 16.

Royston Union.—Medical Officer. Applications, stating age and medical qualifications, with testimonials and references, to Thomas Shell, Clerk, Royston, Herts, on or before June 19.

Saint Columb Major Union.—Medical Officer of Health. Applications, stating age, qualifications, and salary required, on or before June 27.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Crickhowell Union.—Mr. Parry has resigned the Workhouse; salary £45 per annum.

Pateley Bridge Union.—Mr. R. S. Veale has resigned the Eastern District; area 6447; population 1612; salary £20 per annum.

APPOINTMENTS.

Church Stretton Union.—Robert Dunstan, M.R.C.S. Eng., L.S.A., to the Second District.

Daventry Union.—George B. Faskally, F.R.C.S. Edin., L.S.A. Lond., to the Workhouse and the First and Second Districts.

Horsham Union.—T. H. Martin, M.R.C.S. Eng., L.S.A., to the Fifth District.

Northleach Union.—Hugh G. Webb., L.K. & Q.C.P.I., L.R.C.S.I., to the Second District.

Pontefract Union.—George W. Wigin, M.R.C.S. Eng., L.S.A., to the Methley District.

St. Austell Union.—Robert B. Hill, M.B., L.R.C.S. Edin., to the St. Blazey District.

Professor Wenzel Gruber.—The completion of the thirtieth year of his Professorship of Anatomy at St. Petersburg was made the occasion of an ovation to Prof. Gruber, the like of which has never been before witnessed in Russia. In reply to the enthusiastic address of the students, the Professor replied that during thirty years he had striven with all his might to fulfil his duty as a teacher and an investigator. Twenty-two years since he founded the Anatomical Institute, of which, as well as of the Museum, he is the director. The latter contains between 6000 and 7000 specimens, and 15,000 bodies have been dissected under his supervision. The Professor has also contributed 300 communications to scientific literature. The Professorial College unanimously prolonged for another five years the tenure of his important posts.—*Wien. Med. Woch.*, May 12.

Death of Professor Caventou.—This celebrated chemist (whom most of our readers probably thought had died long ago) has quite recently passed away, after a long illness, at the age of eighty-two. While still an interne at La Pitié, Joseph Bien-aimé Caventou drew upon himself the attention of the learned world by a note which he published on the properties of the *Narcissi*. This was but the first step on the road to fame, which he rapidly traversed from success to success. Very soon afterwards, in fact, either alone or with Pelletier, he isolated that long series of alkaloids and active principles with which his name has remained constantly associated. First, in 1818, came veratrine; and then, in 1820, quiuine—the discovery of which alone would make any man famous. Shortly afterwards followed strychnine and brucine, and then cafeine—to mention only the names of some of the series. About the same time he demonstrated, as a special production, the existence of chlorophyll in the green parts of plants. Such services explain how he came to be elected one of the original members of the Academy of Medicine of Paris in 1823, when only twenty-seven years of age. At his death he was the father of that learned body. Appointed Professor of Toxicology in the Ecole de Pharmacie in 1826, he filled the post with the greatest success during the long period of thirty years.—*Presse Méd. Belge*, May 27.

Treatment of Diphtheria.—At a recent meeting of the Therapeutical Society, M. Cadet de Gassicourt gave an account of the trials he had made at the St. Eugénie Hospital with copaiba, cubebs, perchloride of iron, chlorate of potash, and salicylic acid. In fact, cures were effected by all these means, but the chlorate of potash has been perhaps the most successful. The essential thing is a tonic treatment, and the resorting to local applications as little as possible, avoiding those of a caustic nature. M. Blache agreed with M. Cadet in condemning the use of caustics, the nitrate of silver being an especially detestable application, which he has known to produce true wounds in the pharynx. His father was a great advocate of the use of the chlorate of potash, which he used with the greatest success in the form of irrigation of the pharynx, repeating this twenty times in the course of the day. M. Créquy, while agreeing with what had been said as to the superiority of internal treatment, still believed that a properly directed local one prevented the diphtheria spreading to the larynx. He employs tannin, not applying it as is usually done over the false membranes, but after these have been removed. M. Labbé believed that whenever the constitution is much weakened, and tonics are indicated, the chlorate of potash may be of great service. Even in syphilis he has thus found it of much utility. He employs it also by irrigation, also using in this way two pints of alkaline water. M. Sanné believes that all the medicines which have been tried are about alike successful, there being no special treatment of diphtheria known. As to local treatment, it has no justification.—*Gaz. Hebd.*, June 8.

Professor Lowne, F.R.C.S.—This gentleman, who will commence his course of lectures on Teratology in the Theatre of the College of Surgeons on the 20th inst., has issued the following programme of the course, viz.:—*Lecture I.:* Introductory—Causes of malformations:—1. Inherited tendencies. Transmission of a malformation from the parent. Certain forms of malformation almost confined to certain animals, or at least much more common in them than in others. 2. Abnormal conditions acting directly upon the ovum; experiments of M. Dareste. Relative frequeney of malformations in birds and mammals. 3. Diseases of the ovum or embryo.—Classification of malformations:—1. Variations in the process of development. 2. Abnormal conditions arising from incomplete vegetative reproduction. 3. Abnormal conditions arising from atrophy. 4. Abnormal conditions arising from disease of the embryo.—Variations in the developmental process. The laws of variation. Deviation from the average. The laws of Quetelet and Galton. Examples. Disturbance of the law of deviation from the action of a definite cause. Illustrations of these laws in the case of the human eye.—Great deviations from the average. Giants and dwarfs. Variation in the number of parts. Multiple organs chiefly liable to this form of variation. Examples from the vegetable kingdom. The laws of reversiou, correlation of growth, and compensation.—Latent transmission. Assumption of male characters by the female, and of female characters by the male. Theoretical explanation of atavism. Darwin's theory of pangenesis. *Lecture II.* (June 22).—Double Monsters: The origin of double embryos. Fission and fusion. Observations on eggs with two yelks. Statements of Geoffroy and Schultze. Observations by M. C. Dareste and M. Lereboullet. Embryology of the earlier stages of development in the vertebrate ovum. Definition of the term fission. Malformations amongst the coral polypes and amongst plants. Anterior and posterior dichotomy in vertebrates. Twin births. Sex in twin births. Geoffroy's law of affinity. True cases of fusion. Syreniform monsters. Lereboullet's observations on the tendency to return to the normal condition by atrophy or fusion. Results of this tendency seen in cases of parasitic embryos, and doubling or partial doubling of a limb. Amorphous and acardiac twins. The phenomenon of fœtus in fœtu. Impaction of a second embryo in the facial clefts. *Lecture III.* (June 25).—Arrest of Development: The normal process of development of the facial arches; arrested conditions of the investing mass. Cleft palate and hare-lip. Absence of the lower jaw. Cyclopia. Condition of the ossicles of the ear in cyclopia. Fusion of the tympanic cavities. Condition of the brain, nerves, and vessels. Arrested condition of the mouth and pharynx. Janus-like malformations. Concluding remarks.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Vincent D.—The population of South Australia is estimated at 225,677; there was an increase of 15,000 in the course of last year.

"*Palmam qui Meruit,*" *etc.*—Sir Charles Wheatstone was made a Fellow of the Royal Society in 1836; he was knighted in 1868. He had altogether upwards of thirty foreign distinctions.

Lady-Nurse.—Miss Florence Lees was not the first student of the art of nursing who entered St. Thomas's Hospital under the auspices of the Nightingale Fund. She was preceded there by a lady who afterwards became a Sister of Charity. In 1861 Miss Lees made her application to the authorities at St. Thomas's Hospital, and was accepted as a student, but her training was deferred owing to her youth and other causes until 1866. She is, nevertheless, termed by the Nightingale School authorities their "first lady probationer."

Egalité.—The anecdote may be Englished thus:—M. Boudon, a surgeon of some eminence, was sent for by the Cardinal Du Bois, Prime Minister of France, to perform a serious operation upon him. The Cardinal, on seeing him enter the room, said, "You must not expect to treat me in the same rough manner as you treat your poor miserable wretches at your hospital of the Hôtel-Dieu." "My lord," replied M. Boudon with great dignity, "every one of these miserable wretches, as your Eminence is pleased to call them, is a Prime Minister in my eyes."

Hampton.—Dr. Hooker has been made a Knight-Commander of the Star of India. The Royal Society have now again a president of the historic name of "Sir Joseph."

Mr. Williams.—On inquiry, we find that notices of the annual election of Fellows into the Council of the College of Surgeons have been duly forwarded to every Fellow in the United Kingdom whose address is known to the Secretary.

F.R.C.S., Southampton.—All the gentlemen recently admitted Fellows, and whose names are published elsewhere, can record their votes on the 5th prox.

WORMWOOD SCRUBS.

With reference to the preservation of Wormwood Scrubs for the use of the people, the Metropolitan Board of Works have adopted a memorial to the Enclosure Commissioners for a scheme for dealing with the same. It appears the Government had purchased the interest of the lord of the manor in this land for £51,600. The extent of the ground was 194 acres. And moreover the Government had proposed that it should be transferred to the Board as an open space for the recreation of the people on the condition that the Government should be allowed the use of it for certain military purposes.

COMMUNICATIONS have been received from—

Mr. R. ATKINSON, London; Dr. ALLEN STURGE, Paris; Mr. J. CHATTO, London; Dr. J. M. BRUCE, London; Dr. J. HUGHLINGS-JACKSON, London; Dr. STEPHEN MACKENZIE, London; Dr. T. WHIPHAM, London; Dr. BALMANNO SQUIRE, London; Dr. OCTAVIUS STURGES, London; Mr. T. M. STONE, London; Mr. C. A. FOX, London; Mr. A. TREVELYAN, Lyncholm; Mr. GREENWOOD, London; Mr. KNOWSLEY THORNTON, London; Mr. A. HAVILLAND, London; THE SECRETARY OF THE STATISTICAL SOCIETY, London; Mr. J. INGPEN, London; THE SECRETARY OF THE HOSPITAL SATURDAY FUND, London; THE SECRETARY OF UNIVERSITY COLLEGE, London.

BOOKS AND PAMPHLETS RECEIVED—

Lawson Tait, F.R.C.S., Diseases of Women - Charles West, M.D., On Hospital Organisation, with special reference to the Organisation of Hospitals for Children—A. Dupré, Ph.D., F.R.S., On the Estimation of Urea by means of Hypobromide - Dr. A. Verneuil, Chirurgie Réparative.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Analyst—Students' Journal and Hospital Gazette—Nordiskt Mediciniskt Arkiv—La Province Médicale—Sanitarian—Guy's Hospital Gazette—Glasgow Medical Journal—Dublin Journal of Medical Science—Miller.

APPOINTMENTS FOR THE WEEK.

June 16. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

18. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

19. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

STATISTICAL SOCIETY, 7¾ p.m. Mr. E. G. Ravenstein, "The Populations of Russia and Turkey." Mr. Ernest Seyd will submit and remark upon Diagrams illustrating the Accounts of the Banks of England, France, Germany, Belgium, Holland, &c.

20. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex. 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

21. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

22. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

QUEKETT MICROSCOPICAL CLUB, 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 9, 1877.

BIRTHS.

Births of Boys, 1189; Girls, 1168; Total, 2348.
Average of 10 corresponding years 1867-76, 2090·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	746	683	1429
Average of the ten years 1867-76	654·9	606·2	1261·1
Average corrected to increased population ...	...	...	1349
Deaths of people aged 80 and upwards ...	...	...	48

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	5	6	3	1	5	...	2	1	3
North	751729	22	14	2	...	10	...	1	...	4
Central ...	334369	...	4	2	1	3	...	...	...	1
East	639111	5	27	3	2	10	...	3	1	2
South	967692	26	14	9	2	12	1	5	2	6
Total	3254260	58	65	19	6	40	1	11	4	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·808 in.
Mean temperature	60·4°
Highest point of thermometer	81·7°
Lowest point of thermometer	44·2°
Mean dew-point temperature	49·6°
General direction of wind	S.W.
Whole amount of rain in the week...	0·07 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 9, 1877, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending June 9.	Deaths Registered during the week ending June 9.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2348	1429	81·7	44·2	60·4	15·78	0·07	0·18
Brighton	102264	43·4	62	44	75·7	45·0	57·9	14·39	0·10	0·25
Portsmouth ...	127144	28·3	77	40	68·4	49·2	56·3	13·50	0·00	0·00
Norwich	84023	11·2	38	28	81·0	48·0	61·6	16·45	0·17	0·43
Plymouth	72911	52·3	52	30	68·0	47·5	55·6	13·12	0·31	0·79
Bristol	202950	45·6	127	87	78·7	45·2	57·8	14·34	0·19	0·48
Wolverhampton ...	73389	21·6	54	30	77·3	39·5	55·0	12·78	0·15	0·38
Birmingham ...	377436	44·9	320	179	...	...	...	...	...	...
Leicester	117461	36·7	98	41	78·5	43·8	57·8	14·34	0·09	0·23
Nottingham ...	95025	47·6	63	41	77·3	40·0	56·3	13·50	0·10	0·25
Liverpool	527083	101·2	385	262	76·2	47·7	56·4	13·55	0·34	0·86
Manchester ...	359213	83·7	298	190	83·3	42·8	57·6	14·23	0·07	0·18
Salford	141184	27·3	129	62	77·5	40·3	55·4	13·00	0·15	0·38
Oldham	89796	19·2	90	54	...	...	...	...	...	...
Bradford	179315	24·8	113	79	75·6	46·2	56·4	13·55	0·19	0·48
Leeds	298189	13·8	231	149	78·0	46·0	57·4	14·11	0·18	0·46
Sheffield	282130	14·4	178	141	77·0	43·5	57·1	13·95	0·28	0·71
Hull	140002	38·5	110	67	...	...	...	...	...	...
Sunderland ...	110382	33·4	81	50	76·0	47·0	58·4	14·66	0·07	0·18
Newcastle-on-Tyne	142231	26·5	110	47	...	...	...	...	...	...
Edinburgh	218729	52·2	153	76	69·9	45·0	56·6	13·67	0·43	1·09
Glasgow	555933	92·1	432	272	64·0	45·5	54·3	12·39	1·41	3·58
Dublin	314666	31·3	183	185	63·4	38·6	55·3	12·95	0·40	1·02
Total of 23 Towns in United Kingdm	8144940	38·3	5732	3583	83·2	38·6	57·0	13·89	0·25	0·63

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·81 in. The lowest reading was 29·52 in. on Monday evening, and the highest 30·05 in. on Thursday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XVI.

WOUNDS—*Continued.*

At last lecture your attention was directed to the three leading effects of blows or falls on the human body, regarded in their obvious aspects as *local* and *direct* forms of violence, and the impressions made by them indirectly on the cerebro-spinal system. These effects we have now to follow beyond the mere local results to the part of the body impinged against, or the arrest of the functions of the organs sympathising with the injured part, to the additional injuries primarily of a mechanical sort which may be inflicted on distant parts transmitted through the intermediate structures.

These mediate or consecutive mechanical disorders are sometimes such as may be readily overlooked at the time of the receipt of the injury in question, and their alarming or fatal nature only becomes apparent after the lapse of a few hours or days. The more important of these—to which I limit myself—are *lacerations* of internal organs, and *ruptures* of blood-vessels and other deep-seated parts.

Injuries of this serious character are of the rarest possible occurrence after common assaults with the fists, or even with sticks or stones, except in blows about the head rupturing intracranial arteries, or occasionally, though but seldom, lacerating the brain. Such injuries are more common effects of falls from a height, the fall of heavy bodies on the person, or (what is most likely of all to produce them) the concussion or shock in railway accidents.

Ruptures of viscera are most easily produced when the organs involved are naturally dense, voluminous, and not readily displaced. Hence the comparative frequency of these accidents in the liver and kidneys and spleen, and their greater rarity in the heart, lungs, brain, bladder, and alimentary tube. Internal arteries and veins, from their elasticity when in a healthy state, enjoy a considerable immunity from untoward shocks, excepting those which lie within the cranium or spinal canal.

The dropping of the dead body from a height of eighteen feet, in Richerand's experiments, gave rise to ruptures of the liver and spleen, with other more or less extensive injuries. In persons killed by falling from the second, third, or fourth storeys of houses, besides numerous fractures, Devergie discovered ruptures of the liver, spleen, lungs, stomach, bladder, diaphragm, and thoracic and abdominal aorta. The amount of mechanical injury occasionally met with after railway accidents may be judged of from the following case, which presents points of interest deserving of being related:—In 1866, the instant death of an old woman was caused by her being caught between the buffers of a railway train which was being shunted at the Waterloo Station in Aberdeen, when the inspection showed that several of the dorsal vertebræ were dislocated forwards into the abdomen, the lungs torn up into fourteen fragments of various sizes, lying loose in the chest in a mass of fluid blood, and the heart torn across near its base, the ventricles detached from the auricles, and the large blood-vessels (arterial and venous) of the heart in fragments.

In *ruptures of the liver* the torn surfaces are usually rough and granular, without retraction or ecchymosis, the blood furnished by them escaping into the abdominal cavity, and gravitating to the loins and pelvis, sometimes partly in the fluid, partly in the clotted state, often almost wholly fluid, and but seldom in any great quantity. The ruptures of the liver in Devergie's inspections—("Méd.-Lég."),—were all on the upper or lower surfaces of this organ, and most frequently in the vicinity of its left lobe; consisting of mere clefts, directed from before backwards, or with but slight obliquity. In two cases of this sort which I have had occasion to examine, however, the rents were at the posterior margin of the liver; in a third, the rent (a transverse one) was at the base of the right lobe; while in a fourth case, both the larger lobes were torn in more than one place, and in a direction from before backwards. An extensive rent of the right lobe of the liver, in a girl of eight years, came under my notice at Fyvie, Aberdeenshire, in July, 1838. A boy of sixteen was left in charge of his two younger sisters, by their mother, a tramp. The girl in question had been submitted by the boy to rough treatment, having been placed by him on the bare back of a donkey, and driven over a mile or more of uncultivated stony ground; and besides the injury of the liver, a small clot of blood on the outer or surface of the brain, and some severe contusions of the limbs, were encountered at the inspection.

The two following cases of rupture of the liver, in addition to other fatal injuries, from presenting some additional features of novelty, seem to me to be deserving of notice:—

In September, 1854, a woman lost her life in a railway collision at Kittybrewster, near Aberdeen. The inspection showed a fracture of the left fibula and right ilium, the first and second lumbar vertebræ an inch apart from the last dorsal, and the spinal cord torn across at this part. Besides this, a lacerated wound, extending from above the middle of the crest of the right ilium to the vicinity of the symphysis pubis, laid open the abdominal cavity. Through this wound were found protruding the whole of the small, and a large proportion of the large intestines, the right kidney, fragments of the pancreas, the pyloric portion of the stomach, and about a third of the liver with the gall-bladder attached: the liver detached from its natural connexions, and quite clear of the wound.

The remaining case gave rise to a trial for homicide in Aberdeen, in 1839, and has been already briefly referred to in another connexion at last lecture. A man of the name of Brown, in a scuffle with the police, in North-street, Aberdeen, was thrown on his back, and when in this position a constable came down with his knee on the man's epigastrium. Brown was taken to the watch-house, and subsequently to the Royal Infirmary, in a state of collapse, where, without any reaction, he sank in about forty-eight hours. At the inspection of the body, along with the late Dr. Kilgour, we found a quantity of blood, mostly fluid, in the abdominal cavity, the gall-bladder lying loose in the pelvis, and the lower surface of the liver at the cystic hollow raw and bloody, from the detachment of a thin layer of the organ, found adherent to the gall-bladder.

In the two cases just noticed, the gall-bladder itself had escaped injury, the organ being detached at the cystic duct. Ruptures of *the gall-bladder* proper have usually been the effects of emetics given to insure the expulsion of gall-stones; though one case of this injury is recorded from the fall of an old man from his bed on the floor of his room, where a gall-stone was found impacted in the cystic duct.—(*Med. Gaz.*, vol. xxxvii. page 967.)

Ruptures of the spleen exhibit a clean edge, and occur on the convexity of this viscus, excepting where the injury has been of a very violent character, when part of the substance of the organ has been found reduced to a pulp. I have met with such ruptures after falls from a height, after railway accidents, and from severe blows. One case, in the first of these ways, was noticed in another connexion at last lecture. In a recent case, examined along with Dr. Fiddes (January, 1877), where a woman of sixty-two precipitated herself from a window in the third floor of a house, there were not only two lengthened superficial rents of the spleen in a longitudinal direction, and three smaller transverse rents near its outer margin, all in front, but also several superficial ones across the viscus, and one spot about an inch and a half in greatest breadth at the back part of the organ, irregularly reduced to the state of pulp. In 1854 I had occasion to examine the body of a female child of fifteen months, where violent blows had produced rupture, to some depth, of the upper part of the spleen, in addition to fractures of the ribs, and other serious injuries.

Ruptures of the stomach are very rare. They may occur from general concussion of the body, as in falls, or by blows on the epigastrium. Their direction is usually transverse, and they may affect the whole, or be limited to any one of its tissues. I made a drawing of a stomach which ruptured *spontaneously* in a young lady, while labouring under obscure gastric disturbance.

The smaller size of *the intestines*, and their freedom of motion in the abdomen, render ruptures of these viscera rarer than those of the stomach.

Ruptures of the bladder are usually the effect of a direct blow on the hypogastrium, as in the case of homicide adduced in the last lecture, from a kick with a heavily ironed shoe.

In the last case but one of rupture of the spleen, noticed

above, the woman's death, which was almost instantaneous, had been directly caused by a large irregular rent in the fundus of the bladder, through which a quantity of urine had escaped into the abdominal cavity, along with sixteen ounces of effused blood, mostly fluid, but partially clotted.

The facility with which *ruptures of the heart* are occasionally produced in certain diseased states of the organ, such as attenuation and aneurism of its walls, is well known to pathologists. Ruptures from shock have been less noticed in practice. One instance of this of an extreme sort has just been adverted to in connexion with a railway accident. A previous case from violence in a different form occurred here in June, 1855, in a girl of four years. She had been struck with the shaft of a cart, and died in a few seconds. The cause of death was shown at the inspection, by the detection of a rent in the wall of the right auricle, extending into the superior cava, accompanied with a large effusion of blood into the pericardium.

Spontaneous ruptures of the heart occasionally occur, which we cannot confidently refer either to injury or disease. A case which I examined in the spring of 1863 appeared to me to belong to this category. The subject, an apparently healthy man, under thirty years of age, after his day's work as a carpenter, was occupying himself sawing a piece of wood at home, when he suddenly dropped down dead. At the inspection the heart was found large for his size, but otherwise presenting nothing unusual, beyond the rent through both ventricles, at the part where they adjoined the proper auricles. I have lately examined the body of a woman of sixty, where the anterior wall of the left ventricle had given way in two places, ending in sudden death on the street. In this case the walls of the heart and its valves presented nothing which could be called morbid. The ascending aorta and its arch were, however, very much enlarged, but otherwise exhibiting nothing unusual.

In a case of this sort, then, the diagnosis between the rupture of the heart *from violence*, and its *spontaneous rupture*, might occasionally be difficult; from the circumstances that such shocks, as in the girl's case above, when instantaneously fatal, rarely leave any traces of the blow on the walls of the chest. In this instance, independently of the extraneous evidence of the violence having been received, the diagnosis was facilitated from the fact of rupture of the heart being so very unlikely at this early age; such disease of the heart as to have led to its spontaneous rupture being all but unknown prior to adult age.

Ruptures of the cerebral mass from violence are believed by Caspar and others to be extremely rare. Caspar says that he has only met with one instance. This comparative immunity appears to be explicable by the form which these injuries usually take, being rather a *breaking down of the cerebral tissue* than *rents as they present themselves in other organs*. In this form these injuries are not unusual in these *mixed cases of concussion and contusion*, already noticed as set down by some late authors as *contusion of the brain*. If I may judge from a few instances I have met with, they are usually encountered at its base. One was on the cerebellum.

Cases of this sort may, or may not, be accompanied by fractures of the skull at some points corresponding with the injured brain.

In a case which I attended with the late Dr. Benjamin Williamson, the basilar artery at the inspection was found ruptured, with effusion of blood at the base of the brain, without fracture or other injury beyond a trifling contused scalp-wound on the top of the head. The rupture of the vessel, in this instance, was the result of the fall on the crown of the head of a small stone, dropped from a height by a mason at work on a house-top. The patient, a girl of fourteen, survived the accident, in a deeply comatose state, for ten days.

In drunken squabbles, or passionate quarrels, spontaneous ruptures of the cerebral vessels are not unusual, in circumstances occasionally very puzzling to the medical jurist. These occurrences are, however, usually found to be traceable rather to the direct and immediate effects of the alcoholic stimulus, or the excited passions of the moment, disturbing the balance of the circulation within the head, than to any chance blow which may have been received or been suspected.

Ruptures of the larger bloodvessels within the other cavities of the body are not unusual consequences of heavy falls. The most frequent of these are ruptures of the thoracic and abdominal aorta. Their direction is mostly either transverse or oblique; seldom extending entirely around the vessel; exhibiting either a clear division or one with angular margins; and leading to copious discharges of fluid blood into the thoracic or abdominal cavities.

A case of spontaneous rupture of the ascending aorta occurred here some years ago. A military gentleman, the brother-in-law of a medical man in town, now deceased, was seized with death-like pallor and faintness in the water-closet, from which he partially rallied, but died of a faint seven hours after. The aorta, on inspection, was found torn into shreds, with a large effusion into the chest, chiefly fluid, but partly of clotted blood. The rupture, in the first instance, had probably been but partial.

A similar case was lately reported to me by Dr. Barclay, of Banff.

The larger veins may be ruptured *from violence*, or may *burst suddenly in previously diseased conditions*, and prove instantly fatal. Such spontaneous ruptures are mostly encountered in the larger veins of the lower extremities. The rents take various directions, leaving angular flaps.

Of the muscles, the one which most frequently suffers from concussion is the diaphragm. Ruptures of this muscle are known to have been caused by falls on the hands and feet, blows on the belly, the passage of a heavy vehicle over the trunk, or trampling on it with a heavy person's knees. The rent, usually of the fibres joining the left side of the central tendon, variable in extent, and with ragged edges, gives rise to but sparing hæmorrhage. In such cases portions of the liver, or of the stomach, the spleen, or parts of the intestines, have been met with protruded into the chest, and compressing the left lung. In one case which I had the opportunity of examining, the rupture of the diaphragm was produced in the dead body. During a heavy night of wind, a man, it was supposed while walking by the edge of the quay at Footdee, Aberdeen, had been overpowered by the gale and blown into the water, where he perished. His body was not found for some days, and when it was examined, the greater part of the intestinal canal and the whole of the liver were observed to have been forced into the cavity of the chest through a large rent in the diaphragm. Other injuries were found in the body, all produced after death, in consequence of the floating of the corpse under a ship in the harbour, which, at low tide, had crushed it in the manner mentioned.

Amongst the curiosities in medicine, we have an instance of a person surviving rupture of the diaphragm. A seaman, as related in the *Guy's Hospital Reports*, whose death followed the amputation of a limb, four months after the injury which led to the loss of his leg, was, though unsuspected till inspection disclosed it, found to have had the diaphragm ruptured to such an extent as to have permitted the intrusion into the chest of the stomach and portions of the colon and omentum. —(*Med.-Chir. Rev.*, No. 59, pages 193-4.)

Ruptures of the muscles generally, and *fractures of the bones from concussion*, are too well known to need to be spoken of. One effect, however, of serious injuries, leading to extensive fractures of bones, may deserve a passing notice. I refer to the fact occasionally encountered of injuries of this sort, from the extent of the shock proving instantly fatal by syncope, when the total want of blood in the vicinity might lead to their being mistaken for fractures produced, not in the living, but in the dead body.

My attention was first directed to this point in 1839, on the examination of the body of a workman killed by the fall on his head of the chimney of a house, which was being pulled down. In this instance, although a fissure had traversed both temporal bones, and both middle meningeal arteries had been torn across, not a drop of blood had been effused in the vicinity of these injuries. Nor, though here too the base of the skull was extensively fractured, did the quantity of blood effused at this part exceed half a teaspoonful.

A case which occurred here in the winter of 1860-61 is interesting as showing how long a person may survive fractures at the base of the skull. The late anatomical porter at the University of Aberdeen—the person referred to—lived for seven weeks after an injury of this kind, with occasional consciousness, notwithstanding the presence of an extensive clot of blood on the surface of the brain, occupying, however, chiefly the upper aspect of the hemisphere.

I come next to speak shortly of

Lacerated Wounds.—Bodies which *tear*, in place of *cutting*, produce their effects on the resulting solution of continuity in different ways:—1st. Such wounds are attended by considerable separation of their edges. This separation, which is here purely passive, may be the consequence in part of loss of

substance; but it is mainly owing to their connexions with the surrounding parts having been destroyed along with more or less destruction of their physical or vital properties.

Again, there is always more or less thickening of the margins of such wounds from the bruising of their edges. In this respect they resemble contused wounds; but from these last they may in general be distinguished from the shreddiness and irregularity of their margins.

Lastly. Such wounds are remarkable for the want of correspondence between the quantity of blood lost and the importance and the vascularity of the parts divided. Limbs have even been torn away in this manner, and not a drop of blood has flowed from the remaining wounded surface.—(Devergie, "Méd.-Lég.," vol. iii. page 65.)

In the case of a person to whom I was called some years ago, who had got entangled with the machinery at a bone-mill in Loch-street, the wounded surfaces, though raw, would not have wetted a cloth, though the muscles on one side of the abdomen were laid bare to a considerable extent, the scrotum and one of the testes were torn away, the penis had the integuments completely dissected off, and there was so much of the common integument of one thigh carried away as to leave a large surface of the muscles on its front and inside, like those of the side of the belly, completely exposed. This person survived till the fourth day, and still no hæmorrhage took place.

Lacerated wounds are frequently attended with marks of contusion. *There may likewise be clotted blood effused into the parts in their vicinity;* and it is only when these *exceptional appearances* are present that we can speak with any confidence as to their having been produced during life, when they are encountered in the dead body.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

RETINAL HÆMORRHAGES AND MELANÆMIA AS SYMPTOMS OF AGUE.(a)

By STEPHEN MACKENZIE, M.D.,
Assistant-Physician to the London Hospital.

F. V., AGED twenty, of mixed Scottish and Hindoo blood, was admitted into the London Hospital on November 17, 1876. He stated that six years previously, when in India (his native country), he had had an attack of dengue during an epidemic of that disease. For about a year prior to admission he had been making voyages between Calcutta and the Cape as an ordinary seaman, but during this period his health was good.

On November 3 he reached London, having had during the voyage from Calcutta, on one occasion only, a fit of ague—that is to say, he shivered and felt cold and then felt very hot. There was no repetition of the attack whilst he was at sea. The day after he reached this country, however, he had a severe paroxysm, which was repeated every day until he came under observation. On the evening of admission his temperature was taken hourly, and was found to rise rapidly from 98° to 107° Fahr. He had the usual rigor, hot stage, and sweating stage of his disease. His spleen was found to be considerably enlarged. There were no abnormal physical signs in his chest, excepting a few râles. The main interest of his case lay in the fact that Mr. Atkinson, the House-Physician, found recent hæmorrhages in each retina on the night of admission. These presented the streaky appearance so often assumed by hæmorrhages in this situation, and were chiefly seen along the course of the larger vessels, especially arteries, which they in places obscured. Sprinkled about the fundus, and most numerous near the disc, were many small round bright spots, resembling pinholes pricked in a piece of paper held up against the light. The retinal vessels were of normal size, and their sheaths did not appear thickened. These hæmorrhages were carefully observed day by day, and were seen to fade away gradually; and as each died away it left to mark its former situation one of the shiny white spots of which mention has been made above. It may be here stated that the patient had neither albuminous urine nor other symptoms of Bright's disease.

His blood was examined under the microscope, and found to contain pigment. When a drop was taken from the pricked finger the following appearances were observed with a Hartnack's objective No. 7, ocular No. 3:—Coloured (red) corpuscles of natural size and appearance; a few large corpuscles of the same tint as the red blood-corpuscles, but twice or three times as large, destitute of any nucleus (macrocythæmia); colourless (white) corpuscles free from pigment; colourless corpuscles containing pigment granules. The pigment granules of brownish-black colour (malaria-melanin) when in small quantity were mostly arranged concentrically around the nuclei; when more abundant they completely obscured the latter. Sometimes the pigment had a stellate arrangement; at other times it completely occupied the corpuscles, which then appeared as brown or black spherical bodies. The nature of the corpuscles containing the pigment was shown by the amœboid movements which took place. There were some large protoplasmic flakes, three times the size of an ordinary colourless blood corpuscle, also containing pigment granules. Free pigment was not regarded, as it might have had an extraneous origin. The blood was examined on several occasions, and on each the pigmented cells dotted the field of the microscope, and could not have escaped detection. They were abundant on the day that Mr. Walker made a sketch of the appearance of the blood. Wishing to have a drawing of the pigment cells on a larger scale than that adopted by Mr. Walker, special arrangements were made one morning for the purpose, but, when the finger was pricked and blood placed under the microscope, scarcely a pigment cell could be found—indeed, only three or four examples from amongst many slides. This occasion was a few days before the patient's discharge. His blood was examined once or more between then and his leaving, but there was no reappearance of the melanæmia in the degree observed when the first examinations were made.

FIG. 1.

(From a drawing by Mr. Basil Walker soon after admission.)

A few days after admission, having ascertained that we had to deal with a quotidian ague, and having found out at what time a rise in his temperature might be expected, thirty grains of sulphate of zinc were administered shortly before the expected paroxysm. This, as was desired, caused a copious emesis; but it did not altogether prevent, though it modified, the expected rigor. It was followed up by three-grain doses of sulphate of quinine, and no further exacerbation occurred. The patient rapidly improved, and soon recovered from the state of prostration to which the ague had reduced him.

The retinal hæmorrhages first seen gradually faded away until, on December 10, there were no traces of them, except the shining dots, which remained unaltered when he was discharged. On December 20, however, on examining the patient's fundus, I discovered a new hæmorrhage of an entirely different character from those previously seen. It was round in shape, with a sharply defined margin, and was of a uniform dark red colour. It was not at all streaky, like the others previously observed. It gradually altered in colour, the centre becoming first purple and then yellow, and much

(a) Read before the Hunterian Society, March 28, 1877.

paler than the circumferential portion, whilst the latter became, as it were, frayed out. In this condition it was when the patient left the hospital, and returned in good health to his seafaring life.

There are two features of special interest in the case I have read: these are the hæmorrhages into the retinæ and the melanæmia.

1. Retinal hæmorrhages (or hæmorrhagic retinitis, as the condition would be described by many ophthalmic writers), so far as I am aware, have been noticed specially in connexion with ague. In fact, the observations recorded of the condition of the retinæ in malarial disorders are few in number. Dr. Hammond, in a paper published in the *Transactions of the American Neurological Society* in 1875,(b) on "Pigmentary Deposits in the Brain resulting from Malarial Poisoning," has described ophthalmoscopical alterations from melanæmia, the result of malarial poisoning. In one case Dr. Hammond says, "Upon examining the fundus of the eye with the ophthalmoscope I found double optic neuritis, worse on the left side than on the right, and large deposits of pigment in both retinæ, especially the left. Theso masses were stellate in form, and followed, mainly, the course of the arterial branches. I then punctured the spleen and drew off a few drops of blood. Examined by the microscope it was found to contain a large quantity of free pigment as well as numerous pigment-holding cells." Professor Roosa examined this patient, and confirmed Dr. Hammond's observations as to the ophthalmoscopic appearances. Of another case of malaria with choreic symptoms Dr. Hammond says, "On examining the eyes with the ophthalmoscope, I found numerous deposits of pigment, stellate in form, along the course of the arterial branches on both sides." And of another case he says, "There were no abnormal ophthalmoscopic appearances beyond choked disc on both sides." Dr. Hammond does not appear to have observed retinal extravasations in his cases.

[Since reading this paper I find that M. X. Galezowski, under the head of "Affections de la Rétine et du Nerf Optique dans la Fièvre Palustre," at page 190 of his "Traité Iconographique d'Ophthalmoscopie" (Paris, Baillière et Fils, 1876), has described the occurrence of retinal extravasations in connexion with ague. He writes—"The accidents which occur in the different forms are proportionate to the gravity of the malarial diathesis. In the common form we have distinguished a kind of apoplectic and exudative retinitis, with peripapillary serous infiltration, which yields readily to antiperiodic treatment. To give an example which we observed with our distinguished friend and colleague Dr. Noel Guéneau de Mussy. A schoolboy was seized with violent headache and intense fever; some days later he complained of defective sight, and on examining him with the ophthalmoscope we found double neuro-retinitis with multiple hæmorrhages. After an emetic the disease presented all the characters of a tertian ague, and later fifty-centigramme doses of sulphate of quinine administered for some days produced a cure both of the fever and of the neuro-retinitis." M. Galezowski also mentions atrophy of the papilla and marked diminution of the central vessels in cases of chronic malarial poisoning.]

But whilst hæmorrhages into the retina do not appear to have attracted attention in connexion with malaria, hæmorrhages into the brain and its membranes have been described by most writers on the anatomy of the disease. Frerichs(c) states that obstruction of the capillaries by pigment and fibrinous-like coagula leads to the formation of numerous capillary apoplexies. He states that Planer described eight cases in which small extravasations were scattered through the grey and white substance of the brain. He adds, "These numerous hæmorrhages have not come under my own observation, but in two cases I have observed extravasations into the meninges." Further on he writes, "I have seen paralysis make its appearance suddenly, and here capillary hæmorrhage was found. Niemeyer says,(d) "In *autopsies* of persons who have died of pernicious intermittents we often find signs of melanæmia, and occasionally remains of inflammative effusions of blood, or excessive hyperæmia in different organs. Hertz, in his exhaustive monograph on "Malarial Diseases,"(e) mentions "numerous punctiform extravasations which have been thought to depend on blocking up of the capillaries by means of pigment, but which Heschl says may exist independent of the formation of pigment matter, and represent capillary aneurisms." Wagner(f) also mentions that capillary hæmorrhages have been found in the brain in connexion with malarial melanæmia, and also in cases of malarial poisoning without melanæmia.

It would, therefore, appear that hæmorrhages into nervous structures are not unfrequently met with in fatal cases of malarial diseases. The hæmorrhages are not confined to these parts, however. Hertz(g) states that ecchymoses are found in the endocardium and pericardium, and small hæmorrhages have been found in the heart-muscle. The liver is sometimes found studded with apoplectic spots, and the mucous membrane of the stomach and intestines has been found ecchymotic.

But besides these post-mortem appearances, hæmorrhages are not at all uncommon during life and in non-fatal cases. Intermittent hematuria is a well-known malarial affection. Hertz writes—"Hæmorrhages from the nose are frequent" (this is interesting, as epistaxis is common in the form of Bright's disease which is most commonly attended with retinal apoplexies), "those from the female genitals or from the stomach and bowels, rare; petechiæ appear upon the skin, and a scorbutic condition is sometimes developed about the gums." Dr. Sinclair has recorded(h) a very interesting case in which intermittent epistaxis appeared to be due to malarial influence and yielded to anti-malarial treatment. Surgeon-Major Porter read a paper last year at the Royal Medical and Chirurgical Society,(i) on Recurrent Hæmorrhage from the amputated stump of a patient who had formerly suffered from malarial affection. Each attack of hæmorrhage was ushered in by a cold and hot stage resembling ague.

It will be seen that the majority of, though not all, writers who have described hæmorrhages into the brain and other organs have been inclined to attribute them to the melanæmia which has been so frequently observed in association with them. It has been held that the pigment cells, by blocking capillaries, lead to fluxionary extravasations or rupture. The retinal hæmorrhages observed in the case of ague I have narrated might, therefore, be naturally referred to the melanæmia which co-existed. I very much doubt, however, whether we should be justified in concluding that there was any direct or necessary connexion between the two.

Wishing to ascertain if retinal apoplexies were at all common in ague, I looked about for other cases. Mr. Atkinson was good enough to go to Greenwich Hospital to find out if there were any malarial cases there. He found six patients suffering from ague, and in two of these there were extravasations into the retina. A few days later I accompanied him to examine the cases. There were then only three out of the six cases remaining in the hospital, and of these two had hæmorrhages—they were the same two in whom Mr. Atkinson had previously seen hæmorrhages. These patients were all under the care of Dr. Ralfe, whom I must here take the opportunity of thanking for most courteously according me permission to examine any of his patients and have drawings or other observations made. The examinations were made by the light of a candle, so that only gross changes could be well observed. In one patient, a male aged eighteen, suffering from tertian ague, there was one small hæmorrhage in the left eye a little above the disc; his blood contained no pigment. In the other patient, a male aged twenty-nine, suffering from quotidian ague, there were numerous large superficial hæmorrhages in both retinæ; some of the hæmorrhages appeared to be clearing up at the edges, leaving white patches—one was paler in the centre than at the circumference; this patient's blood, also, was free from pigment. When Mr. Walker went to the Seamen's Hospital, five days later, to make a drawing of this patient's eye, the hæmorrhages had to a great extent cleared up, and he only found the two depicted in Fig. 2.

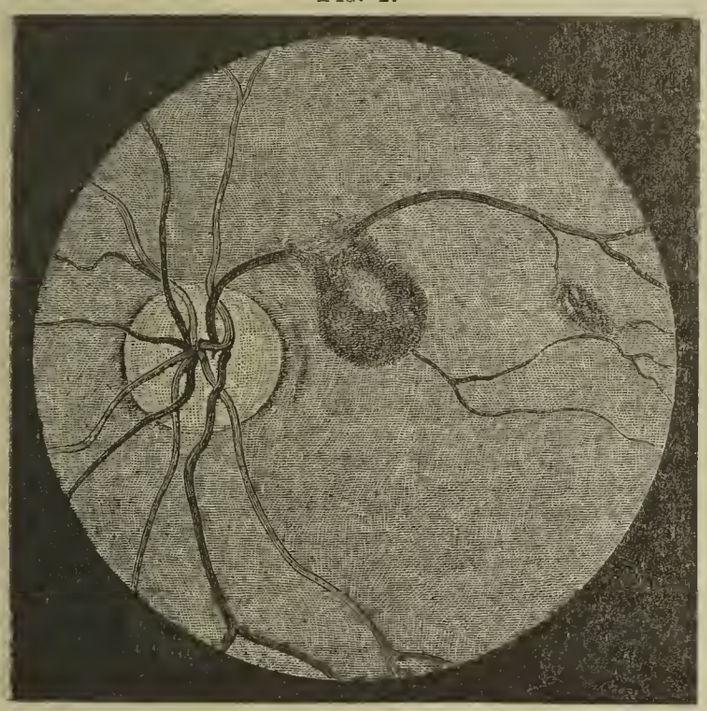
Now, these two patients had been on a vessel lying for some time off the coast of Mexico. There was in the hospital, also suffering from ague, a third seaman from the same ship. His eyes and his blood were examined, but he had neither retinal hæmorrhage nor melanæmia. The form of his ague was

(b) Republished in his "Diseases of the Nervous System."
(c) "Clinical Treatise on Diseases of the Liver" (New Sydenham Society translation), vol. i., page 327.
(d) "Text-book of Practical Medicine" (American translation), vol. ii., page 623.
(e) "Ziemssen's Cyclopædia of the Practice of Medicine" (English translation), vol. ii., page 626.
(f) "Manual of General Pathology" (translated from the sixth German edition by Drs. Duyn and Scguin), page 550.
(g) *Loc. cit.*
(h) *British Medical Journal*, October 28, 1876, page 551.
(i) *Royal Medical and Chirurgical Society's Transactions*, 1876.

irregular, so that he had the disease less severely than the other two patients.

This point—the stage or severity of the disease—appears to me to be of importance in determining the hæmorrhages: for it will be seen that of the three cases in which hæmorrhages were noticed, in the two in which the hæmorrhages were well-marked the ague was of the quotidian type; in the other case, in which there was only one small hæmorrhage, the ague was tertian. In the shipmate of the two patients at Greenwich, who had no hæmorrhages, the ague was irregular. Moreover, the other cases examined by Mr. Atkinson, and found to be free from hæmorrhages, were patients about to be discharged cured from the hospital. In the few chronic malarial cases I have examined I could find no extravasations. If, therefore, retinal hæmorrhages are at all frequent concomitants of ague it would seem that they may be expected to be found in the early stage of the affection, when the disease is most active and the paroxysms occur at short intervals.

Fig. 2.



It should be stated that none of the patients in whose eyes I have found hæmorrhages complained of loss of sight or any ocular trouble. This shows the importance of the routine use of the ophthalmoscope in medicine, as so strongly insisted on by my colleague Dr. Hughlings-Jackson.(k) In Galezowski's case it will be observed there was defective sight.

As to the cause of the retinal hæmorrhages, I should conjecturally refer it to an altered condition of the blood. Retinal hæmorrhages are found in pernicious anæmia,(l) leukæmia,(m) purpura,(n) diabetes,(o) and several other diseases characterised by alterations in the blood.

It is an interesting fact that retinal hæmorrhages have been described by Roth(p) in pyæmia, a disease which shares with ague, more almost than any other, profound alterations in the blood and repeated rigors.

Retinal hæmorrhages in connexion with ague may be much less frequent than would appear from the cases I have brought under the notice of the Society. I hope I shall not be thought to over-estimate their importance, or to generalise from one or two chance cases. I merely wish to call attention to the fact that they have been observed in three cases, and would ask those who have the opportunity to examine with the ophthalmoscope the eyes of patients suffering from ague. Should hæmorrhages be found of frequent occurrence, they may in doubtful cases have diagnostic value, as have the intraocular changes in Bright's disease and diabetes.

(To be continued.)

(k) "A Physician's Notes on Ophthalmology," *Royal London Ophthalmic Hospital Reports*, vol. viii., part 4, 1873, and vol. viii., part 1, 1874; and elsewhere.

(l) Immerman, *Deutsche Arch. f. klin. Med.*, 1874, xiii., pages 209-244. Manz, "Veranderungen in der Retina bei Anæmia progressiva perniciosa," *Centralblatt f. d. med. Wissensch.*, 1875, No. 40, page 675.

(m) F. Poncet, "Rétinite Leucocythémique," *Arch. de Physiol. Norm. et Path.*, 1874, page 496. Liebreich, Galezowski, and most ophthalmic writers mention it.

(n) Rue, *Union Méd.*, 1870, No. 48. Wickham Legg, "Report from the Post-mortem Room," *St. Bartholomew's Hospital Reports*, 1875, page 64. Author, *Medical Times and Gazette*, March 3, 1877, page 233, and March 10, page 258.

(o) Leber, *V. Graefe's Archiv*, Band. xxi., Abth. 3, who gives the literature of the subject.

(p) *Deutsche Zeitschrift für Chirurgie*, September, 1872, page 471.

CASE OF

ACNE ROSACEA TREATED BY OINTMENT OF CHRYSOPHANIC ACID.

By BALMANNO SQUIRE, M.B. Lond.,
Surgeon to the British Hospital for Diseases of the Skin.

A LADY, aged forty-five, residing in one of the Midland counties, had been affected with acne rosacea for about a year and a half, when she came up to London to be treated for it. She is approaching the menopause—that is to say, for the past two or three years her periods have been irregular. However, her general health is apparently perfect, and she declares that she has always enjoyed the best of health. She is a brunette of sturdy build and hearty appearance. Her face is her only misfortune. This region presents not merely the blotchy patches of discoloration which are characteristic of some varieties of acne rosacea, nor that copious sprinkling of minute pimples which represents another common phase of the disease, but rather what may be termed the tuberculous variety of acne rosacea—that is to say, the papules, or rather tubercules, are individually large; not that their sebaceous core forms any considerable portion of their bulk (as is wont to be the case in the indurated phase of "acne juvenilis"), but that the elevated induration which encloses the small core is notably developed. These tubercules (several of which are of the size of split peas), although they are mostly smaller, occupy very abundantly the forehead, the cheeks, and chin, and also that portion of the skin of the neck which lies immediately under the lower border or "*base*" of the lower jaw.

She was treated with chrysophanic acid ointment as an external application to the face, and with glycerole of nitrate of bismuth as an internal remedy. No other remedy, external or internal, was used from first to last. She commenced treatment on January 19, 1877. On February 27 she presented herself quite free from any trace of her former eruption. I attribute the alteration she experienced purely to the action of the chrysophanic acid ointment. There was no indication whatever for the exhibition of bismuth; the patient's digestion was in no way out of order; but I was engaged at the time in making further observations on the effect of my glycerole of the nitrate of bismuth, the preparation and physical properties of which have already been fully described in this journal.(a)

In the case of this patient, a dose of the glycerole containing four grains of the nitrate of bismuth, given three times a day for a few weeks, produced no appreciable effect of any kind.

As to the ointment, it consisted at the first of twenty grains of chrysophanic acid dissolved in an ounce of lard at the temperature of an oil-bath. For the last ten days of the treatment, however, the strength of the ointment was raised to that of forty grains of chrysophanic acid to the ounce of lard. The ointment in either case was regularly, three times a day, rubbed well in all over the face, avoiding only the eyelids and the lips. From the beginning to the end the patient never experienced any smarting from this energetic treatment. However, occasionally the face became a little puffy, as if slightly swollen. Throughout this treatment the face became more or less stained by the action of the ointment, but it was not *very* much stained. The complexion of a field labourer about autumn time is often quite as dark as this patient's face was at any time of the treatment. The stain proved, of course, quite transient, passing away completely after a few days' discontinuance of the ointment.

Commentary.—The case above related bears on some points in dispute as to the action of two new remedies. Of the glycerole of nitrate of bismuth it was generally prophesied that it would prove a very sharp and acrid medicine: but in this case a fair dose of it given for a long while did not appear to be at all a disagreeable remedy. Of the chrysophanic acid ointment it has been said by some that it is dangerous to use it to the face, and by others that even when used to the tougher regions of the skin its strength ought not to exceed a

(a) *Medical Times and Gazette*, December 9, 1876.

scruple of the acid to the ounce of lard, and even then its use ought to be cautiously limited to one or two, or at the most but very few, applications. Now, in this case an ointment of forty grains to the ounce, well made by one of the best chemists in this city, was energetically rubbed in over the whole of the face three times a day for thirty times in all, without producing any sensation of smarting, nor causing more swelling than a very moderate puffiness of the face. Then the staining of the skin has been spoken of as a great disadvantage. "Patients," it is said, "object to this very much." Now, this patient did not make any difficulty of that kind. The case illustrates, moreover, quite a new field for the employment of chrysophanic acid. I have already pointed out that it is a serviceable remedy in cases of psoriasis.(b) To this I have now to add that it is capable on occasion of curing acne rosacea.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THREE CASES OF HEAD INJURY.

SEAMEN'S HOSPITAL, GREENWICH.

Compound Comminuted Fracture of Vault of Cranium—Hernia Cerebri—Cerebral Abscess—Double Optic Neuritis—Death.

(Under the care of Mr. JOHNSON SMITH, and subsequently of Mr. T. E. MACLEAN.)

W. C., aged twenty-one, an engineer's labourer, was admitted on July 25, 1876, under the care of Mr. W. Johnson Smith. He had fallen a distance of thirty feet, and his head had struck against an iron rivet. The diagnosis on admission was —compound comminuted fracture of the vault of the cranium, with laceration of the membranes, and protrusion of lacerated brain-substance.

July 26.—Vomited freely for first time this morning. Has had a quiet night. Has no recollection of what happened, but answers name and age quite rationally. There is a wound two inches and a half in length, a little to the left of the middle line, extending forwards from a point two inches and a half above and in front of the apex of the occipital bone. Much ecchymosis of right upper eyelid. Slight ocular subconjunctival ecchymosis at outer part. Right pupil contracted. Left pupil reacts normally to light. Respirations irregular, 18; pulse 60; temperature—morning 98·4°, evening 98·6°. Ordered calomel gr. v., pulv. jalapæ co. gr. x., statim.

27th.—Drowsy, but answers rationally when spoken to. Takes food well. Temperature—morning 98·4°, evening 99°.

28th.—Very drowsy. Lies on left side, away from light. No head-pain. Wound clean; visible pulsation at its base. Pulse 48; temperature—morning 98·4°, evening 98·6°.

29th.—Mental condition as yesterday. Paralysis of sensation and movement of right arm and leg. Pulse 56; temperature—morning 99°, evening 99°.

30th.—Has regained a little power in the right hand, but right leg remains as it was. When asked he now complains of pain in the back of the head at the seat of the wound. Temperature—morning 98°, evening 98·4°.

31st.—Temperature—morning 98°, evening 98·8°; pulse 52.

August 1.—Still rational; complains of pain in the head. Temperature—morning 98·4°, evening 101·4°.

2nd.—At 1 a.m. had some short but severe convulsive seizures. This morning drowsy; tongue furred. Pulse 80; temperature —morning 100·6°, evening 101°.

3rd.—Pulse 92; temperature—morning 101·2°, evening 101·4°.

4th.—Pulse 80; temperature—morning 100°, evening 100·8°.

5th.—Still complains of pain in head. He is feebler. Pulse 84; respirations 20; temperature—morning 100·4°, evening 101°.

6th.—Temperature—morning 100°, evening 101°. Slept all day.

7th.—Complained of his head during the night. Does not answer when spoken to. Still lies on left side, away from light. Complete paralysis of right arm. He passes his urine into the bed. The wound looks clean. Pulse 56; temperature—morning 99·8°, evening 100·6°.

8th.—Pulse 84; temperature—morning 99·6°, evening 99°.

9th.—Pulse 72; temperature—morning 98·6°, evening 99·2°.

10th.—Restless during night. Again complained of head. A little more protrusion of brain-substance. Copious discharge of blood-stained serum. This began yesterday morning when the hernia cerebri commenced. Morning: temperature 98·6°; pulse 68; respirations 20. Evening: temperature 99·2°; pulse 86; respirations 16.

11th.—Between 12 and 1 a.m. delirious. Morning: temperature 98·2°; pulse 72; respirations 16. Evening: temperature 98·8°; pulse 64; respirations 20.

12th.—Morning: temperature 98°; pulse 64; respirations 16. Evening: temperature 99°; pulse 64; respirations 16.

13th.—Morning: temperature 99·2°; pulse 80; respirations 20. Evening: temperature 99·8°; pulse 80; respirations 20.

14th.—Double optic neuritis. More drowsy. Morning: temperature 99·6°; pulse 92; respirations 16. Evening: temperature 99·8°; pulse 88; respirations 20.

15th.—Morning: temperature 99·4°; respirations 20. Evening: temperature 100·2°; pulse 64; respirations 20. Does not answer now when spoken to. Facial palsy right side. Also probably the sensation on right side of face and right conjunctiva blunted. He does not flinch when a pin is applied to right cheek, whilst he does flinch if it be applied to the left.

16th.—Hernia cerebri has increased. 9 a.m.: temperature 99·6°; pulse 80; respirations 20. At 8 p.m. respirations became very rapid—viz., 76. The pulse was too quick to count. Died comatose 11.45 p.m. The temperature at 8 p.m. was 103·4°; at 10.30, 105·4°; at midnight (*i.e.*, a quarter of an hour after death), 106·6°; and at 12.30 still 106·6°.

Post-mortem, thirteen hours and a half after death: Rigor mortis feebly marked; slight hypostatic congestion in dependent parts.

Examination of Head.—The greater part of the hernia cerebri has disappeared. On removing the scalp, a line of ecchymosis was seen beneath the pericranium, over the line of the cervical suture, and the bones of the skull were slightly depressed along this line. Two inches and a half behind the cervical suture, a fracture was seen just to the left of the middle line. This fracture looked just as if it had been cut out with a trephine; being clean-cut in front, but behind rather more of the outer than of the inner table had been broken away. The dura mater was found to be normal, except where wounded, and three small fragments of bone were found adherent to it. The sub-longitudinal sinus contained no clot, nor were any of the veins opening into it plugged. The arachnoid was generally slightly opaque, and markedly so round the wound; the dura mater and arachnoid were adherent in this situation, but no free flakes of lymph were seen. Brain: No flattening of the convolutions, except in the left parietal and left occipital lobes. The olfactory nerves, especially their bulbous ends, were swollen, looking quite dropsical. The section of the optic nerves showed their component fasciculi very plainly, with intervening points of divided bloodvessels. The third nerves were also swollen. The remaining nerves appeared normal. There was slight laceration of the tip of the left frontal lobe, and more extensive laceration of the temporo-sphenoidal lobe on the same side. There was no injury to the right hemisphere, nor to the cerebellum. On cutting into the left lateral ventricle, the wound on the surface of the brain was found to communicate with it by a diffuse abscess. The greater part of the roof of the descending cornu was in the stage of yellow softening. This softening also involved the posterior part of the nucleus caudatus. The nucleus lenticularis was normal. The piece of bone wanting in the calvaria was found embedded in the left parietal lobe, and still attached to a fold of dura mater, which formed a connecting hinge; thus the bone had been driven downwards and backwards, rotating round a horizontal axis, so as to bring the inner table of the displaced piece uppermost. In the base of the skull a fracture ran across the anterior fossa, about three-quarters of an inch in front of the small wings of the sphenoid. Through the thin roofs of both orbits and of the ethmoidal cells the hæmorrhage resulting from the fracture could be seen, most marked in the right orbit.

LONDON HOSPITAL.

Compound Depressed Fracture of the Skull—Trephining and Removal of a Detached Sunken Fragment of Inner Table—Recovery.

(Under the care of Mr. RIVINGTON.)

A. W., aged eleven, was admitted into the London Hospital on June 4, 1873. He was in a urinal, when a serrated piece

(b) *Ibid*, February 10, 1877.

of iron, with rather a sharp point, fell from a height of about fourteen feet, causing a wound about the size of a threepenny-piece at the posterior part of the right parietal bone. A probe passed some way in beyond the wound, and then slipped into a depression about the size of a pea. The patient had been insensible at first, but he recovered and walked to the hospital, and was quite sensible on admission. As the fracture had been caused by a pointed body, as there was evident depression, and it was probable that the internal table would be found to have been splintered, under ether Mr. Rivington enlarged the wound by making a T-shaped incision, pressed aside the periosteum, and removed a little piece of the sound bone at the margin of the fracture with the smallest sized trephine. The outer table was fractured and slightly depressed, and on its removal the inner table was seen to be driven inwards. Blood welled up freely from the edge of the fracture during the operation, but as soon as a depressed piece of the inner table, about three-quarters of an inch long and a quarter of an inch wide, which had been driven down on to the dura mater and was firmly wedged in, had been raised and removed, all discharge of blood ceased. The blood that issued was blood effused in consequence of the fracture. At one spot the dura mater seemed injured. Wound dressed with wet lint.

June 5.—To-day, when the wound was re-dressed, the scalp was seen to pulsate over the site of the operation. Pulse 132; temperature 102·4°. Ice applied to the head.

6th.—Did not sleep well; had headache, especially at the posterior part; was drowsy, and had intolerance of light; quite sensible. Pupils normal; wound healthy; free sweating. Head ordered to be shaved. Pulse 120; temperature 103·6°; respirations 40. 8 p.m.: Pain down his back to the sacrum; very chilly; feet cold; pulse weak; looked pallid. Hot bottles ordered for the feet. Pulse 124; temperature 103·4°; respirations 33. 9 p.m.: Rigor. Gaslight too strong for his eyes. Hot, dry skin; much thirst; quite sensible.

7th.—Had passed a good night. Pain down the back gone. Made a pretty good breakfast off bread-and-butter and milk. No more shivering; less headache; sweating freely; pupils unequally dilated, the left being the larger. Wound healthy, with discharge of a little pus. Scalp over occipital bone slightly œdematous. Temperature 103·4°; pulse 132; respirations 32. Evening: Another attack of shivering; covered his head up to exclude the light; felt "frightful giddy"; looked flushed, and had been complaining of the pain; very drowsy, and had to be spoken to two or three times before he answered.

8th.—Felt quite himself; giddiness gone; headache better; shooting pain round the neck; skin hot and dry. Quite sensible, but had called out in his sleep during the night, as if delirious. Face very much flushed; scalp more œdematous; red flush about the forehead, indicative of the commencement of erysipelas. The scalp over the wound had ceased to pulsate. The sutures were removed; partial union had taken place, but the rest did not look very healthy, and a drachm of yellow ochre-like pus was pressed out in a curdled state. Wound to be dressed with lint dipped in carbolic oil. Pulse 100; temperature 103·8°; respirations 30.

Erysipelas now more fully developed itself, and the patient was sent to the isolation ward. The attack passed off very favourably, and at the end of about a month the patient was discharged cured.

Compound Depressed Fracture of the Skull—Operation refused by Friends—Recovery.

(Under the care of Mr. RIVINGTON.)

John U., aged fourteen, was admitted into the London Hospital on June 8, 1873. He had been struck on the left side of the head by half a brick, which had been thrown at him by another boy. The blow staggered him, but he did not fall. He walked to the hospital—about one hundred yards—with the assistance of a woman. On examination, a small laceration on the left side of the head was found over the squamous portion of the temporal bone, an inch above the ear. A portion of bone, the size of a threepenny-piece, fractured above and depressed below to the extent of about one-eighth of an inch, was found. As this case seemed very similar to the one admitted a few days before, in which injury by a pointed body had caused a slight fracture of the outer table, and a more extensive fracture and depression of the inner table, it was thought advisable to examine the fracture, and for this purpose Mr. Rivington enlarged the wound, and found that its extent was not greater than that already described. The friends of the patient were informed of the nature of the case, and advised that it would probably be safer to remove a small portion of the bone in order that any loose fragments which might exist internally might be taken away. They would not, however, consent to any operation. The result seemed fully to justify the prohibition. The wound healed very speedily, and there was no unfavourable symptom, except on the 12th, when the patient complained of frontal headache, had a furred tongue, a temperature of 102·4°, and refused solid food. In a very short time these threatening indications entirely passed off, so that by June 26 the lad was able to attend as an out-patient.

CHARING-CROSS HOSPITAL.

CEREBRAL HÆMORRHAGE—CHRONIC BRIGHT'S DISEASE—DEATH.

(Under the care of Dr. GREEN.)

[Reported by Dr. HOUGHTON, Registrar.]

THIS case illustrates well the triple association of conditions—granular kidney, hypertrophied left ventricle, cerebral hæmorrhage. The report is of special value on account of the temperature-record.

W. C., a coachman, aged forty-nine, was admitted on March 24, 1877, under the care of Dr. Green. While seated quietly on the box of a carriage he had suddenly lost his consciousness and become paralysed in his right arm and leg. Unfortunately no previous history of the patient could be obtained.

On admission he was found to be partially conscious. He spoke very thickly, and could not remember his name and address, although he recognised them when they were repeated to him. There was paralysis of the lower part of the face on the right side; the tongue deviated to the right on protrusion; there was total paralysis, motor and sensory, of the right upper limb, and the elbow was rigidly flexed. Patient had partial voluntary power over the right lower limb. There was some heat of head present. The ocular movements were perfect, and the pupils small and equal. Patient was fairly well nourished; there was no œdema of the extremities, and the temperature in the axilla was 99°. Patient was put to bed, an ice-bag applied to the head, and one minim of croton oil administered. On further examination during the next few days there was found marked degeneration of the arteries, with a hard, full, and regular pulse at the wrist. The sounds of the heart were muffled at the apex, with partial reduplication of the first sound over the septum between the ventricles; at the base the second sound was accentuated. Patient had clonic spasms on the paralysed side on several occasions; and from the date of admission there was incontinence of the urine and fæces. He generally lay with his eyes wide open, taking but little notice of surrounding objects, and singing or muttering to himself. There was a weak, loose cough, with expectoration, but numerous mucous and sonorous râles were audible. On one occasion some of his urine was obtained; it was pale, with a large opalescent deposit, studded with small granules of uric acid; it contained one-eighth part of albumen, and had a specific gravity of 1015. It was found to contain granular, and fragments of large hyaline, casts.

Patient died a week after admission, the temperature being very high for some time before death.

The following shows the patient's temperature from the day of admission until his death:—March 24, evening 99°; 25th, morning 98°, evening 99·6°; 26th, morning 101·2°, evening 102·5°; 27th, morning 101·8°, evening 103°, 102·5°; 28th, morning 103°, 101·8°, evening 101·5°, 103·2°; 29th, morning 102°, evening 103·2°, 104·2°; 30th, morning 104°, 104·2°, evening 103·6°.

Post-mortem Examination.—The sinuses of dura mater were congested, and the two layers of the arachnoid separated with some difficulty. The arteries at the base of the brain, especially the basilar, were dilated and rigid, but were quite free from aneurismal dilatation or calcification. Left lateral ventricle contained a large firm clot not completely filling it, and this was continuous with a clot in the substance of the optic thalamus. On further examination, a recent hæmorrhage half the size of the closed fist was found undermining all the floor of the left lateral ventricle, and extending onwards to within half an inch of the convolutions; the source of this could not be discovered. The left ventricle of the heart was greatly hypertrophied, and the entire viscus weighed thirteen ounces.

The lungs were emphysematous, with great congestion of their lower lobes. The kidneys were small, pale, with greatly thickened and adherent capsules; the substance was found to be toughened, and a section showed great diminution in the thickness of the cortex. The outer surface of the kidneys was granular and uneven.

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Medical Times and Gazette.

SATURDAY, JUNE 23, 1877.

THE RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL.

The "Recommendations of the General Medical Council on Education and Examination" were subjected to very prolonged and minute, and we suppose we must say careful, consideration and revision during the recent session, as is well known to those of our readers who took the trouble to look through our reports of the proceedings of the Council, and at our weekly comments on them. But it would not be easy to gather a very clear idea of the results from reading the debates, and we therefore this week publish elsewhere in our columns the Recommendations as they now stand:—

In Chapter I., on "Preliminary Examination" in General Education, among the necessary subjects the restriction of Geometry to the "first two books of Euclid" has been relaxed by the admission of "or the subjects thereof" as an equivalent; and in the list of optional subjects, the phrase "Elementary Mechanics of Solids and Fluids, meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics," has been substituted for "Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics,"—a change gained at the cost of not a little time and discussion; and much time was also spent over the question whether "Natural Philosophy" should or should not be included among the subjects of professional education, or should be made one of the *compulsory* subjects of the preliminary examination. A new Recommendation was added, to the effect that any cases in which decided ignorance in the subjects of general education has been shown by candidates at the professional examinations should be reported to the various licensing bodies, with the name of the board, or boards, before which the preliminary examinations have been passed; and that such reports should be transmitted to the Registrar of the General Medical Council. This Recommendation, if accepted and acted on by the licensing bodies, may certainly be expected to insure a decided improvement in general eduction.

In Chapter II., on Registration of Medical Students, it is now provided that a student shall, on being registered, produce evidence of his having commenced medical study, as well as of having passed a recognised preliminary examination in general education; but apprenticeship or pupilage at a county hospital, or to any registered medical practitioner, will be accepted as evidence of the commencement of medical study. And in the Recommendations respecting the duration of professional study, the words "forty-five months" have been substituted for "four years," in order to enable students to present themselves for the final examination at the end of the summer session of their fourth academical year. The same alteration is made also in Chapter III.

In Chapter IV., on Professional Education, "General Anatomy" has been omitted from the list of subjects, as being taught in the courses of Anatomy and Physiology, and not as a special subject. "Chemistry" has been made to include "a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine"; and "Chemical Physics, meaning thereby Heat, Light, and Electricity," has been added, these subjects not being now taught in courses of Chemistry. The subject of Therapeutics has been separated from Materia Medica and Pharmacy, and included in the term Medicine; Pathology has been made a subject by itself; and certificates of education in vaccination are to be received only from "an institution where the appointed teacher of vaccination is recognised by the Local Government Board."

In Chapter V., on Professional Examination, some important alterations have been made in the Recommendations. It is now recommended that there be in future *three* examinations instead of two, and that these be arranged in two divisions; the first division to embrace the more elementary subjects, as Chemistry and Chemical Physics, Anatomy, Physiology, Materia Medica, and Pharmacy; and the second, the more practical subjects—Pathology, including Morbid Anatomy, Medicine, Surgery, Midwifery, and Forensic Medicine. It is recommended that an examination in the earlier subjects shall take place before the end of the first year of professional study; and that the examinations, and the subjects included in each, shall be such, and in such order "as may insure, so far as possible, a due continuity and sequence of study"; but it appears to be left to the licensing bodies to subdivide, at their discretion, either the first or the second division of the examinations into two parts. These Recommendations are well calculated, we think, if wisely carried out, to make students work well in their first year, and work more continuously and evenly throughout the curriculum; and some such additional stimulus was greatly needed. It may be said that the student who has passed in the early part of his studentship the examination in Anatomy, Physiology, and Materia Medica, will thenceforward neglect those subjects, and may have safely forgotten them when he goes in for his final examination: but "Medicine" is to include Medical Anatomy and Therapeutics, and "Surgery" is to include Surgical Anatomy; so that examiners may easily take care to prevent candidates from neglecting with impunity the practical knowledge of some of the most important subjects of the earlier examinations. The Council have done well also in expressing an opinion that it is desirable that in the examinations in several of the subjects of a curriculum (as Chemistry, Physiology, and Materia Medica) the licensing bodies "should limit and

define by schedule the extent of examination." It is fair to both students and teachers that the limits within which real knowledge of such subjects is expected from candidates for a minimum qualification shall be marked out. Another important recommendation is that candidates for the final examination shall be required to give evidence that they have had "opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere. This, again, recognises pupilage under a practitioner as a part of professional study. It is an invaluable means of learning "the care of patients," which was lost when the old system of apprenticeship was given up; and may be made to give students all the most valuable benefits of that system without its disadvantages. The recommendation that the course of professional study required for a licence shall occupy at least four years, "of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act," points also in the same direction.

It may also be mentioned here that, on the last day of the session, the Council agreed to Mr. Lister's motion—"That it is undesirable that any teaching or licensing body should insist on the student taking more than one course of lectures on any one subject." This is a step towards liberty of education, towards the leaving a student free to get his knowledge as he likes, so long as he gets it, and would be an additional incentive to teachers to make their lectures as good as possible: for we may be sure that students will not fail to attend any course of lectures that they find to be instructive and profitable. On the whole, it must be admitted that the revised Recommendations are an improvement on the former ones, though most people may be very strongly of opinion that the degree of improvement does not justify the expenditure of the greater part of the recent session of the General Medical Council on the work.

ON THE ETIOLOGY OF CANCER.

The Pathological Society of London has during the session which is now just over had before it many important questions, and among them assuredly not the least important is the subject of the etiology of cancer. Dr. Creighton, whose papers on this subject appeared in Mr. Simon's blue-books some little while back, briefly stated his views before the Society at their meeting on the 1st ult., and at the same time laid before the members a series of beautiful microscopic preparations illustrating the doctrine he at present holds as to the relations of normal gland-function, perverted function, and the production of tumours. As it is our purpose, however, only or chiefly to criticise Dr. Creighton's views on the etiology of cancer, we must refer the reader elsewhere in our columns for a full account of his paper. It was argued that during the stages both of evolution and involution of the breast certain cellular products are formed, which, as they are not utilised, must be called waste products. And as cells very much resembling these "waste products" are found in certain of the pathological processes of the breast, it was argued that any pathological excitation which might befall the gland tended to start the breast upon a course of evolution, and that certain immature cellular products resulted which ultimately become the source and origin of cancer. On referring to the blue-book reports (1875),(a) we find Dr. Creighton's views on this point more fully developed. He says that the waste cell of the second stage of evolution is the type of most of the cells in cancer of the human female mamma, and in those normal processes where it occurs it is safely disposed of, but where it is due to the spurious excitation of disease it remains at or near the place of its origin. "In the evolution of the breast in pregnancy this waste cell corresponds to a passing phase of the process; in the diseased processes of the breast it represents the effect of a certain imperfect degree of the functional excitation acting at the same low rate for an indefinite time."

Dr. Creighton chiefly investigated the physiological and pathological processes in the breast of the bitch; and though there are certain differences between these and the corresponding processes in the human female, yet for practical purposes they may be regarded as identical. In the bitch, the starting-point of tumours is the "large yellow cell," which is found abundantly; he regards it as a constant product of evolution. If the evolutional excitation be normal, the production of the "large yellow cell" is only temporary, and further and higher products result; but if the excitation be a morbid one, the functional activity thus erroneously called into play continues to act at a low rate for an indefinite time, and "under these circumstances the secretory product would appear to be a more stable product than the waste cells produced by a corresponding functional stimulus in the healthy evolution." In the female breast these "large yellow cells" are of "exceptional occurrence." In certain tumours, however, when seen under the microscope, an arrangement of cells and matrix closely resembling that of the large yellow cells is constantly seen; and Dr. Creighton believes that, though the cells just referred to in the human breast are "rather less than half the size," and have no pigmentation, they are the analogues of the "large yellow cells" seen in the bitch. He says, "there arises the strongest presumption that the cells of the scirrhus are of the same origin and subject to the same influences as the pigmented cells, which are known beyond all doubt to be the waste products of a feeble degree of the secretory activity." Thus, then, the waste cell of the second stage of evolution is the type of most of the cells in cancer of the human female breast.

Dr. Creighton argues "that a disturbance of the glandular function tends more to transitory inflammations or abscesses and less to permanent cell-collections or tumours in proportion as the secretory excitation is near its highest intensity and the epithelium of the acini near its perfect form." After developing these views much more fully (our space does not allow us to follow him further), Dr. Creighton sums up thus:—"The liability of the breast to malignant tumours may be said, therefore, to depend on at least three principal circumstances. The first and most important of these is the circumstance that the law of the secretion is the law of endogenous cell-formation, which always affords an opportunity for the formation of collateral cellular products, not only useless but also heteroplastic (*sic*). The second is the circumstance that the gland is liable to periodical remissions of its function, that it remains in an involuted or resting state for a greater or less portion of the mature years of every individual, and that it re-acquires its full development and activity, after each period of rest, only by passing through a slow process of evolution. The third circumstance is that a time arrives in the life of every woman, long before old age, when the mamma is no longer capable of reacting as before to the excitations that may befall it, and when the process that may be set up within it is more than ever likely to have a disastrous issue."

Such, then, are the chief points in Dr. Creighton's paper on the etiology of cancer, and such may be given as a brief summary of his remarks at the Pathological Society. We are unable to accept his conclusions; his statements as to the microscopic structure of the parts examined are no doubt rigorously exact; it is with the interpretation of these specimens that we differ. It seems to us to be a retrograde step to teach that a spurious functional activity, when carried on

(a) Reports of the Medical Officers of the Privy Council. New Series, No. VI.

"at a low rate for an indefinite time," should give rise to products more stable than those which result during normal excitation. Such a doctrine is contradicted by every physiological process with which we are acquainted. If such were the case, how does the mammary gland manage, under certain circumstances, to continue to secrete milk uninterruptedly for a couple of years—and that, too, under the least favourable circumstances that we can conceive? If Dr. Creighton's views were correct, surely after a time the secretion of milk should cease, and "more stable" products ought to result. But is such the case? Then, if this doctrine of waste products is to explain the origin of cancer, how about organs in which these waste products never occur at all—organs, in fact, which are not subject to periodical remissions of function? How will it explain cases of cancer which occur in young women, whose glands are still capable "of reacting to the excitations which befall them"—cases where the cancer developes during the period of suckling? Still less will it answer for those cases of cancer in the male breast—breasts which, but rudimentary at the best, have probably never known either a normal or a spurious excitation of any kind!

As we have already said, it seems passing strange that Nature should adopt in this instance a course which is the very contrary to that which she adopts elsewhere under similar circumstances; it is therefore *primâ facie* improbable; nor does a more careful consideration of the subject render it at all more feasible. For if such were the cause of cancer, what an infinite amount of it we should surely get! and yet how rare is it! Dr. Creighton, if we heard him aright, argued that the same theory would hold good in other cases. Let us ask him how it could explain cancer of the lip. Finally, his doctrine that organs most subject to catarrh are also most subject to cancer, as the stomach and uterus, is difficult of acceptation. For on this hypothesis the lungs, with their endless extent of epithelial lining, and their proverbial tendency to catarrhal mischief, ought to be at once the most favourable and the most frequent seat of primary cancer; and yet, what is the fact? Why, that cases of primary cancer of the lungs might, metaphorically speaking, be counted on the fingers of one hand.

We may sum up by saying that Dr. Creighton's papers teach us (1) much that is good and new concerning the involution and evolution of the breast; (2) a little that is exceedingly questionable—viz., that "the secreting epithelium and not the connective tissue is the source even of so alien tissues as the myxomatous and the cartilaginous and the osteoid"; and (3) plenty which is still not only very doubtful, but highly improbable—that "the waste cells of the pathological process are more stable than in the normal processes."

He argues, further, that his view of the origin of cancer could claim another advantage—that of affording some sort of motive for the exuberant growth. True, if he had proven his point; and this would certainly have been a subject for congratulation, for nothing is more mysterious than the power which starts the disease. It is easy enough to follow it after it has once started, but it is exceedingly difficult to say why the epithelial tissues in one patient should proliferate towards the surface and be harmless, while in another patient this same tissue in proliferating should *invade* deeper structures, and in doing so constitute at once the most fatal and the least tractable disease with which we are acquainted. Yet such is the fact. The microscope in most cases fails to detect anything which is actually characteristic of cancer and of cancer only; and, before expressing an opinion, the histologist must examine considerable areas of tissue and know the *situation* of the new growth if he would avoid errors and mistakes. All we can say, at present is, that a proliferation of epithelium is harmless, provided it does not invade the territory of the connective tissue on which it lies. If invasion once takes place, then we get the disease which we term cancer. Can it be that the epithelial tissue—a non-vascular structure—takes on an inordinate power of development whenever it finds itself in the more vascular, and consequently more fertile, soil of the connective-tissue type? Would not such a view explain the great characteristic of cancerous growth—its gigantic vitality—better than a theory founded on the belief that this excess of growth is the result of a "certain imperfect degree of the functional excitation acting at the same low rate for an indefinite time"?

THE WEEK.

TOPICS OF THE DAY.

At a recent inquest held before Dr. Hardwicke upon the body of a female pauper who died suddenly in St. Pancras Workhouse, the Coroner's officer said the Board of Guardians had forbidden him to go into the Workhouse, stating that if he wanted information he could not go further than the gate. The Coroner, who required witnesses, said he must insist upon the officer going in to get them on behalf of the public. Subsequently two inmates were procured, who gave evidence. The jury, after recording their verdict, handed to the Coroner a rider censuring the Master of the St. Pancras Workhouse "for not attending to explain why he refused admission to the Coroner's officer into the Workhouse wards, to obtain proper witnesses for evidence to the Court, causing thereby delay and waste of time to the Court." At a subsequent meeting of the St. Pancras Board of Guardians the subject was discussed, and a motion proposed, justifying the Master of the Workhouse for the steps he had taken; but one of the more sensible of the Guardians warned the meeting against a rupture with the Coroner, who, he reminded them, had great power, and could commit persons for contempt of the Coroner's Court. Moreover, he wisely pointed out that the prohibition of the Coroner's officer entering the Workhouse for the purpose of procuring evidence in cases of death would create a suspicion in the minds of the public that matters went on there that they were desirous of concealing. It was eventually agreed to send an explanation to Dr. Hardwicke. The parish of St. Pancras may be congratulated on having on its Board of Guardians a few representatives possessing some amount of worldly wisdom.

Last week a large and influential meeting took place at the rooms of the Social Science Association, presided over by Mr. Robert Lowe, M.P., for the purpose of furthering a testimonial to Mr. John Simon, C.B., F.R.S., late Medical Officer to the Privy Council and Local Government Board, in recognition of his eminent services in sanitary science. Mr. Alfred Haviland, M.R.C.S., read a report showing that a number of noblemen and gentlemen had formed themselves into a committee for carrying out this object, and that it had been proposed to establish a scholarship and medal to commemorate the work of Mr. Simon; but, as he had expressed his unwillingness to receive any public recognition of his services, a special request had been made to him to allow the testimonial to assume the form of a bust in marble for presentation to the Royal College of Surgeons, the Council of that body having agreed to accept the same. The chairman, after giving an able sketch of Mr. Simon's eminent services, concluded by moving the adoption of the report, which was seconded by Dr. Guy, F.R.S. Sir Thomas Watson, M.D., F.R.S., then moved—"That the long, arduous, and valuable services rendered to the State by Mr. Simon, in the cause of sanitary reform, justly entitle him to the mark of high appreciation suggested by the committee; and it has much pleasure in appealing to the public generally, and to the medical profession, for contributions in aid of this object." The motion was seconded by Dr. Farr, F.R.S., and carried. It was stated that about £500 would be required.

A somewhat singular case was tried in the Queen's Bench Division, before Mr. Justice Manisty, last week. Mr. William C. Cass, of St. George's-road, Pimlico, a medical practitioner, sought to recover the sum of £21 for professional attendance from a Mr. Bowyer Smijth. Mr. Cass had been summoned to attend a female who passed under the assumed names of Mrs. Seymour and Mrs. Vaughan, and had received a letter from the defendant signed "E. Vaughan," requesting him to continue his attendance. Subsequently, on meeting the defendant one day, on his way to visit the patient, Mr. Smijth informed him that she was dead, and handed him his card with his real name and address. Not being able to obtain payment, he brought the present action. The somewhat singular defence was set up that the defendant resisted payment of the account on the grounds that the deceased woman had been leading an immoral life. The jury at once returned a verdict for the plaintiff, and the learned judge remarked that he had never known a more shocking case.

A summons was heard last week at the Lambeth Police-court, against the owner of a house in Clifton-road, Peckham, for non-compliance with an order to properly disinfect and cleanse a house wherein cases of small-pox had taken place. According to the evidence, it appeared that a lady died of small-pox in the house in question on the 4th inst. Notice was served on the following day for the house to be thoroughly disinfected. Another person died there from the same disease a few days after. Defendant said he had done all he possibly could to get the work done, but it was very difficult to obtain men to do it, owing to fear. When men were obtained, extra wages had to be paid them. The magistrate said there might be a difficulty in getting men to do the work, but still the law must be obeyed in so important a matter; he ordered the defendant to pay a penalty of 20s. and costs. The foregoing is only one of the many minor incidents which help to spread small-pox, and paralyse the efforts of those who work incessantly to check its spread.

Another illustration was afforded at a meeting of the Liverpool Health Committee last week, when the Deputy Medical Officer of Health called attention to the injury that is done to the public health by the proceedings of a body of people styled "Anti-Vaccinationists." The father of a family of eight children, he stated, was influenced by the exaggerated statements of these people, and, rather than have his children vaccinated, paid the fines when summoned before the magistrates. The result was, that no sooner did small-pox attack one member of the family than all succumbed, and they were lying in hospital suffering from the disease. During the epidemic of small-pox the Anti-Vaccinationists of Liverpool propagated their views from house to house, and paid the fines inflicted upon people for not complying with the Vaccination Act.

A Parliamentary paper has just been issued containing a letter from the Admiralty to Captain Sir George Nares, R.N., K.C.B., on the subject of the outbreak of scurvy in the Arctic Expedition of 1875-76. The letter runs thus—"With reference to the eighth paragraph of my letter to the Commander-in-Chief at Portsmouth of November 3 last, in which their Lordships stated 'that they refrained at present from expressing any opinion on the cause of the outbreak of scurvy in the Arctic Expedition under your command,' I am commanded to acquaint you that after the receipt of the report of the Director-General of the Medical Department on the outbreak of scurvy, and your letters of November 30 and December 14 last, my Lords thought it desirable that the questions discussed therein should be referred to the judgment of a Committee. My Lords desire me to forward you a report of the Committee, and I am to state that they accept the conclusions at which the Committee have arrived after a careful investigation of the matter. I am to observe that my Lords make full allowance for the great practical difficulties that you had to contend with in deciding upon the best scheme for provisioning the sledge parties, and that they appreciate the reasons which guided your action in the matter, but at the same time their Lordships must express their regret that you did not attach due weight to the recommendations of the Director-General of the Medical Department upon the subject." We presume that this is the last that will be heard of the matter; but it should remain as a warning to the commanders of any future arctic expeditions not to deviate from the practical experience of medical officers whose knowledge of the dangers to be encountered in the northern latitudes renders their advice too valuable to be neglected.

Dr. Owen Rees, Consulting Physician to Guy's Hospital, has again, through the *Times*, called attention to the subject of arsenical poisoning which is going on largely in the metropolis through carelessness. A lining to curtains, of green calico, was found to contain arsenic, and on the removal of the curtains several patients recovered their health at once. This poisonous lining Dr. Owen Rees says he believes is still selling freely, and is doubtless producing severe suffering. Another source is a green muslin much used for ladies' dresses. Dr. Debus, the Professor of Chemistry at Guy's Hospital, purchased some of this muslin, of a very beautiful pale green, for analysis. It proved to contain upwards of sixty grains of an arsenical compound (Scheele's green) in every square yard, and this was so slightly incorporated that it could readily be dusted out. Dr. Rees thinks cases of this kind call for Government interference, since here is a cause for nausea, vomiting, violent headache, inflammation of the eyes, etc., which can only be removed by stopping the manufacture of these deleterious fabrics. Green is not the only colour to be shunned, unfortunately. Dr. Debus found that red, scarlet, and mauve colours—so much in use, and so justly admired—are sometimes contaminated with the arsenic used in their preparation, the metal not being always properly separated. The atmosphere of the ball-room, for instance, where these fabrics are worn, must be thoroughly impregnated with the arsenic shaken off in dancing; and loss of health and languor at the end of a London season are not always to be attributed to late hours and bad champagne.

An intimation has been forwarded to the authorities of the Westminster Hospital from the Queen, expressing the approval of her Majesty of the extensive scheme of reparation and improvement now in progress in that building, and also stating her kind intention to subscribe to the fund for carrying it out. The response made by the principal City Companies and the public generally to the appeal recently made has relieved the House Committee to the extent of nearly £3000 of the cost of the works, which it is calculated will amount to about £12,000.

A sudden outbreak of small-pox is reported from Orsett, on the Essex bank of the Thames. Forty cases have been recorded in the town and neighbourhood, in addition to several patients removed to the union-house. On the other hand, the small-pox epidemic is rapidly declining in Manchester, not a single case remaining at the Monsall Hospital.

A summons has been granted against the South Staffordshire Waterworks Company, Brierley Hill, at the instance of the Local Board of Health, for neglecting to supply the town with water. The Board had recently closed the wells in the neighbourhood, and the inhabitants were consequently suffering from want of water, and their homes were dirty because the Company's mains were not properly supplied.

About £11,000 had been received at the Mansion House on Wednesday evening last, as the beginning of the amount realised by the collections on Sunday on behalf of the Hospital

Sunday Fund. This sum included £251 collected in Westminster Abbey; £126 in St. Paul's Cathedral; £383 in St. Michael's, Chester-square; £145 in St. Margaret's, Westminster; £152 in All Saints, Knightsbridge; £154 in St. Jude's, South Kensington; £175 in St. James's, Paddington; £140 in St. Thomas's, Stamford-hill; £117 in Marylebone parish church; £215 in the Metropolitan Tabernacle; £135 in St. Andrew's, Wells-street; £135 in the Greek Church, London-wall; £321 in Quebec Chapel; and £75 in the Chapel Royal, St. James.

DUBLIN SANITARY ASSOCIATION.

The fifth annual general meeting of this useful public body was held on Thursday, June 14, the chair being occupied by Dr. Gordon, President of the King and Queen's College of Physicians in Ireland. The report, which was read by Mr. Edward F. Beatty, Acting Honorary Secretary, stated that the number of members of the Association was now 263. The income of the year ending May 31, 1877, had been £157 7s., which exceeded the amount received in any previous year. The expenditure, including £21 due to the Assistant-Secretary from the previous year, was £163 14s. 5d. The report summarised the work of the Executive Committee during the year, and concluded by expressing the conviction of the Committee that the Association has done and is doing a most useful work, and that the fruits of its labours are already apparent in the increased interest taken by the public in sanitary questions, and in the improvements in sanitary administration in the city which have taken place since the formation of the Association. The adoption of the report was moved by Dr. Robert McDonnell, F.R.S., President of the Royal College of Surgeons in Ireland, and seconded by Mr. Charles Dawson, Town Councillor. The officers for this year were elected on the nomination of Mr. Adam S. Findlater, a leading merchant of Dublin, seconded by the Very Rev. Hercules H. Dickinson, D.D., Dean of the Chapel Royal, Dublin Castle. Dr. J. W. Moore moved the third resolution, as follows:—"That this Association desires to express its regret that the sanitary condition of Dublin was excluded from the scope of the inquiry recently held in this city by the Local Government Commissioners; and that the Executive Committee be requested to take such steps as they may think proper to procure a public inquiry into the causes of the excessive death-rate in Dublin, and its general unsanitary condition." It was shown that since 1870 Dublin was so unfortunate as to have risen from the thirteenth to the fifth place on the mortality-roll of the cities and large towns of the United Kingdom. The resolution was seconded by Mr. Frederic W. Pim, and unanimously adopted. On the motion of Mr. Price, barrister-at-law, seconded by Mr. A. Shackleton, it was resolved—"That Dr. Churchill, one of the Vice-Presidents, be elected an honorary member in consideration of the services he rendered during his term of office as chairman of the Executive Committee." Some formal votes concluded the business of the meeting.

THE HEALTH OF BOLTON AND THE EAGLEY EPIDEMIC.

In his report on the health of Bolton during the year 1876, Mr. Edward Serjeant, the Medical Officer of Health for the district, in alluding to the "milk" epidemic of typhoid fever which caused so much alarm in Bolton in the January of that year, says:—"It will be remembered that in the course of a few days, dating from January 29, over 100 persons were stricken with symptoms of typhoid fever, more or less severe; the whole of the persons affected in the borough during the epidemic amounted to 137, of whom seven died. The cause of the epidemic was due to the drinking of milk which had been contaminated by the addition of water containing filth from fæcal deposit. As proofs of the direct connexion of the milk with the fever, it was shown that all those who partook of the milk suffered, and that the track of the milk-cart from the Eagley farm marked unerringly the course of the epidemic. The lesson taught by the above unfortunate occurrence points unmistakably to the necessity for strict sanitary inspection of all sources of milk-supply; and since the premises of other vendors of food, such as butchers, bakers, etc., are under sanitary supervision, I cannot see why the premises of vendors of milk—an article of food so liable to contamination and so universally used—should not come within the same category. In Section 78 of the Bolton Improvement Act, 1877, the Corporation seek the following powers with respect to dairies—namely, 'For regulating the situation and sanitary arrangements thereof; the inspection thereof by an officer of the Corporation at all reasonable times; and for insuring the purity of the water-supply thereof.'"

DEATH UNDER BICHLORIDE OF METHYLENE.

An inquest was held on the 16th inst. at the East Suffolk Hospital, Ipswich, on the body of a man, aged fifty-six, who died whilst under the influence of bichloride of methylene. The medical evidence went to show that the patient was about to undergo an operation for necrosis of the bones of the leg, and that he was anæsthetised for this purpose. At first the methylene was used, and then ether was commenced. During the operation the patient partially recovered, and began to struggle rather violently, so that some more methylene was given. Its administration was continued for about fifteen seconds—not more,—during which the deceased struggled violently. Respiration became stertorous, and then gradually ceased. Galvanism and brandy-injections failed to restore the man. No post-mortem examination was made, so that it is impossible to say accurately what the cause of death was. There was some evidence, however, of arterial degeneration, and it is supposed that he ruptured a bloodvessel within the brain, and died from its effects. The jury exonerated the medical officers from all blame, and returned a verdict of accidental death.

THE RURAL SANITARY AUTHORITIES OF NORTHAMPTON AND MR. HAVILAND.

At the last meeting of the Combined Sanitary Authorities the question was raised as to the payment of the Medical Officer of Health for his services during the interregnum that elapsed from a former to a subsequent appointment. The meeting came to the conclusion that they were powerless in the matter, but it was suggested that each Rural Sanitary Authority that had had the services of Mr. Haviland should pay him. The Wellingborough Authority did so, but were surcharged by the Poor-law Auditor with the amount of £5 10s. 3d., being one month's salary to the Medical Officer of Health. Application was made, however, to the Local Government Board, who, exercising the equitable jurisdiction conferred upon them by 11 and 12 Vic., cap. 91, sec. 4, have remitted the above sum. They agree, however, with the Auditor's decision as being sound in point of law, and only remit the surcharge on the ground of services actually rendered.

ROYAL OPHTHALMIC HOSPITAL, MOORFIELDS.

We hear that Mr. Bowman and Mr. Critchett have just been appointed Consulting Surgeons to this Hospital, both gentlemen having attained to the limit of age (sixty) which the rules of the Hospital impose on the Surgeons. These gentlemen are well known, and enjoy the very highest reputation, and both are in very large and lucrative practice; they have, nevertheless, been permitted to retain one bed each, and will continue to attend at the Hospital to see any special cases about which their colleagues may wish to have their advice and help. Mr. Waren Tay and Mr. James Adams have been appointed Assistant-Surgeons in the vacancies thus produced. These gentlemen have both served the Hospital long and faith-

fully, having been Clinical Assistants for a period of ten years. Thus the Committee gain two experienced and well-trained ophthalmologists, whose appointments will help to indemnify the Hospital for the loss it sustains in the persons of Messrs. Bowman and Critchett.

"CENTRAL-ZEITUNG FÜR KINDERHEILKUNDE."

We see that the Germans are about to establish a special journal for articles on the management and diseases of children. It is to appear in October next, under the joint editorship of Dr. Baginsky and Dr. Monti. Seeing the very great importance of this branch of medicine, we doubt not that a well-conducted journal of this kind will meet with favour. It cannot be doubted, we think, that some of the most difficult social problems of the day are connected with the proper bringing-up of children, and it is highly important, too, that a knowledge of their diseases and treatment, both therapeutic and prophylactic, should be carefully disseminated, especially in large populous centres, where the first conditions of health are often ruthlessly set aside. We shall hail the new journal with pleasure, and we wish it every success.

MEDICAL ACT AMENDMENT BILL.

At a meeting of the Nottingham branch of the Medical Defence Association, held on the 14th inst., the following resolutions were unanimously passed:—1. That this Society strongly urges upon Dr. Lush, and the other members of Parliament associated with him in introducing a Bill to amend the Medical Act of 1858, the great importance of adopting a clause whereby prescribing as at present carried on by many druggists and other unqualified practitioners should be considered an infringement of the Act, and render such persons liable to a penalty. 2. That no amendment of the Medical Act can be considered satisfactory which does not make the carrying out of prosecutions of offenders incumbent upon the General Medical Council. 3. That the 31st section of the Medical Act be amended, so that all "registered" medical practitioners may be able to recover for medicines in a court of law.

ROYAL COLLEGE OF SURGEONS.

The following are the candidates for the three vacant seats in the Council of the College, viz.:—Messrs. Gay and Erichsen, the retiring members, who offer themselves for re-election; Mr. William Adams, of Henrietta-street, Cavendish-square, nominated by Messrs. Wiblin (of Southampton), Lund (of Manchester), West (of Birmingham), Jessop (of Leeds), Bryant (of Upper Brook-street), and Hutchinson (of Cavendish-square); Mr. William Scovell Savory, F.R.S., of Brook-street, nominated by Messrs. Harrison (of Liverpool), Lund (of Manchester), Hulke (of Old Burlington-street), Durham (of Brook-street), Power (of Great Cumberland-place), and Heath (of Cavendish-square); and Mr. Timothy Holmes, nominated by Messrs. Hawkins (of Grosvenor-street), Callender (of Queen Anne-street), Wood (of Wimpole-street), Bond (of Parliament-street), Allfrey (of St. Mary Cray), and Sympson (of Lincoln).

ROYAL COLLEGE OF PHYSICIANS, LONDON.

The annual *conversazione* of the Royal College of Physicians was held last evening in the College. The rooms were early filled by a brilliant and distinguished company, which included the Emperor of Brazil, the Chinese Ambassador and suite, the Greek Minister, the Minister of Costa Rica, Sir James Paget, the Dean of Lincoln, Lord Talbot de Malahide, and many other guests. In addition to the portraits of distinguished members of the College which ordinarily adorn its walls, the portraits of other men famous in the healing art were contributed specially for the occasion, and commanded much attention. There was also displayed upon the walls a collection of Mr. George Cruikshank's etchings and drawings, and it was somewhat curious to watch the venerable draughtsman examining his own works executed in the very early youth of the present century. Scientific experiments were shown in many parts of the *salons*, and were watched with interest by the visitors. The Chinese Ambassador seemed to be much amused by the performance of the sympalmograph; but he lingered longer over a collection of gems exhibited by Mr. Flower, which, under an ingeniously arranged limelight, created a blaze of brilliancy.

DR. BROWN-SÉQUARD'S LECTURES AT THE LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The medical profession of Liverpool and the neighbourhood are in expectation of an intellectual pleasure in the shape of a course of three lectures, which Dr. Brown-Séquard has volunteered to deliver on the 25th, 26th, and 27th inst. They will embody his most recent views as to the production of epileptiform and choreic movements, tremor and rigidity. On the 27th the meeting of the Lancaster and Cheshire branch of the British Medical Association also takes place in Liverpool, and Dr. Brown-Séquard proposes giving a short address to the members on the origin of the symptoms of brain disease. The Council of the School of Medicine have placed the accommodation afforded by the institution at his disposal, and have issued invitations to the members of the medical profession who are sufficiently near to be likely to avail themselves of the privilege of attending.

THE BRADLAUGH TRIAL.

This debasing trial has happily come to an end more rapidly than was anticipated. On Thursday the jury returned a verdict to the effect that the work which was the cause of the prosecution was calculated to debase public morals; but they exonerated the defendants from corrupt motives in publishing it. As a question of law has been raised on the indictment, this will come before the judges in banco, till which time sentence is deferred. It is most unfortunate that this case should ever have been tried, but it is still more to be regretted that there has been a necessity for such a trial.

DR. PEACOCK.

We have great pleasure in helping to make it known that Dr. Peacock has so completely recovered from his late serious illness that he has resumed his professional occupations. The profession and the public will alike be glad to know that this able and accomplished physician is again at their service.

"Cureurgents."—A writer in this month's *Fraser*, giving an account of the proceedings of quarter sessions in Devonshire concerning the granting at the Restoration pensions to the wounded and maimed among the Royalist party, after discontinuing those hitherto paid to the Commonwealth wounded, observes that the certificates of two "chirurgeons" were required, and on one occasion at least in the documents the word "cureurgent" is employed instead of "chirurgeon." He suggests that this would not be a bad appellation for a surgeon.

The Russian Red Cross Society.—The *Journal de St. Petersburgh* has published a statement showing that the fifteen sanitary hospitals erected by the Red Cross Society in the central provinces of Russia are now ready for use, and can accommodate 20,000 invalids. Owing to the system adopted by the Society of sending slightly wounded soldiers direct to their homes, this number of beds is calculated to be, for the present moment, enough. The Society now publishes weekly a journal entitled the *National Civil Mercury*, which, besides giving an account of the operations of the Association, contains voluntary articles on the war from the pens of eminent Russian journalists. It is stated that the Government Committee of Elementary Education have opened, in the area of operations in Europe and Asia, thirty-three reading-rooms and thirty-five libraries for the use of the army. Small collections of books will likewise be sent by the Committee to all hospitals established by the Red Cross Society.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON EDUCATION AND EXAMINATION.

The following is a copy of the Recommendations of the General Medical Council on General and Professional Education and Examination, as finally agreed to during the recent session:—

Chapter I.—Preliminary Examination.

1. That no person be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.

2. That it be delegated to the Executive Committee to prepare annually and lay before the Council for recognition a list of examining bodies, whose examinations fulfil the conditions of the Medical Council as regards general education.

3. That, for the present, testimonials of proficiency granted by educational bodies, according to the subjoined list, be accepted; the Council reserving the right to add to or take from the list. A Degree in Arts of any university of the United Kingdom, or of the colonies, or of such other universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.

List of Examining Bodies whose Examinations fulfil the Conditions of the Medical Council as regards Preliminary Education.

I. *Universities of the United Kingdom.—Oxford:* Responsions; Moderations.—*Cambridge:* Previous Examination.—*Durham:* Examination for Students in their second and first years; Registration Examination for Medical Students.—*Oxford, Cambridge, and Durham:* Examination for Degrees in Arts; Local Examinations (Senior), Certificate to include Latin and Mathematics; Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects, viz., Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—*Oxford and Cambridge Schools' Examination Board:* Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, first two books of Euclid; Latin, including Translation and Grammar. And one of the following optional subjects—Greek, French, German.—*London:* Examination for a Degree in Arts or Science; Matriculation Examination.—*Aberdeen, Edinburgh, Glasgow, and St. Andrews:* Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery.—*Edinburgh:* Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh.—*Dublin:* Examination for a Degree in Arts; Public Entrance Examination.—*Queen's University (Ireland):* Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts. Previous Examination for B.A. Degree.

II. *Other Bodies named in Schedule (A) to the Medical Act.—Royal College of Surgeons of England:* Examination conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.—*Society of Apothecaries in London:* Examination in Arts.—*Royal College of Physicians, Edinburgh; and Royal College of Surgeons, Edinburgh:* Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined.—*Faculty of Physicians and Surgeons of Glasgow; and Apothecaries Hall of Ireland:* Preliminary Examination in General Education.—*Royal College of Surgeons in Ireland:* Preliminary Examination, Certificate to include Mathematics.

III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.—Royal College of Preceptors:* Examination for a First Class Certificate.—*The Examiners for Commissions and Appointments in her Majesty's Service, Military, Naval, and Civil:* Certificate to include all the subjects required by the General Medical Council.

IV. *Indian, Colonial, and Foreign Universities and Colleges.—Universities of Calcutta, Madras, and Bombay:* Entrance Examination, Certificate to include Latin.—*Universities of McGill College, Montreal; Toronto; Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; Fredericton; Sydney; and the Cape of Good Hope:* Matriculation Examination.—*King's College, Nova Scotia:* Matriculation Examination; Responsions.—*Medical College, Halifax, Nova Scotia:* Matriculation Examination.—*University of Melbourne:* Matriculation Examination, Certificate to include all the subjects required by the General Medical Council.—*Codrington College, Barbadoes:* English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur"—*Tasmanian Council of Education:* Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—*Christ's College, Canterbury, New Zealand:* Voluntary Examinations, Certificate to include all the subjects required by the General Medical Council.—*South Australia, South Australian Institute, Adelaide:* Preliminary General Examination; First Class Certificate.

4. That it be recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in the following subjects:—1. English Language—including Grammar and Composition.(a) 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry, first two books of Euclid, or the subjects thereof. 4. Latin, including Translation and Grammar. 5. And in one of the following optional subjects—Greek, French, German, Elementary Mechanics of Solids and Fluids, meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics.

5. That it is desirable that the examination in general education be left to the Universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject.

6. That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in the subjects of general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council.

Chapter II.—Registration of Medical Students.

7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.

8. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced medical study.

9. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

10. The registration of medical students shall be placed under the charge of the Branch Registrars.

11. Each of the Branch Registrars shall keep a register of medical students according to the subjoined form:—

Form for the Registrations of Medical Students.

Date of registration.	Name.	Preliminary examination and date.	Place and date of commencement of medical study, as certified by a master, teacher, or official in a medical school or hospital.

12. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the

(a) The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation, as well as to composition; 2. To write a portion of an English author to dictation; 3. To explain the grammatical construction of one or two sentences; 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature; and 5. To give the derivation and definition of a few English words in common use. Provided always, that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

annexed forms, which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.

Form of Application for Registration as a Medical Student.

I hereby apply to be registered as a student in medicine, in conformity with the regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars:—

Name of applicant (to be written in words at length).		Preliminary examination.	Date of preliminary examination.	Place and date of commencement of medical study, as certified by a master, teacher, or official in a medical school or hospital.
Surname.	Christian name.			

Applicant's signature.....
Address .....
Date of application.....

Certificate of commencement of Medical Study.

I hereby certify that Mr. ..... has commenced the study of medicine in*.....

Signature of master, teacher, or official in a medical school or hospital. .....
Place and date.....
The Registrar of the Branch Council for .....

* Insert name of school, or hospital, or place of apprenticeship, as the case may be.

N.B.—The word "master" or "teacher" will be held to include any registered practitioner whose pupil the applicant may be at the time. The certificate of examination must testify that the student has been examined in [the subjects mentioned in Recommendation 4.]

The above form of application, duly and legibly filled up, must be forwarded to the Registrar, post-free, and be accompanied by a certificate of the applicant's having passed a preliminary examination as required by the General Medical Council.

13. The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.

14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students.

15. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration for reasons which shall appear to them satisfactory.

16. A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before December 31 in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.

17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

18. The Branch Councils are desired to take means to make these regulations known at the various medical schools.

Chapter III.—Age for Licence to Practise, etc.

19. That the age of twenty-one be the earliest age at which a candidate shall obtain a licence to practise, and that the age shall, in all instances, be duly certified.

20. That no licence be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student.

Chapter IV.—Professional Education.

21. That the course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.

22. That the following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—1. Chemistry, including a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine; and Chemical Physics, meaning thereby Heat, Light, and Electricity; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy; 5. Pathology, including Morbid Anatomy; 6. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 7. Surgery, including Surgical Anatomy and Clinical Surgery; 8. Midwifery; 9. Forensic Medicine.

23. That the Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.

24. That a certificate be required, by each licensing body, from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph, and that he is thoroughly informed in every necessary part of the subject.

25. That such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.

Chapter V.—Professional Examination.

26. That it is desirable that the different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the Register shall have been tested in all the subjects of professional education which the Council has determined to be essential—viz., as in Chapter IV., Recommendation 22.

27. That there be in future three professional examinations.

28. That the professional examinations be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study; but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. That the examinations, and the subjects included in each, be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.

29. That the first division of the examinations shall include the following subjects:—1. Chemistry and Chemical Physics; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy. That the second division shall include the following subjects: 1. Pathology, including Morbid Anatomy; 2. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 3. Surgery, including Surgical Anatomy and Clinical Surgery; 4. Midwifery; 5. Forensic Medicine.

30. That it is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study.

31. That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.

32. That not less than two examiners shall take part in every oral and clinical examination.

33. That the questions to be answered in writing should be submitted to the whole body of examiners for consideration and revision, if desirable, before being proposed to the candidates.

34. That the written answers should be submitted to more than one of the examiners.

35. That excellence in one or more subjects should not be allowed to compensate for failure in others.

36. That the professional examinations be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified.

37. That returns from the licensing bodies in Schedule (A) be made annually, on January 1, and in the subjoined form, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations

respectively; and that the Registrar forward a sufficient number of forms, with a notice for their being returned in due time.

Table of Return of Professional Examinations and their Results.

Licensing bodies.	Degrees and diplomas.	No. of examinations to be passed.	1st ex.		2nd ex.		Final ex.	
			No. rejected.	No. passed.	No. rejected.	No. passed.	No. rejected.	No. passed.

38. That it is not desirable that any University of the United Kingdom should confer any degree in Medicine or Surgery, whether that of Bachelor, Doctor, or Master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed, after due course of education, examinations, such as are, *bonâ fide*, academically equivalent to those required for a degree in Arts.

39. That in the opinion of the Council it would be desirable, as a general rule, that none of the higher degrees or qualifications in Medicine or Surgery should be conferred on persons who have not shown evidence of higher professional attainments.

40. That it is desirable that in the examinations on several of the subjects of the curriculum—such, for example, as Chemistry, including Chemical Physics, Physiology, and Materia Medica—the licensing bodies should limit and define by schedule the extent of examination.

41. That it be recommended that in no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated.

42. That it is desirable that observation with the microscope should form part of the examinations of candidates for a licence.

43. That it be recommended that candidates for the final professional examination be required to give evidence that they have had opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere.

44. That it is desirable that, in examinations in Anatomy, candidates should understand that they may be called upon to perform actual dissections, and that candidates in examinations in Surgery should understand that they may be called upon to perform one or more operations on the dead subject.

Trichinosis in Saxony.—In a "Statistical Account of the Epidemics of Trichinosis that have occurred in Saxony during 1860-75," published by Dr. Reinhard in the *Arehiv für Heilkünde*, Band xviii., he furnishes a table which shows that within this period thirty-nine epidemics have occurred, giving rise to 1267 cases of trichina disease, and to nineteen deaths, four of these occurring in males, and fifteen in females. Only a very small proportion of the cases arose from eating raw pork, while one-half were produced by eating smoked sausages (*Knaekwürste*), giving rise to, however, only two deaths. Among 340 persons who partook of well-prepared sausages (*Bratwürste*) eight died. The epidemic appeared for the first time in fifteen places, more than once in seven places, and seven times in Dresden. In most instances the number of persons attacked was few, the highest numbers amounting to 209, 140, and 199—one death only resulting from the combined total of 548 cases occurring in these three epidemics. In several instances the number of cases was as low as from one to seven. The mean (thirty-two and a-half) of the 1267 cases was scarcely exceeded in a fourth part of the places, while in three-fourths of the other places the mean was not reached. In many instances the number of cases was so small as to show that a trichinised animal may be entirely consumed without inducing the disease at all. The same conclusion is arrived at from the comparison of the number of slaughtered trichinised animals and the number of cases of the disease. It is calculated that 100 trichinised pigs will give rise to only four cases of the disease in man.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

LYMPHOGENIC DIATHESIS—*Continued.*

Alterations in the Blood coinciding with Diffuse Glandular Hyperplasia—Leucocythæmia not Constant.—Remarks on the History and Names of Pseudoleukæmia—Comparative Inquiry into Leukæmia and Pseudoleukæmia—First Appearance—Symptoms—Their Causes—State of Nutrition—Intermittent or Remittent Fever—Progress and Modes of Termination.—Lymphatic Hyperplasia and Neoplasia in both forms of the Disease—Unity of the Disease—Lymphogenic Diathesis.—Conditions to which the Absence of Leukæmia may be attributed—New Data as to the Physiological and Pathogenic rôle *of the Marrow of Bone.*

Gentlemen,—Spontaneous and diffuse hyperplasia of the lymphatic glands always coincides with an altered state of the blood; but this alteration is not the same in every case. Most frequently it is twofold, and consists in a diminution of the number of red corpuscles, and a considerable and persistent increase of the number of white ones or leucocytes—an increase which cannot be confounded with the maximum number in a physiological condition; for whereas one to 335 expresses the normal proportion of the white to the coloured corpuscles, we here find one to nineteen or twenty, one to fifteen, one to ten; one to two has been observed, and even two to three. In a second group of cases, the first of these modes of alteration is alone present—the red corpuscles are diminished in number, their colour is bad, and they quickly become out of shape; but the proportion of the white elements is either not increased, or only within physiological limits. This is exactly the case with our patient—his blood contains no vestige of leucocytosis.

Cases of the first order have been named according to the special alteration of the blood by which they are distinguished; in choosing that name it has been forgotten that the change in the blood is a secondary effect of previous structural lesions. Attention has been concentrated upon the dyscrasia, because that was the new fact; and so, substituting the idea of effect for that of cause, Bennett termed the disease *leucocythæmia*, while Virchow styled it *leukæmia*.(a)

Cases of the second order, cases of simple oligæmia, have received various designations, all of them good, according to the point from which they are viewed. If you desire to express the diminution of red corpuscles, and at the same time to recall the fact that that modification has its origin in a lesion of the lymphatic system, the name *lymphatie anæmia*, proposed by Hodgkin, and adopted by Wilks, answers capitally. If, looking at the question anatomically, you wish above all to state the fact of the presence of diffused glandular tumours, the names *generalised hypertrophy of the lymphatic glands* (Cossy), *multiple lymphadenomata* (Wunderlich), cannot be improved upon. If it is required to give prominence to the difference, with regard to the alteration in the blood, between this and the preceding variety, the word *pseudoleukæmia*, made use of by Wunderlich, is the best for the purpose. If, lastly, your attention being drawn to the historical question, your aim is to rescue from oblivion the name of the observer who first described this diseased condition, the name *Hodgkin's disease* is the one to be chosen,

(a) J. Hughes Bennett, "Case of Hypertrophy of the Spleen and Liver, in which Death took place from Suppuration of the Blood" (*Edinburgh Medical Journal*, October, 1845, vol. lxiv., pages 413-423); "On Leucocythæmia, or Blood containing an Unusual Number of Colourless Corpuscles" (*Monthly Journal of Medical Science*, Edinburgh, 1851-52, vol. xii., pages 17-38 and 312-326; xiii., pages 97-105 and 317-335; xiv., pages 331-345); "Clinical Lectures on the Principles and Practice of Medicine," Edinburgh, 1852. R. Virchow, *Froriep's N. Notizen*, November, 1845, No. 780. "Weisses Blut und Milztumoren" (*Medicinische Zeitung*: herausg. von dem Vereine für Heilkunde in Preussen, Berl., 1846-7; Jahrg. xv., No. 34, 35, 36; xvi., No. 3 u. 4); "Die Leukämie" (*Archiv fur Path. Anat., etc.*: herausg. v. R. Virchow; Berlin, 1847); "Ueber farblose Blutkörperchen und Leukämie" (*Gesammelte Abhandlungen zur Wissenschaftlichen Medicin.*, Frankf.-a-M., 1856; pages 147-218).

because the first cases of the kind were described by that physician as early as 1832.(b)

As for the expression *adenia*, proposed by Trousseau at the time when every one of the above-named designations had already obtained currency in science, it uselessly burdens a terminology already very rich, and it is well to reject it, as including none of the clearly defined ideas contained in the earlier names.

The two morbid conditions, the details of whose birth and baptism I have just given, have been separated into two distinct species; this separation was at least premature, and I think there would have been less hurry if care had been taken to compare minutely the respective phenomena of the two forms. I wish to-day to proceed to this comparative inquiry; but it is advisable, first of all, to place the question in a clear light.

In the form called leucocythæmia, the genesis of the phenomena is as follows:—One of the organs which take part in the formation of the cellular elements of the blood, and which are called on that account hematopoietic, becomes the seat of a nutritive irritation which increases its size, and a functional irritation which exaggerates its function; this increased activity expresses itself by a numerical increase of the colourless corpuscles which it is the function of the organ to form. Consequently these cells reach the blood in greater quantity, and, at the end of a certain period, the condition of leucocythæmia exists. When the initial process takes place exclusively in the spleen, the leucocythæmia is called splenic; when the lymphatic glandular system is alone or primarily implicated, it is called glandular or lymphatic. In certain infinitely rarer cases, the hyperplasia, of which the white corpuscles are the offspring, is limited to the solitary glands of the intestine and to Peyer's patches; and for this variety, made known through the observations of Förster, Lambl, Wunderlich, and Béhier, the name of intestinal leukæmia may be adopted.

Thus it is quite clear that in order to compare with precision pseudo-leukæmia and leukæmia, we must direct our attention exclusively to glandular leukæmia.

The first appearance, then, in both forms of disease is slow and insidious, by which I mean that a very long period may elapse before attention is called to it; very often the earliest phenomenon to arouse suspicion is the appearance of a swelling, a tumour, in a part where it did not heretofore exist. In other instances, an increasing weakness awakens the patient's solicitude; he is the more surprised at this debility that he cannot rest the blame of it upon any marked derangement of health, and yet he is unable to get on with his work as hitherto; every effort fatigues him, and this comparative physical powerlessness quickly produces a truly characteristic moral apathy. To these primary phenomena wasting is added sooner or later: it appears early if the patient continues to live as active a life as before: it may be long deferred if he is confined to his room and rest is enjoined,—in which case, the smaller organic outlay, compensating for the falling off in the receipts, maintains for a longer period the equilibrium of the budget.

Whether slow or rapid, these initial phenomena are the same in each case, and the symptoms which follow are equally identical, inasmuch as they are produced by the same cause—namely, the pressure exerted by the tumours; if it chance that they remain for a long time limited to regions where they cannot interfere with any important organ, the symptoms are long in abeyance; when they make their appearance they do so as disorders of function connected with the seat of pressure (dyspnœa, alterations of voice, gastro-intestinal disorders), and as dropsical effusions due to a mechanical origin: œdema of the lower limbs, scrotum, and abdominal walls if the vena cava is compressed; peritoneal effusion if the portal circulation is embarrassed; hydrothorax, œdema of the upper extremities and face, if the pressure is exerted upon the pulmonary veins, or the great brachio-cephalic trunks. Arising in both cases from the same mechanism, these functional disorders, these dropsical effusions, are identical in leukæmia and in pseudo-leukæmia; there is nothing in that to cause surprise.

With regard to dropsical effusions due to dyscrasia or cachexia, which are the immediate result of an alteration in the blood, they are wanting, or at any rate exceptional, in both conditions, for the good reason that in both forms of the disease the truly dropsy-producing dyscrasia is absent. That dyscrasia, you know, is effected by an increase in the amount of water and decrease in the amount of albumen occurring simultaneously.

Hæmorrhages occupy an important place in the symptomatology of leucocythæmia; they take place most frequently from the Schneiderian membrane, the mouth, more rarely from the surface of the bronchial tubes or into one of the viscera; just as with the symptoms already mentioned, hæmorrhages are not peculiar to true leukæmia, and a considerable number of observations of Hodgkin's disease strikingly exemplify both their frequency and danger. The child, nine years old, whose history is reported by Eberth,(c) had repeated hæmorrhages from the nose and mouth; and these accidents had a marked influence in hastening on the cachexia, from which the patient died. The boy of eighteen observed by Payne(d) was the subject of profuse bleedings from the nose, although the cervico-thoracic glands remained intact. The man of fifty-six, of whom Bohn speaks,(e) and who died from subacute peritonitis, presented on several occasions cutaneous hæmorrhages in the form of purpura; and the same phenomenon is mentioned in one of Trousseau's cases. I think this is sufficient to show you that hæmorrhage is not peculiar to leukæmia, and that it makes its appearance with the same seat, the same frequency, and the same dangers in lymphatic anæmia.

The same statement holds good with regard to the cutaneous eruptions to which Virchow has called attention in leukæmic patients. These eruptions, which are most frequently situated on the dorsal aspect of the hands and forearms, affect three forms, which are, in the order of their numerical importance, the papulous, pemphigoid, and furunculous. These manifestations are so common in pseudo-leukæmia that Trousseau has included them in his dogmatic description of the disease. So far they are absent in our patient; but another one, who succumbed a few weeks ago in the same ward, presented, upon his admission into the hospital, a papulous eruption on both hands, and this symptom was so marked, that, as the man was a groom, I thought at first that he had contracted his complaint from contact with horses suffering from glanders.

A few years ago Mosler(f) called attention to the development of stomatitis and pharyngitis which occurred either at the beginning or in the course of leucocythæmia. These inflammations quickly give rise to a fungous condition of the tissues; and in recognition of their origin he described them as leukæmic stomatitis and pharyngitis. The appellation was premature, for these inflammations of the mucous membranes appeared equally in pseudo-leukæmia, and they are often the first appreciable symptom of the affection. The observations of Meyer,(g) Bohn, and Eberth,(h) prove the correctness of this assertion; there is nothing here exclusively belonging to the leucocythæmic form.

In glandular leukæmia there is frequently observed, without there being any intrathoracic tumour, a modification of the respiratory rhythm, of which the patient is not always conscious, but which not the less constitutes a condition of habitual dyspnœa; inspiration is more frequent, but inasmuch as it is at the same time more superficial, the respiratory act is in reality imperfect, the sensation of the need for breath is more overpowering than in a state of health, the thirst for air is not appeased. This phenomenon, which we might be tempted to consider as the direct effect of the leucocythæmic condition, is not referable to that; it simply depends upon the great diminution of the number of red corpuscles. These corpuscles are the only oxygenating elements of the blood, the only organs which bring oxygen into contact with the tissues. A marked decrease, then, in the number of red corpuscles is necessarily followed by a diminution of the quantity of oxygen

(b) Hodgkin, "On some Morbid Appearances of the Absorbent Glands and Spleen" (*Medico-Chirurg. Trans.*, Lond., 1832, vol. xvii., pages 68-114). C. A. Wunderlich, "Zwei Fälle von Progressiven Multiplen Lymphdrüsenhypertrophien" (*Arch. für Phys. Heilk.*, Stuttgart, 1858; N. F., zweiter Bd., pages 123-131); "Pseudoleukämie: Hodgkin's Krankheit oder Multiple Lymphadenome ohne Leukämie" (*Arch. der Heilk.*, Leipzig, 1866; Jahrg. xvii., pages 531-552). Cossy, "Mémoire pour servir à l'Histoire de l'Hypertrophie plus ou moins généralisée des Ganglions Lymphatiques sans Leucémie" (*Echo Med. Suisse*, Neuchâtel, 1861). S. Wilks, "Enlargement of Lymphatic Glands with Deposits in the Viscera: Anæmia Lymphatica" (*Pathological Transactions*, 1862, vol. xiii., pages 227-229; see also *Lancet*, May 17, 1862; "Cases of Enlargement of the Lymphatic Glands and Spleen" (*Guy's Hospital Reports*, third series, vol. xi., Lond., 1865, page 65).

(c) C. J. Eberth, "Ein Fall von Adenie" (*Archiv für Path. Anat.*, von R. Virchow, Berl., 1869-70, Band xlix., Heft 1, pages 63 *et seq.*).

(d) J. F. Payne, "Deposits in the Spleen and Liver with Enlarged Lymphatic Glands" (*Pathological Transactions*, 1869, vol. xix., page 401).

(e) Bohn, "Pseudoleukämie" (*Deutsches Archiv für Klin. Med.*, v., 1869).

(f) F. Mosler, "Ueber Pharyngitis und Stomatitis Leukæmica" (*Archiv für Path. Anat., etc.*," von R. Virchow, Berlin, 1868; Band. xlii., Heft. iii., page 444).

(g) Meyer, *Bayer. ärztl. Intell. Blatt* 1870.

(h) Bohn, Eberth, *loc. cit.*

in circulation, a species of asphyxia (*anoxémie*), which increases the desire for air at the same time that it renders the thorough satisfaction of that desire impossible, especially during movement.

Such being the origin of the symptom, you easily understand, gentlemen, that it is equally met with in pseudo-leukæmia, in advanced chlorosis, and, in a word, in all diseases in which there is a deficiency of red globules or oligocythæmia.

The weakness and emaciation of leucocythæmic patients show that in that complaint the process of nutrition is not carried on with normal activity—which, indeed, is true; but the accumulation of white corpuscles in the blood goes for nothing in that modification of nutrition, which is simply due to the deficiency of red corpuscles; the recent researches of Pettenkofer and Voit have settled that point.(i) Avoiding matters of detail, we see that the general conclusions from their experiments are as follow. With a similar amount of nourishment, and in a state of repose, the leucocythæmic patient appropriates as large a quantity of oxygen as a person in health. Consequently, so long as repose is insured, the process of nutrition is the same in the two conditions; but during work (whatever be its nature) the leukæmic individual appropriates much less oxygen than the healthy one—in fact, he appropriates no more than he did when at rest. And the reason of this is, that during rest the red corpuscles, in order to maintain an equilibrium of nutrition, make up for the paucity of their number by a maximum activity; they cannot do more when the period of work comes: whence the patient's unnatural proneness to fatigue and apathy, whence also the impossibility of his ever being equal to a sustained effort. This alteration in the process of nutrition is due to the same cause as the dyspnœa of which we have just been speaking; it is not dependent upon the leukæmic condition, and you find it with the same characters not only in Hodgkin's disease, but in every grave chlorosis.

Leucocythæmia presents, amongst its later symptoms, an intermittent or remittent febrile disturbance, which is not always appreciable by examination of the pulse, but which is made evident by the clinical thermometer. When this fever is intermittent, as is generally the case, it appears in the evening—it is an evening fever; when it is remittent, the remission occurs in the morning, the exacerbation in the evening. The course of this febrile disturbance, as shown by the thermometrical chart, is exceedingly capricious—sometimes the heat only exceeds physiological limits by a few tenths of a degree; at other times it reaches an extremely high figure, 40°, 40·5°, and even 41°.

This irregular character cannot be shown more clearly than in the chart published by Schwarz,(k) which represents the temperature of a leucocythæmic patient during the last five months of his life. This febrile action is not owing to the leucocythæmic condition, it is simply the expression of the irritative process going on in the lymphatic system; hence it appears with similar characters in pseudo-leukæmia—of which you may convince yourselves by glancing at the drawings I now show you. The first has reference to the patient who died a little time ago from asphyxia produced by the bronchial glands; the other is that of our patient the coachman. In both you perceive a manifestly febrile temperature each evening; and if the highest range of the second is less than that of the first, it is simply because the disease is less advanced.

Pseudo-leukæmia has been said to run a more rapid course than true leukæmia. It is desirable to look into that question. If you have in your mind splenic leucocythæmia, the proposition has some truth in it; then, indeed, death generally takes place by cachexia, and that termination may be long postponed; but if the comparison is limited to glandular leukæmia, no marked difference is found, because in both forms of diffuse hyperplasia the duration of the disease chiefly depends upon the presence or absence of intra-thoracic deposits.

The perfect identity that we have hitherto noticed between the two forms of the disease, we find, too, in their termination; not only is death the constant termination in both cases, but its modes and causes are exactly the same. In pseudo-leukæmia, just as in leucocythæmia, death is brought about by hectic and cachexia (Meyer's cases),—by repeated losses of blood (Eberth's case),—by asphyxia (the most common case, for I have myself already seen three instances),—by inflammations, amongst which pleurisy and peritonitis (case observed by Bohn) must be specially mentioned,—lastly, by cerebral complications, hydrocephalus, and sometimes hæmorrhage.

The result of this comparative inquiry is to show that there is no modification peculiar to leukæmia, either in its onset, symptoms, course, or termination, and that, viewed in reference to all these, the two forms of the disease, whether with or without leucocythæmia, are absolutely identical. Let us now approach the subject anatomically, and see whether we shall in that way discover the differential criterion which has hitherto escaped us.

In typical cases, the glandular lesion in leucocythæmia belongs to that class of tumours known to-day by the name of lymphadenomata or lymphomata; the proliferation or hyperplasia is exclusively confined to the cellular or lymphoid elements of the gland; the capsule and inner connective tissue remain intact, without development, and without abnormal thickening. In typical cases, the glandular lesion in pseudo-leukæmia belongs to the class of tumours called lympho-sarcomata, proliferation is no longer confined solely to the lymphoid element of the gland, it also involves the investing membrane and connective stroma, which increase in thickness and consistence, whence there is a more or less marked increase in the hardness and firmness of the gland. If matters were always so well defined, the difference between the lesions might well be looked upon as a sufficiently distinctive character, and pseudo-leukæmia distinguished by lympho-sarcoma might be contrasted with leucocythæmia distinguished by pure lymphoma. But, gentlemen, the position is not so clear. Between the extreme and typical forms, whose characters I have laid before you, observation shows numerous intermediate forms which insensibly merge into one another. There are instances of leucocythæmia with irregular (*impurs*) lymphomata, in the sense of signs of connective proliferation being found side by side with the cellular hyperplasia; and as to the lympho-sarcomata, Virchow has carefully distinguished hard and soft varieties. So then, the soft varieties, owing their softness to the predominance of lymphoid elements, do not in fact differ from irregular lymphomata. When then, instead of only taking into account extreme cases, the facts are viewed as a whole, the line of demarcation which anatomy seemed at first to draw between our two pathological varieties disappears, and the distinctive character sought for is no more forthcoming than when viewed clinically. I can relate to you a case which removes all doubt:—A patient who had been under the care of Trousseau, after having consulted several physicians in Paris, betook himself to Berlin to take the advice of Virchow, who at once declared, in so many words, that the blood was not in the least degree leukæmic. Shortly after, the patient died from pressure of the glandular masses in the neck, and an examination of the glands only showed progressive lymphatic proliferation with small cells.(l) The persistence of the cellular elements of the glands without undergoing degeneration is one of the most constant characteristics of diffuse lymphatic hyperplasia. Nevertheless, in the form without leukæmia, cheesy spots are sometimes found in the affected glands; but this exceptional occurrence may be met with equally in leucocythæmia, as is shown by the recent observations of Slavjansky.(m)

One of the most interesting points in the history of leucocythæmia is the appearance of lymphoid products in organs which do not contain lymphatic glands. These products are not carried ready-made by the blood—they originate locally at the expense of the elements of the connective tissue; they are new formations, *leukæmic neoplasms;* they are often called *heterotopical* on account of the altered locality of their glandular elements. These highly characteristic secondary deposits are not peculiar to leucocythæmia; it would be difficult for me to cite a single well-recorded case in which these neoplastic formations were not met with. They have been found in the spleen, the kidneys, the liver, upon the mucous membrane of the gastro-intestinal tract, the peritoneum, the ovaries, the pleura—in short, almost everywhere,—and the only difference to be noted is that the spleen is more frequently attacked in Hodgkin's disease than in leucocythæmia; it presents three neoplastic foci in the patient from whom were taken the preparations which I lay before you.

To whatever quarter, then, I turn my eyes, I do but meet with points of resemblance, rather indeed with complete

(i) Pettenkofer und Voit, "Ueber den Stoffverbrauch bei einem Leukämischen Manne" (*Zeits. für Biologie*, 1869).
(k) Schwarz, "De Leucæmia," Berol., 1863.

(l) R. Virchow, "Die Krankhaften Geschwülste," Band. II., Berlin, 1864-65; page 729.
(m) Slavjansky, "Ueber die Leukämie" (*Med. Westnik*, 1867).

identity; and, finding myself in this position, I am led to conclude that leucocythæmia is a contingent and accessory fact, an epiphenomenon, which does not of itself produce any special symptom, which does not modify either the clinical or anatomical characters, the course or the termination of the affection. It therefore seems to me illogical to name the disease from this secondary dyscrasia, which, considered by itself, has no importance, and so to separate it from an affection similar in every respect, except the leukæmia.

The development of glandular tumours, including similar deposits in non-glandular organs (*produits similaires hétérotopiques*), as well as the tumours themselves, constitutes the disease, gives it its clinical characters, and accounts for its dangers. It is on these grounds desirable to search for a nosological designation for the disease; and, inasmuch as these tumours arise and become diffused by a spontaneous action of the organism, independently of every ordinary diathesis, I do not see a more exact name for it than the LYMPHOGENIC DIATHESIS, occurring with or without leucocythæmia.

A question now presents itself, which I am unwilling to pass over in silence. Why is leukæmia present in one case and absent in another? This question has already been asked, but no great anxiety has been shown to furnish an answer. Virchow, for instance, restricts himself to saying that he will not inquire into the reason of this difference; and the explanation suggested by Wunderlich is upset by the history of our patient. The Leipzig professor thinks that leukæmia is produced when one of the hematopoietic organs is for a time alone affected, and that it is absent when the greater number of these organs are attacked simultaneously, or nearly so. This interpretation is not very acceptable, for, if it were well founded, our patient ought to present a perfect type of leucocythæmia, seeing that his first tumour remained solitary for at least eight years.

For my own part, gentlemen, I have to submit to you, with regard to this question, not three answers (that would be a prodigality well calculated to inspire mistrust), but three observations.

It is possible that leucocythæmia is not the immediate result of the arrival in too great abundance of the glandular elements in the blood, but that it is due to a defective transformation of the white corpuscles into red. It is clear that if this transformation, which is the normal evolution of the blood-globules, ceases, the lymphatic elements, although arriving in their usual number, will soon be superabundant, and that so leukæmia will be set up. I know this is but hypothesis, but it has in its favour a fact which demands serious attention. Lloyd Roberts has published the case of a girl of twenty-six, who was admitted under his care with all the signs of very advanced chlorosis; the patient, on the other hand, had no appreciable organic lesion, no enlargement of the spleen or of the lymphatic glands; examination of the blood revealed, notwithstanding, a leukæmic condition in the enormous proportion of one white to two red corpuscles. After three months' treatment that girl was cured, when the relation between the two kinds of globules was perceptibly normal.(n) I cannot allow myself to doubt Dr. Lloyd Roberts' statement with reference to the absence of splenic or glandular tumour,—*the recovery of the patient is an indirect proof of it;* consequently, in that case, the leukæmia was independent of any modification of the hematopoietic organs, and solely dependent upon a defect in the transformation of the leucocytes into red corpuscles.

My second observation has a more solid basis. It is possible that the medulla of the bones is altered in the leukæmic cases, and not in the others. This needs explanation. The researches of Bizzozero and of Neumann(o) have established the fact that the marrow of bone contains colourless cell-elements like white blood-corpuscles;—transition-cells, intermediate between the white and red globules; these elements are coloured cells with a nucleus, but the nucleus presents all the appearances of a nuclear metamorphosis, from the brilliant body with distinct outline, to the imperceptible and insignificant granule;—and cells which enclose from two to ten coloured blood-corpuscles (Neumann). It cannot be doubted, after that, that the medulla of bone belongs to the class of hematopoietic organs, and it is possible that alterations of that tissue play a prominent part in the production of leucocythæmia. The assertion is not pure hypothesis; already, in 1868, Mursick(p) met with a rapidly fatal leucocythæmia in the case of a patient attacked with osteo-myelitis after amputation, and soon afterwards Neumann found, in a leukæmic patient with splenic tumour, so altered a condition of the bony marrow, that it might have been thought at first to be suppurating. All the normal cellular elements of that tissue were increased in number and proliferation; the walls of the arteries of a certain size were, so to speak, riddled with lymphoid cells; and an examination of the blood, made three weeks before death, showed the presence of transition cells, distinct from the ordinary elements of leukæmia, notwithstanding that in the normal state these cells are only met with, as a rule, in the marrow of bone. It was shown at the autopsy that these elements were more abundant in the marrow and veins of the bones than in the rest of the blood. Lastly, on making a chemical examination of the medullary tissue, Salkowski showed that it contained substances ordinarily characterising leukæmic blood—viz., hypoxanthine, formic and butyric acids, and octohedral crystals, like those which have been noticed in the blood of leucocythæmic patients, and which were more numerous in the marrow than in the blood. On the other hand, the tissue of the spleen was unusually rich in red corpuscles, while the splenic veins were full of colourless elements. It is certain then that, in this case at any rate, the point of departure of the leukæmic dyscrasia of the blood was a general alteration in the bony marrow; and this fact is indicated by Neumann, in the phrase "myelogenic leukæmia."

With these new data before us, all the autopsies in leucocythæmia have hitherto been incomplete; and without wishing to force the meaning of these facts, there is at least room for calling the attention of future observers to them.

Lastly, I wish to draw your attention to a possibility not hitherto pointed out. In pure lymphomata the fact is notorious that the canals of the lymphatic glandular circulation are free; but is it so in irregular lymphomata and in true lympho-sarcomata? Before any further attempt at explanation, we must answer this preliminary question. When the capsule and connective tissue of the glands are thickened and, as it were, sclerosed, it is possible that the efferent vessels are impermeable from the pressure, and that if the white corpuscles do not reach the blood, it is simply because the way is made up. It would also be desirable to make inquiry into the condition of the great lymphatic and thoracic ducts.

Such are the observations, gentlemen, that I have to lay before you in reference to the pathogenic problem I have raised. Whatever may be the conclusion to which future studies may lead as to the real origin of leukæmia, the clinical and nosological significance of that phenomenon cannot change, and I unreservedly maintain that the *lymphogenic diathesis with or without leucocythæmia*, is one and the same affection.

The causes of this diathesis have not been ascertained. It is only known that it is independent of scrofula and tuberculosis, and independent also of malarial influences. This information, though merely negative, is nevertheless of great practical importance. There is no rule as to age; cases have been recorded from six years to sixty, and even more. As to sex, the position is more clearly defined; both forms of the disease are much more frequent in men than in women. The diathesis generally occurs in persons of week or enfeebled constitution; but exceptions could be pointed out which preclude us from formulating a dogmatic statement.

The diffusion of the tumours is always the effect of a spontaneous action, to which no other cause can be assigned than the systemic predisposition. In the majority of cases this is also true of the first tumour which appears. Sometimes, however, there is a general glandular irritation, which is at once the occasion and starting-point of the manifestations. In a case related by Meyer, repeated attacks of tonsillitis kept up for some time a permanent swelling of the submaxillary glands; the tonsils were removed, and a short time afterwards the glandular chain began to form. In a man of fifty-four, observed by the same physician, carious teeth and inflammation of the gums gave rise to the first tumour, and that lymphatic irritation was the point of departure of the general diffusion. Lastly, in Bohn's patient, a man of fifty-six, the hyperplasia became diffused after repeated attacks of quinsy and removal of the tonsils. Although exceptional, these facts have a real bearing upon the prognosis of glandular irritation.

(n) D. Lloyd Roberts, "Case of Leucocythæmia" (*British Medical Journal*, vol. ii. 1869, page 585).

(o) Bizzozero, "Rendiconti dell' Istituto Lombardo," 1865; "Sul Midollo delle Ossa," Napoli, 1869. Neumann, *Arch. der Heilkunde*, vols. x. xi., xii. Jahrg.; Leipzic, 1869-71.

(p) G. A. Mursick, "Case of Leukæmia, occurring in connexion with Osteo-Myelitis, following Amputation of the Thigh" (*New York Medical Record*, vol. iii. 1868-69, page 3).

The lymphogenic diathesis, with leukæmia, is comparatively frequent during pregnancy,(q) and it then frequently runs a very rapid course.

The prognosis may be expressed in one word—it is fatal; death has been so far the constant termination of the disease. Lloyd Roberts' case forms the only exception; but it cannot modify the severity of the sentence, for in that instance he had to do with a leukæmia without organic lesion. His treatment consisted in a nourishing diet, and the administration of the tincture of the perchloride of iron in a daily dose of thirty drops.

Four lines of treatment have been tried—namely, iodide of potassium, with the local application of tincture of iodine; cod-liver oil, the preparations of iron, quinine, and the tonic regimen; mercurials, chiefly in the form of Zittmann's decoction; the preparations of arsenic. Our patient has been placed, from the time of his admission, under a course of iodide of potassium in increasing doses; he is now taking a drachm (four grammes) daily. He has quinine wine, an almost exclusively animal diet, and some Bordeaux. I intend him to have in addition a sulphur bath every two days, and afterwards one of arsenious acid: but the too well known powerlessness of therapeutics in this disease leaves me in no doubt as to the final result of my efforts.

FROM ABROAD.

The Use and Abuse of the Bromides.

From an interesting paper read by Dr. Seguin to the New York Medical Association (*New York Medical Record*, May 5), bearing the above title, we extract the following observations:—

Their general use, Dr. Seguin observes, has been largely empirical, the medicine being prescribed because of its quieting effects, regardless of its physiological action. This has been investigated since 1867 by researches upon the action of the bromides on the healthy organism; and the general result arrived at has been that they lessen the irritability of the nervous centres, and especially in the motor tract—whether this is brought about by diminishing the amount of blood in the nervous centres, through contraction of the arterioles, or by direct action on the nervous tissue. In Dr. Seguin's opinion the bromides act mainly on the ganglion-cells of the nervous centres—a belief derived not only from experimental and clinical observation, but also from the phenomena of bromism, which can scarcely be explained by the vascular theory of action. It is chiefly due to the empirical view that bromides are indicated whenever there is excitement, probably aided by extreme application of the theoretical view of the importance of changes in the amount of blood in the brain and spinal cord, that abuses in the employment of the bromides take place. Cases are not infrequent in which a condition of impaired nutrition and nervous atony has been brought about and prolonged for months or years by the use of these substances.

Describing the state of "bromism" thus produced, Dr. Seguin says that, superadded to the usual symptoms of the disease for which the bromides are given, we find general debility with weak pulse, cold extremities, a tendency to stupor, slight difficulty in breathing, the bromic breath, and acne. The patients are usually weak anæmic persons, who have taken the bromides for the relief of head-symptoms supposed to be due to congestion. In some cases moderate doses have been taken during long periods with frequent temporary relief to certain symptoms, these patients, however, continuing all the time below par in spite of tonics and diet. This same "mild bromism" may be noticed in some cases of hysteria and hystero-epilepsy, without any actual improvement. In melancholia, also, in which cerebral nutrition is lowered or perverted, the prolonged use of bromides may be attended with injury. Dr. Seguin also strongly objects to their indiscriminate and empirical employment in a large class of patients who, without definite disease, suffer from nervousness, insomnia, queer sensations about the head, etc., and who are always prone to exaggerate their symptoms; for many of these cannot tolerate the general lowering of vitality which the bromides produce. In its more severe form bromism may simulate dementia, mania, or general paralysis, and may even produce death from debility. It is, however, rarely seen except in the early stage of the treatment of obstinate epilepsy.

After other observations upon bromism as obscuring the diagnosis of disease, and of its medico-legal aspects, Dr. Seguin gives an account of the method of using the bromides in epilepsy and other neuroses. First, he lays down these positions:—1. The prolonged use of the bromides is contra-indicated by general feebleness; 2. They are well borne by persons of fairly full habit and good nervous power; 3. They are indicated in abnormally great irritability of the nervous system in its motor (muscular and vaso-motor) and "ideational" tracts; 4. The contra-indications are to be much less regarded in the management of epilepsy; 5. Epilepsy is the only disease which justifies the deliberate production of a degree of bromism for its cure. Dr. Seguin, in "idiopathic" epilepsy, prescribes the two following solutions:—1. Pot. bromid. ℥j., ammon. brom. ℥ss., aquæ ℥vij.; 2. Sod. brom. ℥j., ammon. brom. ℥ss., aquæ ℥vij.; dose a teaspoonful. The quantity administered is to be, as a rule, so divided as to give the largest dose in the evening. It is to be cautiously increased, still keeping the nocturnal dose the largest, until slight bromism is induced, which may have to be kept up for months, giving just as little as will prevent the attacks. The precise quantity required has to be studied in each case, the dose being diluted in a wineglassful or half a tumbler of water to facilitate absorption. The bromides must under no circumstances be discontinued until a cure is effected, although they may have to be diminished—their continuance being required for at least three years after the last attack. Children will bear larger doses of the bromides, as they do of the iodides, than adults. During the use of the bromides means may be employed to a certain extent to prevent the acne, as the occasional use of arsenic, sulphur ointments, mercurial plaster, and alkaline lotions. To correct the general debility or slight paresis we may resort to strychnia, nux vomica, oxide of zinc, and quinia; and, for the relief of dizziness, to the inhalation of the nitrite of amyl, stimuli, and quinia. The patient's diet and hygiene must be regulated, employing also, as may be required, cod-liver oil, iron, quinia, phosphorus, strychnia, with nitro-muriatic acid, wine, beer, or whisky. In certain cases such medicines as act more directly on the nervous centres may be associated with the bromides, the best among these being belladonna. When there is a definitive causative lesion made out, the bromides can merely be used in order to combat the habit. In treating other *neuroses*, Dr. Seguin has used the bromides sparingly, and never continuously. Bromism should not be produced in the treatment of *hysteria*. *Delirium tremens* might probably be shortened by the free use of the bromides. Many cases of *insomnia*, treated by the bromides upon the hypothetical indication of inducing cerebral anæmia, might be much more quickly relieved by chloral, a glass of ale, or correcting the digestive organs. In the treatment of *insanity* the bromides are indicated only when there is a tendency to epileptiform attacks or abnormal sexual excitement, or great nervousness not caused by delusions. Bromide of potassium may be usefully given before administering ether or opium for the prevention of nausea or sickness: and bromide of ammonium is of use as a gargle (from one to two drachms to the ounce), and to wash out (from ten to thirty grains to the ounce) the nasal passages several times a day in *hay-asthma*.

The Thermo-Cautery in Tracheotomy.

At a recent meeting of the Société de Chirurgie (*Gaz. des Hôp.*, No. 41), a discussion arose on the performance of tracheotomy by means of the thermo-cautery. M. St. Germain observed that, in a case of a child seven years old in which he had used the thermo-cautery, there was found some days after the operation an eschar the size of a crown-piece, which extended to the posterior portion of the trachea. The child recovered, but a kind of induration remained, which may lead to contraction of the trachea. He has now recurred to the operation with the bistoury *à un seul temps*, hæmorrhage being arrested on the introduction of the canula if one of rather a large size is employed. In ninety-four operations he has only known hæmorrhage cause any uneasiness in two. M. Gillette has operated with the cautery upon two children, aged two and four respectively, with the greatest facility, and with little or no hæmorrhage. The opening of the trachea itself should be made with the bistoury, for it is not this part of the

(q) Vidal, "De la Leucocythémie Splénique" (*Gaz. Hebd.*, Paris, 1856). R. Paterson, *Edin. Med. Jour.*, No. 15, 1870, pages 1073-1078.

operation that causes the bleeding; and in this way we prevent the cauterisation being too deep. M. Paulet advocates the use of the cautery for adults in consequence of the great danger of the operation with the bistoury. M. Desprès declared himself as opposed to this new procedure, which is tedious in execution and is followed by large eschars. Tracheotomy is one of the best-regulated operations, on the condition that the surgeon does not lose his *sang froid*, the hæmorrhage being very easy of arrest by means of compressing-forceps. M. Verneuil has had recourse to the cautery nine times in the adult without having ever had an eschar form, and six other cases have occurred to MM. Krishaber and Mauriac with a like result. When M. St. Germain performed his operation the procedure was still in its infancy, and the deep cauterisation of the tissues ensued from the extraordinary slowness with which he operated. Such accidents only occur to those who have not had experience and do not seek to acquire it. M. Le Fort observed that a method may be very good, and yet its application defective. M. Desprès advises not opening the trachea until all bleeding has ceased, but the patient would often then die before it was done. The hæmorrhage is usually due to congestion from asphyxia, and is arrested by the very fact of the trachea being opened. M. Tillaux, without being an adversary to the cautery, drew attention to the fact that its employment does not always prevent hæmorrhage. M. Denucé, relating a case, stated that the steps of the operation were seen as clearly as in the subject. A little hæmorrhage does sometimes occur after the use of the cautery, but is easily arrested. The trachea itself should never be opened with the cautery, but with the bistoury. The eschar formed is less large than it looks, owing to the separation of the surface of the wound, it extending very little in depth.

REVIEWS.

On the Pathology and Treatment of Albuminuria. By W. Howship Dickinson, M.D. Cantab., F.R.C.P., Physician to St. George's Hospital, Senior Physician to the Hospital for Sick Children, etc. Second Edition. London: Longmans. Pp. 404.

In the work now before us, which has reached a second edition, the author endeavours to deal with the subject of albuminuria as dependent on kidney disease in as wide a spirit as possible; but as this alone is his aim, as the book is really a portion of a more comprehensive work on Renal Disease, we rather think a more exact title might have been chosen. We are doubtless too often inclined to associate the idea of albuminuria and renal disease as inseparable, but the two conditions are far from being interchangeable. Albuminuria may and does exist without renal disease; and many forms of renal disease exist without albuminuria. In point of fact, the subject-matter of Dr. Dickinson's volume consists of all that relates to the three forms of Bright's Disease which are associated mainly with the epithelium and walls of the tubules, with the interstitial tissues of the kidney, and with the bloodvessels. These forms are best seen and represented by acute renal inflammation and its sequelæ, by the so-called granular or contracting kidney, and by lardaceous, waxy, or amyloid changes in that organ. All these changes, it may be said, are most notable and most important in the cortical portion of the kidney, where the secreting structures are situated; but in the case of the lardaceous and certain other changes, those too are well seen in the larger and straighter vessels.

There is in this treatise a short preliminary chapter on Albumen and Casts as contents of the urine in renal disease, which is not altogether satisfactory; there is either too much or too little of it. Both subjects are, we think, well worthy of a more careful consideration, considered merely as symptoms, than they have yet received; but they are here somewhat abruptly dismissed, probably because they are treated of at length in subsequent sections. Nevertheless, in view of modern physiological doctrines it might have been well to have treated both subjects somewhat more at length. Two points occur to us at the moment. It is not always the same kind of albumen which escapes from the kidney. The reason for this is hard to see, but assuredly the forms of albumen found in urine do not invariably respond to the ordinary simple tests. If we remember right, Dr. George Harley brought this out many years ago. Again, what are the bearings of Ludwig's doctrines, as to the structure of the kidney and its functions, on modern renal pathology? As yet they have been almost entirely ignored, save from a physiological point of view. As to the phenomena of casts, these views are of the first importance, nor are they of smaller value as regards albumen.

The book may really be said to begin with the consideration of Tubal and Diffuse Nephritis; and in dealing with the pathology of this state the first really interesting point occurs in connexion with the chronic form of this malady, which Dr. Dickinson most justly denominates a renal catarrh. As is well known, the tendency to recovery from the acute condition is great, but we not infrequently find that the malady passes into a chronic state, where the tubes are swollen with more or less altered epithelium, giving rise to the large white kidney. In other cases the intertubular structure becomes affected, there is an increase in the connective tissue, ultimately ending in contraction and a form of disease pathologically indistinguishable from the simple cirrhotic form of kidney disease. Early in this form of the disease, however, the kidney may be enlarged, and the only marks of it consist in the existence of great numbers of nuclei in the hypertrophied intertubular tissue. As to this doctrine of contraction subsequent to tubular inflammation of the acute kind, we are at one with Dr. Dickinson on almost every point. It is, moreover, the doctrine most commonly held abroad as to the usual origin of contracted kidney, and we are also perfectly agreed with Dr. Dickinson against Dr. George Johnson as to the nature of the changes in simple cirrhotic or ordinary granular kidney. In the one case there is a "uniform hypernucleation of the intertubular tissue"; in the other, "a highly nucleated and apparently actively growing structure, as different from the framework of the healthy organs as youth from age." In both cases, too, there are intratubular changes, though not always of the same kind. There is, in point of fact, a close resemblance between the two forms of disease at certain stages. Here, however, we, so to speak, part company with Dr. Dickinson. For in neither case does he seem to us fairly to recognise the mode in which the disease advances. Nothing is clearer than that in chronic disease the progress of the malady is not uniform: the patient is better and worse; things which would not hurt a healthy man bring on a fresh attack of his malady; and in this way the progress, though intermittent, is too uniformly in one direction. This cannot be better exemplified than by the progress of renal cirrhosis. It may go on only slowly for years. The urine may for the most part be free from albumen, but any trivial interference with health—a fit of indigestion, or an attack of cold—will bring it back. Nay, more—and this is what we mainly desire to show—the subject of chronic renal disease is as liable, or more so, to an acute attack of the ordinary form of tubular catarrh as another. In other words, experience, we believe, shows that one form of the disease may be engrafted on another; that there are mixed forms of disease of which the pathology is much as given above, though the post-mortem appearances are not always easy to interpret. This fact—as we believe it to be a fact—has not, we think, been borne home sufficiently in Dr. Dickinson's mind.

We should have been glad to say something on the subject of convulsions as treated here by Dr. Dickinson, but our space forbids. His theory is that they are due to anæmia of the nervous system, combined with uræmic poisoning. We venture to say that both theories, as far as they mean anything distinct, are as yet matters of faith rather than of fact.

Dealing with fatty degeneration following on tubal nephritis, Dr. Dickinson most justly points out that the site of the degeneration is usually the epithelium, and he rightly speaks of the ordinary fatty kidney as that most frequently produced thereby; but we may find fatty degeneration elsewhere than in the tubules, though most frequently encountered there. The fatty kidney, as a specific form of disease, can hardly be said to exist.

We may as well at this stage deal with Dr. Dickinson's views on the subject so much vexed—arterio-capillary fibrosis. Here, whilst agreeing with him in almost every respect, we cannot quite follow him to all his conclusions, even whilst acceding to his facts, which seem to us to be the fruit of sound observation. Connected with this subject, three points are now generally conceded—first, that with granular disease of the kidneys there are usually associated hypertrophy of the left side of the heart and general thickening of the smaller arteries; secondly, that the cardiac hypertrophy is simple and

independent of valvular disease; and thirdly, that the arterial thickening is due partly to changes in the muscular, partly to the external fibrous coat. Dr. George Johnson's view is that the arterial thickening is mainly, if not entirely, muscular; and that this muscular hypertrophy has arisen from resistance to the onward flow of impure blood, and that the cardiac hypertrophy has been generated to overcome this resistance. Sir William Gull and Dr. Sutton, on the other hand, advanced the thesis that the arterial thickening was almost entirely due to the deposit in the walls of the vessels of a hyaline fibroid substance, essentially degenerative in character. Moreover, they held that this was only the local manifestation of a general condition; that the vessels and kidneys were alike altered owing to this condition, but that the change in the vessels was the more important of the two. Neither of these views can be accepted as of universal or even general application. There is, no doubt, an increase in the muscular elements in the smaller arteries in the earlier stages of renal cirrhosis; but this apparent increase is speedily followed by degeneration of the nuclei and fibres, which would hardly suit Dr. George Johnson's teleological argument. Indeed, the whole argument is too like those notions which prevailed in bygone days, that over each vessel there presided a kind of deity, whose duty it was to regulate the direction of each particle of blood.

The Gull and Sutton doctrine of the universal nature of this fibrous change, and of its alliance with senile degeneration, are best (as pointed out by Dr. Dickinson) combated by a consideration of those cases where granular disease of the kidneys occurs in children; and, fortunately, his connexion with the Children's Hospital has afforded him the means of dealing with the subject in this practical manner.

In these young children there can be no senile change to interfere or become mixed up with the arterial changes in contracting kidney. It is thus conclusively shown that the arterial change is encountered not only with the ordinary form of granular kidney, but also when the kidney disease follows upon scarlatina or calculous irritation. It may indeed follow on ordinary renal inflammation, however induced. This effectually disposes of the Gull and Sutton theory of universal fibrosis.

Thus far we heartily agree with Dr. Dickinson; but when he in turn brings forward his theory we must leave him. He adopts as his thesis a proposition we hold to be untenable. It is to the effect that the arterial muscular coat is a direct agent in the onward progression of the blood. There are a whole multitude of physical facts against this doctrine, and we are not aware of any physiologist of eminence who advocates it; whilst Dr. Dickinson's views are entirely founded on the *à priori* argument, which are not likely to stand the test of experience. Nevertheless, this apart, Dr. Dickinson is to be thanked for his clear and sensible exposition of the questions in dispute.

One of the most interesting chapters in Dr. Dickinson's book is that relating to lardaceous or amyloid disease of the kidney. In the elucidation of this form of renal disease Dr. Dickinson has himself done excellent work, and has been most instrumental in making clear its causation. His views at first were perhaps too restricted, as was shown by his giving to it the name of *depurative*—that is, depending on the loss of pus; but it is now generally admitted that such maladies as syphilis, where there has been little or no loss of pus, are also prone to beget the disease. Whether Dr. Dickinson's other idea is true, that the lardaceous change is due to fibrin being deprived of alkali, remains to be seen. Certain things, at all events, seem opposed to it. There are many other points in this volume to which we should like to refer—for it is rich in material,—but time forbids. One point we notice which may be well worth the author's while to consider when preparing another edition, which we have little doubt will soon be asked for: we refer to his plates and woodcuts. There are some woodcuts in this edition admirably clear and well defined, but those reprinted from the last edition are, as a rule, unsatisfactory as to definition, and, let us add, magnifying power. There has crept in by almost general consent the practice of representing objects under the microscope at about fifty diameters (by the way, they are nearly all signed + instead of × in the case of Dr. Dickinson's new illustrations), or about 300; and it would be well if this rough standard could be approximately kept.

Dr. Dickinson's book, it will be observed from what has been said, approaches the subject almost entirely from the pathological point of view, which is certainly the most enticing side for investigation; but as regards this it is of the first value. It is full of good sound work, and constitutes a solid contribution to the literature of the subject.

GENERAL CORRESPONDENCE.

THE PROFESSION IN PARIS.

Letter from Sir John Rose Cormack, M.D.

[To the Editor of the Medical Times and Gazette.]

Sir,—It is a fact which is not, but ought to be, generally known, that in France medical professors, hospital physicians, and hospital surgeons must be Frenchmen. In paying a well-merited compliment to my friend Dr. Beujamin Ball, a writer in the *Medical Times and Gazette* of June 16 (page 616) bestows praise in another quarter where it is not due. I quote *in extenso* the passage to which I refer, italicising the unmerited laudation:—"When noticing (May 5) the selection of the first of these candidates, we omitted to state what must be a fact of some interest to our readers, that Dr. Ball, who has pursued a very distinguished career in the Paris schools and Faculty, is an Englishman by birth, *showing that the highest honours of that Faculty are attainable by men of all nations who can bring proof of distinguished talent and acquirements.*" The statement just quoted is not correct. In France, professors of the Faculties of Medicine, hospital physicians, and hospital surgeons must be Frenchmen either by birth or by naturalisation. Only as a Frenchman could Dr. Ball have been appointed to the recently created chair of "Mental Pathology and Diseases of the Encephalon." No one will dispute the eligibility for that post, on the ground of "distinguished talent and acquirements," of Dr. Brown-Séquard; and yet his appointment would have been illegal, for, though his language be French, his nationality is British. As a foreigner, he cannot hold the appointment of physician in any French hospital in Paris, nor the chair of a professor in the Paris Faculty of Medicine. This nationality nullifies unsurpassable fitness. I do not say that this is wrong; I only say that it is a fact. I am, &c., John Rose Cormack, M.D. Edin.

Paris, June 18. and M.D. Paris.

[We must observe that we only stated what is, we believe, simply a fact—viz., that Dr. Benjamin Ball is "an Englishman by birth."—Ed. *Med. Times and Gaz.*]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 22.

Chas. West, M.D., President, in the Chair.

On the Clinical Conditions of the Heart and Vessels in Chlorosis.

Dr. Pearson Irvine, in a paper on this subject, said that certain cardiac physical signs have been long associated with chlorosis and allied conditions, and, above all, a "hæmic" murmur at the base, by some said to be generated in the aorta, by others in the pulmonary artery. It is rare to find in text-books mention of any other of the cardiac signs met with in the above diseases. The most important change in the circulatory system is dilatation of the ventricles of the heart, especially perhaps of the left. This is hardly noticed by writers in this country. In Germany, Stark (*Archiv der Heilkunde*, 1873) insisted on its occurrence in severe cases, but it is common to find it in those of moderate degree. Besides physical signs, subjective symptoms favoured this opinion, such as frequent palpitation, dyspnœa, cough, and the state of the pulse, as do also the results of treatment in its direction. The physical signs are often almost conclusive. The apex-beat in chlorotics is carried too far outwards, is too diffuse, and in this respect corresponds with the general cardiac impulse, which is usually "slapping," and, like that met with in organic disease, followed by dilatation. Sometimes the impulse is distinctly heaving, and hypertrophy undoubtedly occasionally occurs. Virchow and others have maintained that this is the usual condition in chlorosis, and have ascribed it to narrowing of

vessels. Perhaps, however, when it occurs, it is simply secondary in most cases to anæmic dilatation. The cardiac murmurs heard in chlorosis are various, and exclusiveness should not be claimed for one or the other. They may be heard in one or several of the following positions,—all being systolic in rhythm, yet separable from one another when two or more co-exist:—1. Over the aorta. 2. Over the pulmonary artery. 3. Over the left auricle and its appendix. 4. At the left apex. 5. Over the fourth left costal cartilage; limited there or transmitted downwards to the right or left. 6. In the fifth left space, below it or over the sternum, adjacent to these parts. Thus murmurs may be heard "all over" the cardiac area, and yet it be possible to localise them. The effects of pressure in intensifying murmurs in the area of the pulmonary artery are almost conclusive of their generation within it. Frequency of aortic murmurs is more doubtful, but their occurrence has been asserted by many eminent physicians. At the apex a bruit will often be found if looked for, and in its case the question arises whether or not it is due to mitral regurgitation. It can be explained on better grounds than supposition of the latter. Over the auricular appendix a murmur is certainly sometimes heard, as Naunyn says, who believes it to be due to the eddying of thin regurgitated blood in the auricular appendix. Dr. Balfour supports this theory, and by its supporters almost complete exclusiveness is claimed. Perhaps this murmur has been confounded with bruits generated in arteries about the clavicle, and with those whose greatest intensity is over the fourth cartilage. Dr. Balfour asserts that this auricular murmur is heard in all cases where the venous hum in the neck is decided. This is certainly not the case. The murmur audible over the fourth cartilage or below it, or in parts adjacent, is of great importance. It is as common as any abnormal sound heard in chlorotics. Quite ten years ago, Parrot of Paris described a murmur in the area mentioned as met with in acute anæmia from hæmorrhage, and associated with evidences of tricuspid regurgitation in the veins of the neck. He has since argued that all the murmurs heard in chlorosis are due to tricuspid regurgitation. But this exclusive view is altogether arbitrary. The fourth-cartilage murmur is sometimes transmitted downwards to the apex or towards the ensiform cartilage. A consideration of hæmic murmurs is likely to aid in explaining many so-called organic ones. In chlorosis the murmurs heard at the fourth cartilage and below it are perhaps due to dilatation of the ventricles, to their consequent imperfect emptying, and the eddying of thin residual blood in them. Sir Dominic Corrigan long ago gave this explanation of some apex-murmurs in mitral disease, and it has been renewed by later writers. In chlorotics a murmur thus generated is possibly sometimes best heard at the apex, but oftener over the fourth cartilage or adjacently, because the stethoscope is then immediately applied over the source of the murmur. There are many other explanations, plausible enough, of these murmurs, such as irregular vibration of valves, irregular action of the musculi papillares, and in rare cases actual incompetency of the mitral or tricuspid orifice secondary to ventricular dilatation. The pulse in chlorosis is not always rapid, as is everywhere advanced. It is very often indeed slow, and suggestive of a state of hybernation, though easily excited into rapidity. It is often irregular, from moment to moment, both as regards fulness and frequency, and thus such as one would expect in anæmic dilatation of the ventricles. The excitement of examination makes the pulse irregular in this way, but sometimes produces no change whatever in it. Venous murmurs are certainly best heard in the right neck, and in most cases are audible on this side only. The effects of respiration on the *bruit du diable* are much disputed, but the statement of Hope, that respiration causes the "humming" to become "rushing," is probably correct. Inspiration favours the return of blood from the veins, and thus brings this about. Curious changes in the venous hum may be made by modifying respiration. Clinical observation of the heart in chlorosis and allied anæmic conditions is of therapeutical importance. To meet the cardiac states mentioned, belladonna seems most suitable, its use being indicated by its known physiological effects, by its action in cases of fever as asserted by Graves, and by the condition of the heart. It makes the pulse regular in force and rhythm, and increases the number of beats. Of course iron is the essential remedy, but many cases improved much more rapidly generally, while various troublesome symptoms at once disappeared when belladonna was added to the prescription, doses of from about eight to ten minims being employed.

Dr. Barnes thought it was most important to know more of the changes in chlorosis, whether in the blood or in the tissues. He considered the observations made by Dr. Irvine to be insufficient. It seemed to him that the dilatation of the heart was due to a blood-change. Just as in pregnancy, with altered blood conditions, there was hypertrophy. The enlargement of the heart in chlorosis might be apparent, only depending on the flabby condition of the heart and its want of tenacity. The recovery which so commonly ensued pointed to there being no real organic disease. Thus, in the same way, the altered blood in pregnancy might give rise to albuminuria, which, however, was merely temporary.

Dr. Barclay said all murmurs were produced by altered relations between the blood and the cavities and orifices of the heart. The murmurs in chlorosis were, he thought, due to a change in the blood itself, causing it to vibrate more readily. They would be best heard over the most superficial part of the organ, which was generally the apex. The murmurs in the neck might be venous or arterial, according to the degree of pressure exercised.

Dr. Irvine, in reply, said he agreed with Dr. Barnes, that the first changes were probably in the blood, those in the heart secondary. It was also true that, in a certain sense, all murmurs were hæmic, as depending on altered relations between the blood and its vessels.

The President thought the murmurs heard in children were usually organic.

"Dupuytren's Contraction" of the Fingers.

Mr. Wm. Adams read a paper on contraction of the fingers ("Dupuytren's contraction"), describing its treatment by subcutaneous divisions of the palmar fascia and immediate extension. The author directed attention to one form only of finger contraction—viz., that which has been proved by Dupuytren to depend upon contraction of the palmar fascia, and not involving the tendons, or sheaths of the tendons, as generally supposed. After quoting the account of Dupuytren's dissection, the author referred to another dissection by Goyrand, which confirmed the account given by Dupuytren; and also to Mr. Partridge's specimen in King's College Museum; and to a severe case of contracted fingers under his own observation, in which the hand was torn open by a horse. In all these instances the contraction was shown to depend upon the fascia alone, which passed across like the string of a bow, whilst the tendons in their sheaths were seen lying at a distance along the concavity of the curve. The greater the contraction, the greater the distance between the fascia and the flexor tendons. With regard to the cause, the author considered that it depended entirely upon constitutional causes, and not upon any local cause, such as the use of tools in various occupations, etc. The author believed it to be essentially of gouty origin, though occurring generally where there is a tendency to rheumatic gout, rather than true inflammatory gout. With regard to treatment, the author reviewed the operations by open wound, as practised by Dupuytren, Goyrand, and more recently by Professor Busch of Bonn, whose results are reported by Dr. Madelung; after which he referred to the subcutaneous method of operating, which has not been generally regarded with much favour. The author condemned all the operations by open wound, on account of their severity, risk of suppuration, and tedious healing. He then fully described the details of the subcutaneous method of operating, with some improvements, and also the method of after-treatment which he had adopted of late years. These consisted—1. In the subcutaneous division of all the contracted bands of the palmar fascia and its digital prolongations that can be felt, by as many punctures as might be necessary, the smallest tenotomy-knife being passed under the skin, and cutting from above downwards. 2. Immediate extension of the contracted fingers; the fingers and hand to be bandaged to a splint. 3. The bandage not to be removed until the fourth day, when the punctures will be found to be healed. 4. Extension-splint to be worn night and day for two or three weeks, and afterwards at night for three or four weeks, motion being employed every day. The author believed relapse of the deformity was guarded against by this method of multiple subcutaneous divisions of the fascia and immediate extension.

Primary Cylindrical Epithelioma of the Lung.

Dr. Finlay and Mr. Parker contributed notes of a case of the above-mentioned disease, which was interesting rather from

a pathological than from a clinical point of view. Clinically, the features differed little from an ordinary case of cancer of the lungs. H. P., a ship's carpenter, aged thirty-seven, was admitted into the Royal Hospital for Diseases of the Chest on February 8, 1877. His illness dated six months back, previous to which time he had always been perfectly healthy. His first symptoms were cough with shortness of breath, and pain in the left infra-axillary region, which was aggravated by deep inspiration. When first seen he was observed to lie on his back or right side, and was unable, in fact, to lie on the left side. His expression was anxious; his face dusky; his lips livid; alæ nasi dilating with each inspiration; external jugular veins prominent and distended; fingers somewhat clubbed. There was absolute dulness on percussion over the lower two-thirds of the left back. Over this dull area the breathing was feeble, accompanied by sonorous râles and diminished vocal vibration. In short, the physical signs were those of a limited collection of fluid within the chest with thickened pleura. In view of this exploratory punctures were made, but with no satisfactory result. The patient died a month after admission. At the autopsy both lungs were found studded with a large number of nodules of a soft spongy nature, of varying size. The pleura also contained a few independent nodules. Some of the bronchial glands were affected, and there were three nodules of the same character in the liver. The other organs were healthy. The microscopic examination showed that this new growth consisted of epithelium, for the most part arranged in cylinders. The cylindrical arrangement of the epithelium was most marked in the lung; it was found lining spaces which corresponded in size and general appearance with the alveoli of the lung. The walls of the alveoli, beyond some inflammatory thickening, did not seem to participate at all in the cancerous deposit. In no part of the lung did the cancer affect the parenchymatous structure. In some instances the alveoli were larger than normal, but this was obviously due to the fact that two or more alveoli had coalesced. The examination of the pleura showed a similar arrangement, but as a rule the cylindrical arrangement of the epithelial cells was less regular and less typical. The bronchial glands presented appearances similar to those found in the pleura. The liver growths were also less typical than those in the lung. The authors regard this case as one of primary cancer of the lung, from the fact that the symptoms pointed to an affection of the lungs *ab initio;* and they believe that this opinion is borne out by the microscopic examination of the new growths, which showed a more perfect type of structure, as well as a more typical arrangement of cell-elements, in the lung than elsewhere; and further, the amount of cancer founded in the lungs was very much greater in point of quantity than that found in the rest of the organs put together.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 6.

CHARLES WEST, M.D., F.R.C.P., President, in the Chair.

THE following gentlemen were elected Fellows of the Society: — Walter Turvil Colman, M.R.C.S. (Brighton), George Kerswill, M.R.C.S. (Looe), William W. Stainthorpe, M.D. (Wickham Market), and Frederick H. Varley Grosholz, L.K.Q.C.P.I. (Manchester).

Dr. BARNES showed, for Dr. Beck, of Fort Mayne, Indiana, an instrument for application of perchloride of iron to the cavity of the uterus.

Dr. BARNES showed a flexible galvanic stem composed of zinc and copper wire coiled into a tube.

Dr. AVELING said he had shown a similar stem to the Society some years ago.

Dr. ROPER showed modifications of Hicks's cephalotribe and of Barnes's craniotomy forceps.

Dr. WILTSHIRE showed specimens of Ferguson's speculum made of toughened glass.

PATHOLOGY AND TREATMENT OF MEMBRANOUS DYSMENORRHŒA.

Dr. JOHN WILLIAMS read a paper on this subject, which consisted of a narrative of fourteen cases of the affection, twelve of which had come under the author's own observation, a microscopical description of the membranes expelled, the method of treatment adopted in the cases, and conclusions drawn from the above data as to the nature of the affection and its treatment. It was maintained that in the study of the pathology of membranous dysmenorrhœa regard must be had to four things —(1) the history of the patient; (2) the structure of the product expelled; (3) the state of the uterus; and (4) the normal process of menstruation. The theories advanced respecting the pathology of the affection were briefly noticed. The post-mortem appearances met with in the uteri of two women suffering from the disorder were described, and the paper ended with the following conclusions:—1. The dysmenorrhœal membrane is not the product of conception, but the decidua ordinarily shed as *débris* with every menstrual epoch. 2. It is expelled as a whole, or in masses, in consequence of an excess of fibrous tissue in the wall of the uterus. This excess is due to imperfect evolution at puberty, imperfect involution after parturition, or abortion, or is the product of acute inflammation. 3. The membrane is neither the result of an ovarian congestion, nor of a hypertrophy of the ordinary decidua. 4. The chronic inflammation present is the result of the monthly expulsion of the decidua in masses from the uterus, and plays an accidental part only in the formation of the membrane; the inflammation may, however, be independent of the expulsion of the membrane, but it has no causal relation to the formation of the latter. 5. Sterility is not necessarily associated with the affection, but is the result of the condition induced by the expulsion of the membrane in masses from the uterus—inflammation of the uterus and ovaries. 6. The membrane may be expelled without pain. 7. Inflammation of the uterus greatly aggravates the suffering caused by the passage of the membrane along the cervical canal. 8. Great relief may be obtained by curing the inflammation of the cervix, though the membrane continues to be expelled every month. 9. In order to effect a cure the structure of the whole of the body of the uterus must be altered; the excess of fibrous tissue must be removed.

Dr. CLEVELAND said that these cases may place one in an awkward position from the presence of the sac. He had found morphia suppositories ease the pain.

Dr. BARNES attached great importance to our knowledge of the fact that the membrane is passed by virgins. We have no right to call anything the product of conception unless traces of the ovum be found. There are three kinds—one the typical; others having a fibrillar character without evidence of mucous membrane; others, clots decolorised. It is borne out that it is due to excess of fibrous tissue in the uterine wall. This explains the difficulty of cure. Some are undoubtedly due to contraction of the os externum. This explains the congestion and enlargement of the uterus and excess of fibrous tissue in its walls. There is a general condition of the system in almost all cases; nervous and vascular tension and improvement may be obtained by making a free outlet for the menstrual blood.

Dr. FANCOURT BARNES asked if in making microscopical examinations of these membranes catarrhal products were found.

Dr. HAYES asked why it was so uncommon. If the pathology brought forward be the true one, membranous dysmenorrhœa ought to be very common. How can fibrous tissue influence the production of the decidua?

Dr. AVELING thought the condition was due to hyperæmia. The remedies for it are calomel and bromides.

Dr. HEYWOOD SMITH thought the affection rare. He thought that the decidua being retained whole became semi-organised, and then required greater effort to effect its expulsion. He had found application to the cavity of the uterus of carbolic acid or of solid potassa caustica of service.

Dr. GALABIN agreed in the main with Dr. Williams's account of the pathology of membranous dysmenorrhœa, but the evidence was not conclusive as to his view of its causation. The evidence against hypertrophy of the decidua was not conclusive, and it had not been finally proved that the mucous membrane was entirely removed during menstruation. Dr. Leopold had described a uterus on the third day of menstruation, in which there was some thickness of mucous membrane; and Dr. Galabin had found a fair thickness of mucous membrane six days after the commencement and two days after the cessation of menstruation. He had constantly found shreds of membrane in the discharge during the first two days, and thought that many cases might partake of the character of membranous dysmenorrhœa though not recognised as such.

Dr. WILLIAMS, in reply, said that he regarded membranous dysmenorrhœa as a type of a very large number of cases of

painful menstruation, but that they were not recognised as such because the menstrual discharge was not examined. In the great majority of cases of dysmenorrhœa in which he had an opportunity of examining the discharge he had found shreds of the decidua. So far he agreed with Dr. Galabin. On the other hand, he differed from Dr. Galabin with regard to Dr. Leopold's cases, and believed that the weight of evidence derived from recent research went to show that the decidua (not the mucosa) was entirely removed during menstruation. Perhaps the strongest evidence in favour of this view is that while portions of the old decidua still remain attached to the surface of the uterus, a new decidua is seen developing immediately beneath it.

Difficult Labour.

Dr. George Roper brought forward a difficult case of labour in a primiparous woman, who, having been barren for thirteen years, became pregnant after a bilateral division of a deformed cervix uteri. Mrs. B., aged thirty-six, married thirteen years, sterile, suffered from dysmenorrhœa. The vagina was very tender, contracted, and inflamed. A hand could not be introduced into the uterus. The cervix was divided bilaterally by Dr. Day, and she soon after conceived. During labour the head became obstructed. Turning was performed, but the head could not be extracted, and it became necessary to perforate and decapitate in order to accomplish delivery. In this case there were—(1) a small deep pelvis of male type; (2) a sugar-loaf cervix; (3) a small, narrow, irritable vagina; (4) a defective perineum. There were correlated congenital defects. These conditions are sometimes also correlated with certain physiological and moral conditions, as the absence of sexual sympathy, and jealousy.

Dr. Barnes said it was a very interesting case. The correlation of imperfectly developed vagina and uterus was common, but this had not been observed with regard to the pelvis.

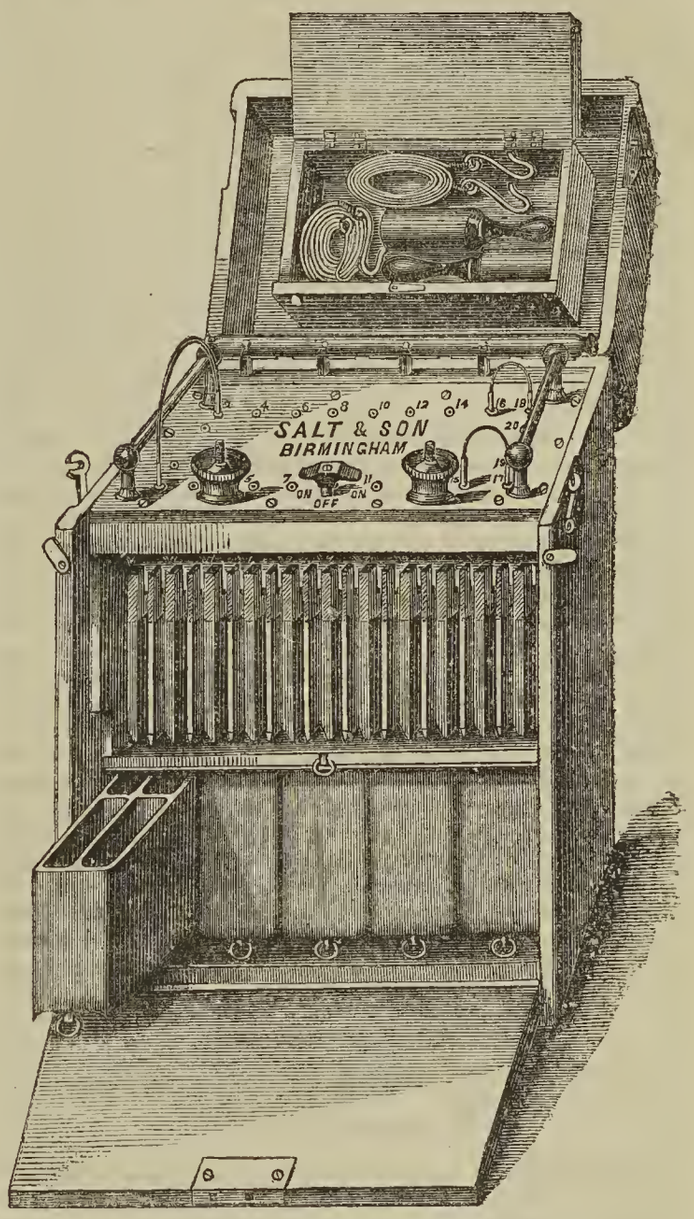
Académie de Médecine.—The place in the Section of Operative Medicine left vacant by the death of M. Giraldès has been filled up by the election of M. Rochard, of the Marine Medical Service, by the votes of forty-three of the seventy-three members who were present.

The Health of Ireland.—The quarterly return of the Registrar-General of Ireland for the period ended March 31 last shows that in the first three months of the present year the deaths registered in that country amounted to 26,958, affording an annual rate of 1 in every 49·5, or 20·2 per 1000 of the estimated population, being 1·5 per 1000 persons under the average for the corresponding quarter of the previous five years. Of this number of deaths 14·2 per cent. were of children under one year old, and 41·4 per cent. of persons aged sixty years and upwards. In England during the same quarter, the deaths of children under one year old formed 23·5 per cent. of the total mortality, and those of persons aged sixty years and upwards 26·4 per cent. Notwithstanding a very general prevalence of diseases of the lungs and air-passages, owing to the exceptionally harsh and broken weather experienced during the quarter, the total mortality compares favourably with that in the March quarter of previous years. Deaths from preventable diseases, though fractionally in excess of those in the first three months of last year, are still under the average; and that they are not very much less is owing rather to the obstacles to recovery presented by the weather, than to a wide-spread existence of any zymotic disease. Bronchitis, pneumonia, and other chest affections, in addition to being unusually fatal as primary causes of death, entered largely as complications with such ailments as measles, whooping-cough, etc., with the result, especially among the humbler classes, of unduly increasing the mortality from these diseases. The rainfall was excessive in many places, and conduced to the spread of fever in some localities, especially in those rural parts of the country where the inhabitants persist in the baneful practice of storing manure in close proximity to their dwellings. The number of deaths registered from small-pox during the quarter was only 25, 18 of which occurred in Dublin; and looking to the great amount of intercommunication always going on between this country and Ireland, it speaks well for sanitary supervision in the present day, that whilst small-pox has been epidemic in so many large towns in this country, it has been kept within such a limited area in Ireland.

NEW INVENTIONS AND IMPROVEMENTS.

NEW MEDICAL BATTERY.

The accompanying woodcut illustrates a continuous current battery recently designed by Messrs. Salt and Son, of Birmingham, with a view to remedy the inconvenience attending the removal of exhausted acid from the cells of Stöhrer's and such-like batteries, and the liability to damage from accidental spilling of the contents of the cells.



To effect this, the front of the case folds downwards like a flap-door, and through it the cells (which are of vulcanite, arranged in sets of four) may be drawn out, and replenished. The cells are capable of being drawn up and retained in contact with the zinc and carbon plates by means of five vertical rods with cross handles.

To prevent the movement or spilling of the fluid when not in contact with the plates, a rubber-faced wooden board slides in a groove between the bottom of the plates and the top of the cells, the latter being tightly pressed against it by springs fastened to the bottom of the case, but capable of being depressed for the introduction of the board by pressing a brass tube seen in the engraving to be resting on the tops of the five vertical rods.

On the element-board are situated two clamps for the conducting cords, a convenient commutator, and twenty numbered sockets, by inserting into which the metallic ends of a short insulated wire any number of cells may be placed in action. The rheophores, cords, and needful implements for mounting and dismounting the cells, are contained in a small box in the lid, together with a small vulcanite measure containing the exact quantity of fluid (dilute sulphuric acid in proportion of one in twelve) required to charge each cell.

OBITUARY.

HENRY WILSON, F.R.C.S. Ire., etc.

The tidings of the sudden and untimely decease of this comparatively young but distinguished ophthalmic and aural surgeon will be received with feelings of deep regret by the profession generally throughout the Three Kingdoms. At the age of thirty-nine years, when rapidly rising to the head of his profession, Mr. Wilson died, late on the evening of June 13, at his house in Merrion-square, Dublin. On the preceding Saturday he had been, to all appearance, in his usual health. In the afternoon of that day he rode in the Phœnix-park, and, it is said, overheated himself. He returned home and entertained a small party of friends in his new house in Merrion-square—"a house," to quote the words of a Dublin daily newspaper, "in which he promised himself many years of useful and honourable labour, of brilliant professional success, and of cultured domestic enjoyment. He had furnished it with the taste of an artist, and with the costly elegance which his fair prospects of a large and increasing income justified." Late at night he was seized with a severe shivering fit, and next day symptoms of a serious attack of pleuro-pneumonia on the right side had developed themselves. So urgent did his symptoms soon become, that his friends Drs. Hudson, James Little, and Cruise were summoned to his bedside in anxious consultation. Subsequently, Dr. A. W. Foot visited him with the above-named gentlemen, while his colleagues Dr. Rainsford and Dr. Thornley Stoker sat up with him at night. But no medical skill could control the progress of the disease—to which an attack of pericarditis succeeded—or arrest the failing of the powers of life. And so it happened that on the night of Wednesday, the 13th inst., after four days' illness, Mr. Wilson's most valuable life ebbed away. It is not exactly known whether the inflammation of the lungs and neighbouring serous membranes, which had its exciting cause in the overheating and chill on the previous Saturday, was due to pythogenic conditions, or depended on a previously existing although latent renal albuminuria.

Mr. Wilson was an ophthalmic and aural surgeon of the first order. Educated in the School of Surgery of the Royal College of Surgeons, Ireland, and in the School of Physic, Trinity College, Dublin, he completed his studies in London, Heidelberg, and Vienna. In 1858 he received the diploma of a Licentiate of the Irish College of Surgeons, to the Fellowship of which body he proceeded in 1865. In 1861 he became a Licentiate of the King and Queen's College of Physicians. At an early period of his career he was appointed Teacher of Ophthalmic Surgery at the House of Industry Hospital; while at the time of his death he held the distinguished positions of Professor of Ophthalmic and Aural Surgery in the Royal College of Surgeons, Examiner in Ophthalmic Surgery in the University of Dublin, and Senior Surgeon to St. Mark's Ophthalmic Hospital. He was also Oculist and Aurist to the Molyneux Asylum for Blind Females, the Claremont Asylum for the Deaf and Dumb, and the Masonic Orphan Schools.

As an author, Mr. Wilson is chiefly known by his "Lectures on the Theory and Practice of the Ophthalmoscope" (published in 1868), and by various contributions to the *Dublin Journal of Medical Science*, the editorial staff of which have lost in him a valued fellow-worker. In private life his agreeable manners and genial and kindly disposition had won him troops of friends; in public his skill and knowledge of his art had attracted a host of patients. It is said that his professional earnings last year exceeded £4000—a large sum for a young man to earn in these days of keen competition for professional honours. The noble generosity of his character was never better exemplified than when, just twelve months ago, he hastened to congratulate his friend and compeer Dr. Charles E. Fitzgerald on his appointment as Surgeon-Oculist to the Queen in Ireland, in succession to the late Sir William R. Wilde. On that occasion Mr. Wilson's message of congratulation was no formal ceremony, but a self-denying, generous expression of goodwill and brotherly kindness.

The extent and representative character of the funeral *cortége* which followed his remains last Saturday morning to their last resting-place in Mount Jerome Cemetery was an indication of the esteem in which Mr. Wilson was held, not only by the members of his own profession, but by all classes of his fellow-citizens.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, June 12, 13, and 14, the following candidates obtained the Licence to practise Medicine:—

Crozier, William.	Penny, Charles Hall.
Knott, John Freeman.	Penny, Henry James.
O'Donovan, Eugene.	Westby, George.

The Licence to practise Midwifery was granted to—

Crozier, William.	O'Donovan, Eugene.
Knott, John Freeman.	Penny, Charles Hall.

Penny, Henry James.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 14:—

Calcott, Lewis Berkeley, Oundle, Northamptonshire.
Collier, Thomas, Sheffield.
Hayward, Thomas Ernest, Tewkesbury.
Heald, Robert, Sleaford, Lincolnshire.
Khambata, Hiraji Jehangir, Bombay.
Scott, William George, London Hospital.

The following gentlemen also on the same day passed their primary professional examination:—

Bottrell, James Francis Henry, King's College, London.
Martin, Theodore, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Baker, Thomas.—Assistant Medical Officer to the Woolwich Union Infirmary, Plumstead, Kent.

Blake, John Ffrench, L.R.C.P., etc.—Surgeon to the Western Dispensary, Westminster, *vice* C. McCann, M.R.C.S., resigned.

Johnson, R. Locke, L.R.C.P., L.R.C.S.—Senior Assistant-Surgeon to the Provident Surgical Appliance Society, 37, Great Ormond-street, W.C.

Osborn, Samuel, F.R.C.S.—Junior Assistant-Surgeon to the Provident Surgical Appliance Society, 37, Great Ormond-street, W.C.

BIRTHS.

Barron.—On June 13, at 5, Broad-street, Peterborough, the wife of Fredk. W. Barron, L.S.A., of a daughter.

Lydall.—On June 19, at Mecklenburgh-square, W.C., the wife of Wykeham H. Lydall, L.R.C.P. Edin., of twin sons.

Lyster.—On June 2, at 72, Devonshire-road, Prince's-park, Liverpool, the wife of C. E. Lyster, M.D., of a daughter.

Welsh.—On June 13, at Saffron Walden, Essex, the wife of F. F. Welsh, F.R.C.S., of a daughter.

MARRIAGES.

Burton—Meadows.—On June 14, at the parish church, Great Yarmouth, Frank Burton, solicitor, of Great Yarmouth, to Marian Isabel, eldest daughter of Daniel Meadows, M.R.C.S. Eng., of Great Yarmouth.

De Wolfe—Haswell.—On June 19, at Trinity Church, Dean, Edinburgh, George Henry Horsfall De Wolfe, M.D., of Tintern, Monmouthshire, only son of J. R. De Wolfe, M.D., of Halifax, N.S., Canada, to Georgina, third daughter of the late George Haswell, Esq., of Edinburgh.

Farnan—Story.—One June 14, at St. Stephen's, Westbourne-park, John, eldest son of John Farnan, of Old Ford, to Ellen, second daughter of John Story, M.R.C.S. Eng.

Frost—Lewes.—On June 14, at Bodenham, Walter Frost, L.R.C.P. and M.R.C.S. Eng., of Williton, Somerset, to Emma Georgeanna, daughter of the late Rev. David Langham Lewes, of Bodenham, Herefordshire.

Pollard—Haig.—On June 12, at St. Chrysostom's Church, Liverpool, Frederick Pollard, M.D. Lond., of Richmond-terrace, Liverpool, to Katherine, only daughter of the late Robert Haig, of Edinburgh.

Watts—Coall.—On May 24, at Monkstown Church, County Dublin, Fred. Watts, L.R.C.P. Lond., of Highgate-road, N.W., to Dorothea Hamilton, daughter of Talbot Coall, Esq., of Kingstown.

DEATHS.

Allen, James, M.R.C.S., formerly of Hale, near Liverpool, at 231, New Kent-road, S.E., on June 10, aged 63.

Cruickshank, James, late Surgeon R.N., at Wardend, Aberdeenshire, aged 85.

Davenport, Henry, M.R.C.S. Eng., at Chertsey, on June 17, aged 64.

Hepworth, John Iver, solicitor, second son of W. B. Hepworth, M.D., of Southport, late of Armley, near Leeds, at De Beauvoir-road, on June 16, aged 27.

Whipple, John, F.R.C.S., eldest son of the late Commander Whipple, R.N., at St. Andrew's Lodge, Plymouth, on June 18, aged 77.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bolton Infirmary and Dispensary.—House-Surgeon. Candidates must have a registered medical and surgical qualification. Applications, with testimonials, to the Secretary, Nelson-square, Bolton, on or before June 25.

Brighton and Hove Dispensary.—Resident House-Surgeon. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Society of Apothecaries of London, and registered under the Medical Act. Diplomas and testimonials, under seal to the Chairman of the Committee of Management, at the Institution, Queen's-road, Brighton, on or before July 2.

East Riding Asylum, Beverley.—Assistant Medical Officer. Candidates must be under thirty years of age, unmarried, and have at least one registered qualification. Applications, with testimonials, to the Medical Superintendent, not later than June 23.

Macclesfield General Infirmary.—Junior House-Surgeon. Candidates must have a double qualification, and be duly registered. Applications, with testimonials, to Mr. A. Cooper, Clerk, on or before June 23.

Parish of Lismore and Appin.—Medical Officer. A knowledge of Gaelic desirable. Testimonials and private references to be lodged with Dr. Laurie, of Drimncil, Appin, on or before June 25.

Saint Columb Major Union.—Medical Officer of Health. Applications, stating age, qualifications, and salary required, on or before June 27.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

APPOINTMENTS.

Birmingham Parish.—Charles J. C. Mitchell, M.R.C.S. Eng., L.S.A., as Assistant Medical Officer at the Workhouse.

Boston Union.—Thos. Nixon, L.R.C.P. Edin., L.R.C.S. Edin., to the Kirton District.

Knaresborough Union.—Alexander Ford, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Harrogate District.

Leeds Union.—John F. Wales, M.D. and M.C. Queen's Univ., Ire., as Assistant Medical Officer at the Workhouse and Schools.

Nantwich Union.—Fredk. F. Jay, L.R.C.P. Lond., M.R.C.S. Eng., to the Audlem District.

German Medical Students.—According to the recent University Calendar the following were the numbers of medical students at the respective Universities during the last winter session:—Vienna 755, Würzburg 547, Leipzig 541, Munich 440, Dorpat 377, Prague 355, Berlin 281, Greifswald 222, Strasburg 201, Zürich 196, Graz 185, Breslau 177, Erlangen 162, Tübingen 157, Bern 149, Freiburg 128, Königsberg 127, Göttingen 122, Bonn 118, Halle 114, Marburg 104, Heidelberg 85, Giessen 84, Jena 71, Kiel 70, Basel 70, and Rostock 34: total, twenty-seven universities with 5877 medical students.—*Berlin Klin. Woch.*, May 21.

Sir William Smart.—The following is a record of the services of the above-named officer:—Inspector-General Sir William Smart, K.C.B., entered the Navy in 1841, on an appointment as supernumerary to the flagship in the first China war; and, being sent to H.M.S. *Cruiser*, served in her from 1841 to 1843. Next in H.M.S. *Sappho* he served on the Cape and East African Station, 1843, and returning home from her in 1846, was appointed to H.M.S. *Trafalgar* on Channel and Mediterranean service, and was selected from her to join the flagship of Sir William Parker, where he received promotion to the rank of Surgeon in 1850 for services during a severe visitation of cholera. From 1851 to 1853 he was Surgeon of the *Spitfire*, surveying-vessel in the Levant, and from 1853 to 1857 of the *Diamond* frigate, in which he had charge of the hospital of the Naval Brigade in the Crimea throughout the siege of Sebastopol. On the *Diamond* being paid off he was sent, as Staff-Surgeon, to take charge of the wounded in the second China war, on board the hospital-ships *Hercules* and *Melville*, commanded by Deputy Inspector-General Burns, and, both receiving promotion for their services, Deputy Inspector-General Smart was placed in charge of the hospital. Between 1860 and 1864 he was Chief of the Naval Hospital at Bermuda, the head-quarters of a large fleet during the United States' civil war and the combined French and English expedition to Mexico. After this important service he was removed to Greenwich Hospital, in which he served as Deputy Inspector-General and Inspector-General from 1864 to 1869, when that naval establishment was abolished. In 1873 he received his present appointment as Superintending Inspector-General of Haslar. Promoted successively to ranks of Surgeon, Staff-Surgeon, and Deputy Inspector-General, for special services, Sir William Smart has also received the following marks of approval:—In 1856, Sir Gilbert Blane Medal; 1857, Knight of the Legion of Honour; 1864, Testimonial from French Government; 1867, Companionship of the Bath; 1876, Honorary Physician to the Queen; 1877, K.C.B.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Junius.—An attempt was made, when the Census Act of 1871 was passing through the House of Commons, to have a question inserted with respect to the prevalence of cousin marriages, but it failed. The idea was that with such statistics a satisfactory conclusion might be arrived at as to whether these marriages are injurious to the mental constitution of the offspring.

Alice D.—The admission of women to the Zürich University dates as far back as 1864, when a Russian lady applied for permission to follow a regular course of medical lectures. Her request was granted by the authorities, and no objections were raised by the professors whose lectures she proposed to attend.

Gabriel N.—The discovery of what was supposed to be a human hand in a City dust-bin, in 1838, was found to be, from reliable authority, in reality the paddle or fore-limb of a turtle.

Sanitas.—The Health of Towns Association held its first public meeting in 1844. The Health of Towns Act was passed in 1848. In 1846 Dr. Southwood Smith established the Metropolitan Association for the Improvement of the Dwellings of the Industrial Classes, which was the forerunner of the Peabody and other like associations.

Mars.—Much was said on the organisation of medical service for the field of battle at the Hygienic Congress held at Brussels last autumn, and it was shown that much advantage would accrue if every soldier carried with him some simple surgical apparatus. It was remarked that already the Germans have learned to take with them into action "a little Esmarch bandage," and the French "a morsel of lint."

Gregson L. W.—Sir Humphry Davy lost his father in 1794, and was in the following year apprenticed to Mr. Borlase, a surgeon and apothecary at Penzance. Upon his introduction to Mr. Borlase his mind received a decided bias in favour of chemistry, which he pursued with great ardour. "In short," says his biographer, Dr. Paris, "it would appear that at this period—only seventeen years of age—he paid much more attention to philosophy than to physic, that he thought more of the bowels of the earth than the stomachs of his patients, and that when he should have been bleeding the sick he was opening veins in the granite."

M.R.C.S.—Professor Lowne will bring his course of lectures on Teratology to a close at the College of Surgeons on the 25th inst.

Dr. Davis.—The local assessor of taxes will give you the desired information.

Anti-Vivisectionist, University College.—It is a poor excuse for not recording your vote at the annual election in favour of a gentleman who has so well performed all his collegiate duties.

M.P.—Dr. Robert Brady, who died in 1700, was elected representative for the University of Cambridge in that Parliament which met at Oxford. Dr. John Brady, M.P., a member of the London College of Surgeons, has represented Leitrim for many years past. Mr. Mitchell Henry, M.P., is a Fellow of the College by examination, and was formerly Surgeon to the Middlesex Hospital.

Dr. Malcolm.—John Hunter was Surgeon to St. George's Hospital from 1768 to his sudden death in the board-room of the institution in 1793.

F.R.C.S. and Mr. Williams.—The election of Fellows into the Council of the College of Surgeons will take place, as already announced, on Thursday, July 5, at two o'clock, when the President of the College, Mr. Prescott Hewett, will take the chair. Mr. E. L. Hussey, F.R.C.S., of Oxford, will be the chairman the same evening at the Fellows' Festival.

Donald P.—The total area of Epping Forest is 6010 acres, of which 2997 are enclosed, and 3013 open; 1030 acres being in the hands of grantees. Of the latter quantity the enclosure of 270 acres, which form gardens and curtilage to houses, is not disputed, but right of possession of the remaining 760 acres has yet to be decided. It is stated that the suits fought by the Corporation of the City of London, to determine the rights of the commoners, have already involved an expenditure of between £40,000 and £50,000.

A Case of Starvation.

There is no doubt that the Infant Life Protection Act, 1872, has been sadly neglected and seldom put in force; we are therefore glad to observe that, at their last meeting, the Metropolitan Board of Works instructed their solicitor to take immediate proceedings under the Act against a baby-farmer for causing the death of a child by starvation.

THE SEAMEN'S HOSPITAL, GREENWICH.

The Emperor of Brazil paid a visit on Monday to the Seamen's Hospital, Greenwich, and expressed himself as highly gratified at the sanitary care bestowed by the officials, both medical and domestic, on the patients under their charge.

THE FRAGRANT WEED.

In 1621, in a Parliamentary debate, Sir William Stroud moved—"That he would have tobacco banished wholly out of the kingdom, and that it may not be brought in from any part, nor used amongst us"; and Sir Grey Palmer said, "That if tobacco be not banished it will overthrow one hundred thousand men in England, for now it is so common that I have seen ploughmen take it as they are at plough." Professor Huxley has acknowledged that for forty years of his life tobacco had been to him a deadly poison. As a medical student he had every temptation to smoke, but his attempts after a few puffs always resulted in his finding himself on the floor. A cold wet night, passed at an inn in Brittany, induced him to make another trial, and from that time he was, to use his own words, "in the position of a lamentable pervert." We have the Professor's admission that nothing is worse than excessive smoking, but, in his opinion, green tea or any other article of diet, if carried to excess, is equally pernicious.

COMMUNICATIONS have been received from—

Mr. E. MARLETT BODDY, London; Mr. JOHN CHATTO, London; Mr. T. M. STONE, London; Professor BENTLEY, London; Mr. CANBY, Liverpool; Mr. O. WARD, London; Mr. H. CUSTANCE, London; THE REGISTRAR OF THE APOTHECARIES' HALL, London; Mr. HAVILAND, Northampton; Dr. J. S. DOWSE, London; Mr. H. HATHERLY, Nottingham; Mr. R. B. CARTER, London; Mr. FRANCIS MASON, London; Mr. GEORGE LAWSON, London; Mr. TIMOTHY HOLMES, London; Dr. J. W. MOORE, Dublin; Mr. J. BRUTON, London; Mr. GERMAN REED, London; Dr. HANDFIELD JONES, London; Sir J. ROSE CORMACK, Paris; Dr. JOHN WILLIAMS, London; Mr. C. A. FOX, London; Dr. C. B. FOX, Chelmsford; Mr. WM. BANKS, Liverpool; Dr. HERBERT TIBBITS, London; Dr. F. W. PAVY, London; Messrs. W. H. BAILEY and SON, London.

BOOKS AND PAMPHLETS RECEIVED—

E. T. Kensington, F.C.S., Chemical Composition of Foods, Waters, Soils, Minerals, Manures, and Miscellaneous Substances—Guy's Hospital Reports, vol. xxii.—Alfred H. McClintock, Smellie's Treatise on the Theory and Practice of Midwifery, vol. ii.—Joseph Jones, M.D., Poisonous Effects of Cyanide of Potassium—Twenty-fifth Report of the Derbyshire County Lunatic Asylum—Lawson Tait, F.R.C.S. Edin. and Eng., An Essay on Hospital Mortality—Thomas H. Huxley, American Addresses, with a Lecture on the Study of Biology.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—La Province Médicale—New York Medical Journal—Home Chronicler—Living Age—Boston Journal of Chemistry—Chicago Medical Journal and Examiner—Cincinnati Clinic—Medical Enquirer—Quarterly Journal of Inebriety—Dairyman—Proceedings of the Medical Society of the County of Kings.

APPOINTMENTS FOR THE WEEK.

June 23. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

25. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

27. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex. 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

28. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

29. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 16, 1877.

BIRTHS.

Births of Boys, 1134; Girls, 1129; Total, 2263.
Average of 10 corresponding years 1867-76, 2153·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	650	665	1315
Average of the ten years 1867-76	646·9	583·7	1230·6
Average corrected to increased population ...	...	...	1317
Deaths of people aged 80 and upwards ...	...	...	47

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	8	9	3	3	8	1	1	...	6
North	751729	29	16	3	1	9	...	1	1	5
Central ...	334369	...	8	1	...	1	...	...	1	1
East	639111	4	19	1	1	13	2	2	1	5
South	967692	14	9	6	2	7	1	5	...	10
Total	3254260	55	61	14	7	38	4	9	3	27

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·895 in.
Mean temperature	62·2°
Highest point of thermometer	83·7°
Lowest point of thermometer	48·0°
Mean dew-point temperature	52·9°
General direction of wind	E. & E.N.E.
Whole amount of rain in the week	0·41 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 16, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending June 16.	Deaths Registered during the week ending June 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2263	1315	83·7	48·0	62·2	16·78	0·41	1·04
Brighton	102264	43·4	37	25	75·6	50·8	61·0	16·11	0·81	2·06
Portsmouth ...	127144	28·3	60	47	70·2	52·0	59·7	15·39	0·31	0·79
Norwich	84023	11·2	64	44	78·5	48·0	59·8	15·45	0·30	0·76
Plymouth	72911	52·3	48	26	71·0	51·0	60·1	15·62	0·18	0·46
Bristol	202950	45·6	132	89	78·7	46·9	59·3	15·17	0·30	0·76
Wolverhampton ...	73389	21·6	59	35	75·3	44·8	57·8	14·34	0·19	0·48
Birmingham ...	377436	44·9	300	148	...	...	...	...	...	...
Leicester	117461	36·7	98	45	74·2	43·0	58·4	14·66	0·04	0·10
Nottingham ...	95025	47·6	51	43	74·9	42·2	56·9	13·83	0·19	0·48
Liverpool	527083	101·2	411	254	74·0	47·8	56·7	13·72	0·09	0·23
Manchester ...	359213	83·7	273	197	80·0	42·5	57·8	14·34	0·00	0·00
Salford	141184	27·3	130	73	77·9	42·2	56·8	13·78	0·07	0·18
Oldham	89796	19·2	93	48	...	...	...	...	...	...
Bradford	179315	24·8	156	76	71·1	46·8	56·1	13·39	0·34	0·86
Leeds	298189	13·8	194	100	72·0	44·0	55·9	13·28	0·29	0·74
Sheffield	282130	14·4	213	105	76·0	45·0	57·5	14·17	0·79	2·01
Hull	140002	38·5	110	52	75·0	40·0	53·7	12·06	1·02	2·59
Sunderland ...	110382	33·4	90	51	72·0	42·0	56·3	13·50	0·28	0·71
Newcastle-on-Tyne	142231	26·5	99	50	...	...	...	...	...	...
Edinburgh	218729	52·2	157	88	72·0	43·0	57·8	14·34	0·00	0·00
Glasgow	555933	92·1	431	249	74·0	44·5	58·2	14·55	0·03	0·08
Dublin	314666	31·3	204	151	74·9	40·0	57·9	14·39	0·00	0·00
Total of 23 Towns in United Kingdm	8144940	38·3	5673	3311	83·7	40·0	58·0	14·44	0·28	0·71

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·90 in. The lowest reading was 29·68 in. on Tuesday afternoon, and the highest 30·00 in. on Friday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XVI.

WOUNDS—*Continued.*

I now come to the important subject of

5. *Gunshot Wounds.*—Injuries of this class, while they differ amongst themselves, have, in *the general case*, many points in common, serving, with some exceptions, to distinguish them from those which have been passed under review.

(1.) Injuries produced by firearms partake of the character of *contused wounds*, with more or less of *laceration of the tissues*, and occasionally exhibit the appearance of *burns*. As in the case of contused wounds, they *bleed but sparingly*, if at all; and, like these, their margins are rounded and thickened, thus *contrasting* strongly with *incised wounds*, and *wounds with sharp penetrating instruments;* while the bottom of the wound is reddish-brown, and the surrounding parts ecchymosed and blackened occasionally, as in *burns*. Such wounds in the living are usually attended with more or less numbness or insensibility of the part struck, and if the person survives, the inflammation which succeeds is commonly extensive and severe.

(2.) When the projectile has produced more than one wound, as where a ball has traversed the body or a limb, *the entrance wound* will differ from *the exit wound*. The *entrance opening* will be *smaller* than *the exit one*. The edges of the former will be *depressed and contused*, the edges of the latter *projecting and torn*. *The entrance wound* will be *dry and dark-coloured*, the *exit one raw and bloody*. There will be *loss of substance* in the former case, but none in the latter. These appearances are well represented in Caspar's Atlas.

(3.) When a ball has traversed in succession different tissues of the body, its course may admit of being readily traced by its points of entrance and exit in its progress through the tissues involved; the openings, as they are traced inwards, increasing in size, and becoming more and more irregular as they depart from the surface; while again, where the ball has come to be arrested in its course, the cavity at the part where it has lodged will be larger than at any part of its traject.

A good instance of this was met with in the examination of the body of a man who was fired at by an assassin, near Kintore, in June, 1830. The entrance wound on the right side of the chest was small, clearly defined, and depressed; with characteristic entrance and exit openings, respectively, where the ball had buried itself in the body—viz., in the lower lobe of the right lung, the diaphragm, and the right lobe of the liver,—while in the last part the projectile had scooped out a cavity for itself and been arrested there. The same thing was observed in the instance of a man who shot himself through the heart, in Marischal-street, in 1870. The entrance wounds on the surface and on the front of the pericardium, as also the entrance and exit wounds on the front and back of the heart, pointed out the course of the ball.

The same contrasts, to a certain extent, betwixt the entrance and exit wounds by a ball traversing the soft parts of the body may also be encountered where such a projectile has traversed the cranium.

Two woodcuts in the second volume of "Holmes's Surgery," pages 157 and 158, give a very faithful representation of the entrance and exit wounds by pistol-balls in the calvaria, with the respective sizes of the two openings and the bevellings of the outer and inner tables of the skull in each, the bevellings being on the inner table in the entrance, and on the outer table in the exit wound. In the first of these woodcuts the ball had traversed the head at point-blank distance; in the other, the momentum being less, the ball—a Minié one—had further caused linear fractures of the skull.

These delineations closely correspond with calvaria in our class museum.

When the ball has entered the body or limb, and lodged there instead of traversing either of these, the character of the wound will be that of *the entrance wound* as described above.

These characteristics of two large classes of gunshot wounds, when distinctly made out, are sufficiently diagnostic to mark them off from the other classes of wounds previously passed under review. They are not, however, to be pressed too far, while they may even fail us altogether; as where injuries caused by gunpowder are not to be distinguished by their effects from those caused by projectiles propelled by cannons, bombs, or other explosives—cases not likely to come often before the medical jurist, or, should they do so, to cause him much embarrassment.

Short of this, nevertheless, the characteristic marks of such injuries as usually come under the designation of gunshot wounds may be so modified by circumstances, or be so imperfectly marked, as to diminish their diagnostic value. It is not immaterial, for instance, to the effects produced by firearms, whether a ball has been fired off close to the body, or from a greater distance; whether it had struck a person perpendicularly, or at an acute or obtuse angle; or whether it had impinged on the body while its original momentum was unimpaired, or only after its impetus had been lessened or nearly lost. The character of the tissues traversed by the ball, or by which its force had been modified or interfered with, and also the material which had served as a projectile, and the kind of firearm from whence it had been propelled, will each have had their influence on the result. Hence, it need scarcely much surprise us to find differences of statements amongst competent observers as to the prevalence in such wounds of even *the mere mechanical conditions* generally assumed as their characteristics. Thus we find it stated that a ball sent by a rifle will leave a semilunar slit, and not a round hole, at its point of entrance; that it will leave no trace of contusion there; and that a spent one has been known to bruise extensively without causing any, or but a slight, breach of continuity. Again, as the blackened or scorched appearance of the edges of the entrance wound may be caused in more than one way, its presence or absence has to be accounted for by the history of the case, and is not found to be invariable in its occurrence. Where, as is frequently the fact, the blackening is owing to ecchymosis being produced, the extent of this ecchymosis will account for the extent of the blackening. The blackening, the result of contusion of the edges of the wound, differs and may be distinguished from that occasionally produced by *the gunpowder* when the firearm has been discharged close to the body; as in this case the discoloration appears in patches, studded with greyish-black dots.—(Caspar, "For. Med.," pages 268-9.) It is also to be distinguished from *the actual burns*, sometimes known to arise from the clothes being set on fire by the wadding. Of this I met with a well-marked instance a few years ago, where a youth had presented a fowling-piece in jest to the nates of a young woman, not knowing it to be loaded. In a French case the question was raised as to *the possibility* of the discharge of a firearm close to the body setting fire to the clothes, and extending from this to any distance along the dress of the party. On this question the Academy decided, after several experimental trials, that though the clothing may be *set on fire* in this way, and the fire spread to a *limited extent*, yet that the burning is *usually confined to the borders of the orifice in the dress*.

Again, *the absence of laceration* may not be an invariable characteristic of *the entrance wound*. From the nature of the projectile itself, or from the force with which it has been impelled, in place of leaving a *small, well-defined opening*, it may *lacerate* the parts *more or less extensively and irregularly*, both at its entrance and along its course through the subjacent tissues.—(*Ibid.*, page 268.) The explosion of *the powder alone*, independently altogether of any ball or wadding, at point-blank distance, is capable of producing very severe injuries of this kind. A pistol, for instance, *without ball or wadding*, introduced within the lips, will give rise to results little less serious than if charged with a ball. When wadding has been used in like circumstances it has been known to have caused extensive laceration of the soft parts, with fractures of the bones of the face and the base of the skull. In a case of this sort, which I examined in 1840, a determined suicide, liberated from our Asylum, by a ball from a horse-pistol, fired into his mouth, had literally blown away the upper part of the face and the top of the head. A striking feature in this case was that though the pistol had burst at its discharge, and lacerated the right thumb and forefinger, its destructive effects on the head and face had been so little neutralised in consequence.

The extent of injury which may be caused by the firing-off of a rusty fowling-piece at point-blank distance without any

ball, by a determined suicide, was shown in a body which I examined at Newmachar, in 1868. The features were thereby almost completely obliterated, and the facial bones extensively comminuted. The stock of the gun had been placed on the ground, and the trigger drawn by the man's foot as he sat on the ground.

Again, as remarked by Dupuytren, *without a ball*, a pistol fired off close to *the abdomen* has produced a fatal wound at this part of the body from the entrance of *the wadding* alone.

In contrast to this, it may not be out of place here to call your attention to the fact, accidentally attested, viz., that a loaded pistol fired off close to the body—with its muzzle resting firmly against the breast, for instance—will either burst, or recoil without the ball or wadding having touched the person at which it has been fired; the only result being a contusion or slight contused wound, caused not by the projectile but by the compression of the air within the barrel of the weapon.

Thus, we are told that a man was brought to the Hôpital St. Louis, in Paris, a few years ago, to be treated for a slight contusion at the region of the heart. He had been engaged in a duel. The pistol had been fired close to the heart. The instrument had rebounded, and the ball fallen harmless to the ground.

In judging of the effect of a projectile, regard must be had, not only to its character, but to the momentum given to it at the time of its striking the body. We have seen that, in certain circumstances, the wadding of a gun may act as a ball does. This depends on the circumstance that, *at its exit from the instrument*, the momentum communicated to it by the same charge is not less than that which the ball would have had imparted to it at the same point. Thus, as in the case of paper or cotton wadding, any solid body whatever—a ball of wax or cork, equally with one of lead or iron—may produce an equal amount of *external violence*. The amount of penetration, however, will here be different,—bodies of soft substance and loose texture rarely penetrating to any depth.

From the same cause a *number of small shot* may either produce the same effect as a single bullet, or only such as is of the most trifling character. Instances of this last occurrence are not uncommon, from the speedy scattering of the small shot after it has left the weapon.

In this way, then, by inquiry into the history of different cases of gunshot wounds, and the effects of circumstances in leading to the diversified appearances which they are respectively found to present, we may arrive at some clue to their diagnosis, where differences of professional opinion regarding them are not unlikely to be formed, or to be enforced. This clue is not, however, so readily to be seized on as regards the respective characteristics of the entrance and exit wounds where the ball has traversed the chest, abdomen, or limbs, as is often assumed. Hence the greater or less amount of disagreement on this point to be met with amongst different observers. Thus, both from observations on the living and experiments on the dead body, Ollivier and Malle were led to deny the universality of the common belief, that the entrance wound in the body is always smaller than the exit one.—(*Ann. d'Hyg.*, No. 46, page 459; and No. 44, pages 318-9). Roux, on the same evidence, came to the conclusion that like traces of the projectile will be left on the two faces of a limb where it has been fixed close to the body, and has in its traject through the tissues lost but little of its momentum. Founding on what he had seen in Paris during the Revolution of 1848, Huguier came to the following conclusions—1st, that in gunshot wounds the entrance opening, far from being always smaller than the exit one, is often of equal size; 2nd, that Roux's conclusion, just noticed, holds good as to the equal sizes of the two openings when the projectile has not spent its force in its passage through the tissues; 3rd, that the entrance wound is only smaller than the exit wound when the ball in its traject has lost much of its force; while 4th, the entrance wound will be larger than the exit wound where these last circumstances are reversed.—(Briand and Chaudé, pages 316-7.) Caspar has gone further than this, and affirms, unconditionally, that the exit is always smaller than the entrance wound.—("For. Med.," vol. i. page 266.)

It is not for me to attempt successfully to reconcile these statements of competent observers with the diagnostic marks generally enunciated as characteristic respectively of the entrance and exit, where projectiles have passed in, through, and out of the body, by most medico-legal writers. Some general considerations, however, may be suggested in explanation of such points of disagreement.

In judging of the effects of projectiles in *the human body*, sufficient account has not always been taken of the differences of its structure and the complications of its tissues, as contrasted with the homogeneity and uniformity of structure in the substances with which the comparison of these effects of projectiles have been made; while results deduced from the latter have been applied to the former. Though the laws of physics are uniform and fixed, and the organic and inorganic kingdoms are equally affected by these, it does not necessarily follow that the same results should succeed the penetration of the human body by projectiles, as are observed in the piercing of media differing in mechanical and physical properties, and of more or less homogeneous and uncomplicated textures. In the one case while the results *vary*, they show the *strictest uniformity* in the other. This *uniformity*, as regards the latter, is seen in experiments with projectiles directed against various inorganic media of a homogeneous kind. Experiments have shown, for instance, that a ball penetrating any such mass, if not very brittle, such as a thick plank of wood, usually leaves *a small hole, nearly the size of the projectile, with clean edges;* as it proceeds, *the canal goes on increasing in diameter;* if *arrested* in its course, *the cavity around the ball is larger* than the diameter of the rest of the canal; and when it *passes through and through* the plank, *the exit opening is larger than the entrance*, and *its edges irregular and splintered.*

The same results have been obtained from different kinds of projectiles; such as a ball of wax, a few inches of a candle, or a ball of moist chopped paper.

This, it will be seen, corresponds with *the mere physical or mechanical alterations* in the human body, which, as we have seen, are laid down as *typical characters* of gunshot wounds. These results, however, we have seen also, have not in all cases been observed to follow such wounds in the living, or when effected purposely in experiments on the dead body.

Notwithstanding this admission, however, we may safely infer that the long prevalent opinion, based upon ordinary *physical principles*, as regards the respective charaeters of *the entrance and exit* openings—notwithstanding Caspar's dogmatic assertion—requires rather to be *modified* than *abandoned;* which is all the length that the other authorities we have quoted demand of us to go. Where, as in ordinary experiments with *homogeneous media*, the ball has penetrated rapidly and *directly*, and traversed, *in a straight line*, masses of soft parts of nearly equal consistency, the results will be essentially alike, the openings differing, if at all, but slightly. Again, the obliquity of the direction of the ball as it enters, and the resistance it may encounter in its traject from tissues of such varied density as the skin and muscles, or the soft viscera, on the one side, and bones, cartilages, and tendons, on the other, will obviously seriously affect the observed results. Here the entrance will be less than the exit wound.

While, therefore, we must be prepared to abandon our *exclusive reliance* on *the criterion of size*, as regards *the openings in question*, as *certainly distinctive* of the *entrance* and *exit* of the projectile, we must look to the circumstances of the case, and to the remaining indications, in order to assist us in settling the point, where the requisite data are procurable; which, however, may not always be the case. We may not, for example, be enabled to decide as to *the distance* at which the firearm has been discharged, or *the direction* in which it has been pointed.

Again, as regards the other marks, our proofs may be occasionally indistinct or defective. Thus, *the depression or elevation of the edges* of the two respective wounds may be either altogether wanting or affected by the absence or excess of subcutaneous fat, or amount of effused blood. The elasticity of the soft parts of the living body, above all, tends to the speedy restoration of the natural level of the surface after its displacement by the projectile at the moment of its passage. That this is the true explanation of the difference betwixt the appearances respectively of the openings in experimental trials on dead matter, and the living body, in most instances, seems to me to be evident from the fact which I have observed from the passage of a ball through such an inelastic mass as the liver, where I have had occasion to observe the depression unusually marked at the point of entrance, though the party had survived the wound for a good many hours.

The distance, likewise, at which the firearm has been discharged must be taken into account as affecting the character of the two openings differently. Thus, when the gun has been

fired off at a distance, it has been found that the laceration has usually been confined to the exit wound, and that the size of the entrance has only equalled, or even been less than, that of the exit wound; and that, when at hand, the entrance wound has often presented torn edges.

Any defect of evidence which may be encountered, in cases of the kind we have been considering, occasionally admits of being supplemented from a different quarter. Thus, when the projectile has passed *through the clothes* of the person fired at, it has been generally observed that at *the entrance hole* of the ball, the tissue, *of whatever kind*, exhibits a more or less *rounded and irregular opening*, along *with loss of substance;* while the injury to the stuff caused *by the exit* of the projectile is not so much a hole as *a rent*, either straight or shreddy, which will admit the tissue to be so replaced as readily to show that there has been no part of its texture destroyed or carried away.—(Ollivier d'Angers, *Ann. d'Hyg.*, No. 44, page 320.)

The opening made by the ball in entering is always smaller *in the clothes* than *in the skin*.—(*Id.*)

In general, projectiles buried in or passing through the bones leave injuries of an undefined sort; though, as we saw in the head, exceptions to this occur. We had occasion to notice previously, in the case of *contusions*, that deep-seated parts may be severely injured, without leaving any trace of the violence on the surface. In the same way, in *the case of projectiles striking the body* obliquely, the viscera of the abdomen have been found ruptured without any observable wound or contusion of its parietes; there has been concussion of the brain without injury of the scalp; and comminution even of bones without wound or appearance of injury of the integuments. These are the class of cases which are known to older surgeons as "*wind contusions*," on the mistaken notion that the projectile had passed close without touching the body.—(*Id.*, pages 137-45.)

In connexion with gunshot wounds the question sometimes arises as to *the period at which the gun was last fired;* and witnesses accustomed to the use of firearms will occasionally speak with much confidence on this point. Observing this fact, medical jurists have attempted to arrive at some data which may assist them in this direction. Accordingly, it has been found that when the combustion of the powder has been *imperfect*, the inside of the barrel of the gun or pistol, near its mouth, is either found *blackened* by a coating of *charcoal and sulphuret of potassium*, shortly after their discharge; or where the discharge has been perfect, *whitened* by a crust of *sulphate and carbonate of potass:* while, after an interval of some days, varying with the amount of moisture in the atmosphere, the mixed residue of charcoal and sulphuret of potassium has become converted into sulphate of potass; which after a still longer interval has been found to contain peroxide of iron.

Further than this, the researches of Boutigny, in France, did not lead to any conclusions which could be relied on for the settlement of the question.—(*Ann. d'Hyg.*, volumes for 1834 and 1839.)

THE HEALTH OF PORTSMOUTH.—The limited space at our disposal does not admit of our giving as full a notice of the elaborate report on the health of Portsmouth for the year 1876, by Mr. George Turner, the Medical Officer of Health for the borough, as it deserves. In complying with the requirements of the Public Health Act, Mr. Turner not only affords all the information enjoined, but he supplements it with details which show that his heart is in his work. The mortality for the year under notice averaged 21·63 per 1000 of the population, and was the highest recorded for some years; in fact, it is necessary to go back to 1872, the year of the small-pox epidemic in the town, to find an equally high death-rate. This increased mortality was due to the prevalence of scarlet-fever, which had prevailed in the borough during fifteen months, but which at the present time has died out. Mr. Turner has, however, gone deeply into the health statistics of Portsmouth, with the result of establishing the fact that that town comes quite up to the average of the rest of England as regards healthiness; and as one proof he shows that although the gross mortality was high during the year 1876, yet the deaths of children under one year of age, when compared with the total number of deaths, was very low, viz., 21·1 per cent.—a lower percentage than has been recorded for the previous fifteen years. The tables and plates which accompany this report are decidedly worthy of imitation by gentlemen holding similar appointments to that so worthily filled by Mr. Turner.

ORIGINAL COMMUNICATIONS.

CASE OF

STENOSIS OF THE ORIFICE OF THE PULMONARY ARTERY FROM DISEASE OF THE VALVES,

PROBABLY OF CONGENITAL ORIGIN.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
Hon. Consulting Physician to St. Thomas's Hospital.

G. D. T., a boy, aged thirteen, residing in Wandsworth-road, was admitted into Charity ward, St. Thomas's Hospital, under my care, on July 20, 1876.

No satisfactory history of his previous state of health could be obtained, but he was not known to have ever had rheumatism or any other illness likely to lay the foundations of cardiac disease. He was reported never to have been strong, and to have always been livid in the face in cold weather. He was, however, in his usual health till four months before his admission into the hospital. When admitted his face was flushed and the lips purple. He had much difficulty of breathing, and the face and extremities were puffy, and the abdomen tumid. The urine had a specific gravity of 1025, and was not albuminous. On examination a loud double murmur was heard at the base of the heart, at the upper part of the sternum, and on each side of that bone, and it was the most distinct in the course of the pulmonary artery, where also a very marked thrill was felt. The jugulars were distended, and there was very obvious pulsation of the carotids. The dropsical symptoms became more marked after his admission, and on September 19 the abdomen measured in circumference at the umbilicus 27½ inches, and above that point 30 inches. Two days after, the dimensions were 28 and 31¼ inches, and there was distinct fluctuation to be felt. On October 11 he was tapped, and eight pints and a half of greenish-yellow coloured fluid was removed. The abdomen, however, very rapidly refilled, and on October 27 the circumference at the umbilicus was 30 inches, and above that line 31 inches. In addition to the loud systolic murmur, followed by a slight diastolic whiff, heard over the orifice and in the course of the pulmonary artery, there was also a double murmur audible towards the apex, and a systolic sound in the left dorsal region. The thrill was very distinct over a large space, but was most marked in the second and third left inter-cartilaginous spaces. The abdomen continued to enlarge, and on November 29 the girth at the umbilicus was 31 inches, and above that line 33¾ inches. He was therefore again tapped, and thirteen pints and a half of fluid were removed. On the following day he complained of pain in the abdomen, and soon after he began to sink, and died in a few hours.

On post-mortem examination the lower extremities were not materially anasarcous. The peritoneal cavity contained a pint and a half of fluid. The surface was generally opaque and irregularly thickened with a thin layer of recent lymph, and the serous coat of the intestines was somewhat injected. The capsule of the liver was opaque and covered with rather dense fibrinous layers, and very firm and tough. The hepatic veins were distended, and the surface of the liver mottled. The spleen was much enlarged, and the capsule irregularly thickened, and its substance tough and deeply congested. The kidneys were of their natural size; the capsules were not adherent; their substance was tough and congested. The brain and its membranes were somewhat congested. The pericardium contained eight ounces of clear fluid. The heart weighed about nine ounces avoirdupois. The anterior surface was composed almost entirely by the right ventricle, and the organ measured 42 Paris lines = 94·5 millimetres, or 3·73 English inches, across; and 44 P.l. = 99 mm., or 3·84 E.i., in height. The right ventricle was dilated, and its walls very greatly hypertrophied, being excessively firm and resistent; they measured 3 P.l. = 6·75 mm., or 0·266 E.i., at the base; 2·75 P.l. = 5·17 mm., or 0·14 E.i., at the midpoint; and 2 P.l. = 4·5 mm., or 0·177 E i., at the apex. The walls of the left ventricle measured at the base 3·5 P.l. = 7·87 mm., or 0·31 E.i.; at the midpoint 5 P.l. = 11·25 mm., or 0·44 E.i.; and at the apex 3·25 P.l. = 7·31 mm., or 2·88 E.i. The right auriculo-ventricular aperture admitted the passage of a ball measuring 42 P.l. = 94·5 mm., or 3·72 E.i., in circumference. The pulmonic orifice was very much contracted from disease

of the valves. The three curtains were blended together so as to form a kind of diaphragm extended across the aperture, and protruded forwards in the course of the vessel, and perforated in the centre by a rounded aperture, only admitting the passage of a ball 10 P.l. in circumference = 22·5 mm., or 0·88 E.i. There were the remains of three raphes or cross-bars on the upper aspect of the diaphragm, indicating the former separation of the valves or their lines of incomplete division. The imperfect curtains had deep sinuses behind them, and were very much thickened and indurated. The trunk of the pulmonary artery was of somewhat large size, and its coats thick. The heart was otherwise well formed, the fœtal passages, the foramen ovale, and the ductus arteriosus being perfectly impervious. The left auriculo-ventricular valves were opaque and much thickened, and the aperture somewhat constricted.

In the absence of any satisfactory history of the mode of development and the course of the symptoms in this case, it is impossible to say, with confidence, what was the precise nature of the disease of the valves of the pulmonary artery. From, however, the similarity of the condition of the valves to that which obtains in many cases of malformation, and from the extreme rarity of disease of the pulmonic valves in after life, it seems a fair inference that the disease was of intra-uterine origin. If, however, that was the case, the amount of obstruction which existed at the time of birth must have been comparatively slight, or it would almost necessarily have prevented the closure of the fœtal passages. Various cases very similar in character, except that the foramen ovale or ductus arteriosus still remained open, are on record, and of them there can be no question as to the congenital origin; and there are also a few instances in which the condition of the heart was precisely the same as in the present case; and I have not hesitated to regard such cases as instances of malformation.(z) We know that when there is any defect in the conformation of the valves such defective valves are very apt to become the seat of disease in after-life, so that the constriction, which may have been comparatively slight at the time of birth, often becomes very great, as was probably the case in this instance.

RETINAL HÆMORRHAGES AND MELANÆMIA AS SYMPTOMS OF AGUE.(a)

By STEPHEN MACKENZIE, M.D.,
Assistant-Physician to the London Hospital.

(*Concluded from page* 665.)

The second point of interest in the case I have read is the occurrence of melanæmia.

Melanæmia, long observed in malarial affections, has had its interest and importance greatly increased by some recent researches by Lanzi and Terrigi.(b) An abstract of their papers has been made in the *Centralblatt für die Medizinischen Wissenschaften.*(c) A translation of part of this I will quote:—"After extensive examinations of the microscopic fauna and flora of the marshes in the Roman Campagna, and of the Pontine marshes, Lanzi was led to the discovery of a peculiar alteration which the algæ undergo in these localities. Dark granules are found embedded in the endochrome or chlorophyll of the algæ cells, sometimes single, sometimes in clumps. They become more abundant as the algæ die, and, finally, they so completely fill the algæ cells that the latter no longer appear green but black; whilst, simultaneously with these changes, the algæ become stinking and decomposed. This process (which has been closely followed by Lanzi in his aquarium) takes place on a large scale each year in the Roman Campagna. The swamps which form in the winter are covered in the spring with a very abundant growth of algæ. In the summer, when the water dries, large surfaces of the country are covered with a continuous layer of decaying algæ. In the autumn, also, they die and decay on the surface of any water that remains, and the soil of these shallow marshes is transformed into a layer of decomposing slime, in which the microscope reveals the presence of the above-mentioned dark granules. These dark granules arising from the decomposition of algæ and other plants are, according to Lanzi, of the nature of a ferment. They are found abundantly disseminated in the dust of the Roman Campagna, or can be readily developed out of it by cultivation. According to Lanzi these granules are identical with the pigmented *Spherobacteria* of Cohn, and the *Bacteridium brunneum* of Schroetter; and by cultivation he obtained growths of *Monilia penicillata* of Freis. The pigment-granules which are found in the liver and spleen of persons suffering from malarial cachexia are identical in their properties with these ferment-producing granules, developed out of decomposing vegetables; and Lanzi strongly maintains the identity of the so-called 'malaria-melanin' of pathologists with the granules resulting from decaying plants. He has been able by cultivation to grow zoöglea-like vegetation from the pigment of melanæmic livers.

"Terrigi found abundance of 'malaria-melanin' in the liver and spleen of guinea-pigs which were made to breathe marsh-air containing the organisms described."

Lanzi and Terrigi would, therefore, regard the pigment found in the blood in melanæmia as the germs causing ague and other manifestations of malarial poisoning, and as taking their origin from the pigment-granules found in decaying algæ. This is a most important point as regards the pathology of malarial affections. Others, as Salisbury,(d) Balestra,(e) Hannon,(f) Bartlett,(g) and Safford,(h) have claimed to have found in algæ the active principle of marsh miasm, the *contagium* of malarial diseases. But they have not observed any connexion between the algæ and the melanæmia so common in severe or pernicious forms of malaria.

Heretofore, the pigment-granules which have been noticed by observers of all nations in the malarial diseases of all countries have been referred to alterations in the blood. It has been generally held that an extensive destruction of the coloured blood-corpuscles takes place with the formation of the brownish-black granules from the altered and carbonised hæmatin. It has been thought that the greatest destruction of blood-corpuscles takes place in the spleen—an organ which always shows implication in malarial affections—and to a less extent in the liver, in the lymphatic glands, and in the medulla of bones. Blood drawn from the spleen during life or after death generally is found to contain pigment, whilst the organ itself is of blackish colour—the *milze nera* or black spleen. Blood passing from the spleen has necessarily to traverse the liver, where much of the pigment becomes arrested in the radicles of the portal vein, and produces the pigment liver (*pigment-leber*) so well described by Frerichs. The pigment which is unarrested in the liver, and escapes the meshes of the pulmonary capillaries, passes into the general circulation, and is distributed throughout the system. It has been found in all parts of the body. It is, when melanæmia is present, always found in the skin. It is particularly well seen in the brain, which, from its colour and vascularity, renders the presence of the pigment very conspicuous. Dr. Hammond has observed its presence in the retina during life.

The pigment, however produced, is generally found in one of three conditions—

1. Free pigment. This, though found in all parts, has been particularly observed in the bloodvessels of the spleen and liver. In early or slight cases the pigment is found as small brown or black granules. The coalescence of these appears to give rise to the larger masses. When recently formed they are made paler by the addition of acids and caustic alkalies; the older pigment-granules resist for a long time the action of these reagents. Dr. Hammond, in the paper already alluded to, depicts some large masses of irregular form obtained from the spleen during life by puncture with a hypodermic syringe. Frerichs, in his "Atlas of Liver Diseases" (Tafel IX. Fig. 2, *c*), shows some pigment masses from a clot out of the splenic vein.

2. Pigment-holding cells. These appear to be the most common form in which pigment is found in the blood. Meckel,(i) according to Virchow,(k) was the first to draw

(z) See "Malformations of the Human Heart," by the Author. Second edition. 1866. Pp. 120-121.

(a) Read before the Hunterian Society, March 28, 1877.

(b) M. Lanzi e G. Terrigi. "Il Miasma palustre." 1. M. Lanzi, "Il Miasma palustre"; 2. G. Terrigi, "Nuovi studi ed esperienze sul Miasma palustre o sull' Agente fibrigeno." Roma, 1875. 27 s. 4°.

(c) 1876, No. 40, s. 713.

(d) *American Journal of Medical Science*, 1863, page 51.

(e) *Compt.-Rend.*, lxxi., No. 3, page 235, 1870.

(f) *Journal de Méd. de Bruxelles*, 1866, page 497.

(g) *Brit. Med. Journal*, 1873, page 54.

(h) Mentioned by last author.

(i) Meckel (*Zeitschrift für Pyschiatrie*, von Damerow, 1847) recorded the occurrence of melanæmia in association with marked pigmentation of the liver, spleen, and brain. The patient was a lunatic, and Meckel did not note the antecedence of intermittent fever. In a later paper (*Deutsche Klinik*, 1850. 50), Meckel showed that he then recognised the relation between melanæmia and malaria. Stiebel (Virchow's "Cellular Pathology") claims to have preceded Virchow in his description. Kelsch portrays in a lithograph very accurately the pigmentary changes in the blood.

(k) "Cellular Pathology," translated by Dr. Chance, p. 221.

attention to pigment-cells in the blood, though Virchow himself appears to have been the first to recognise that the cells which contained the pigment were the colourless corpuscles of the blood. He writes—"The cells which I discovered in many respects bore a resemblance to colourless blood-corpuscles; they were spherical, but frequently also rather oblong, nucleated cells, within which a greater or less number of large black granules were to be seen." Meckel, Virchow, and Tigri noticed the association of the melanæmia with enlargement of the spleen and malarial poisoning. In Dr. Hammond's paper (handed round) the pigment-holding colourless blood-corpuscles are well seen, and they are shown in the drawing from the blood of my patient. Frerichs, in his Atlas, gives several illustrations of them. Colin(l) has drawn particular attention to the fact that the leucocytes are the carriers of the pigment, and that the deposition of the latter in perivascular spaces is to be explained by the migration of the corpuscles from the small vessels and capillaries. Heschl(m) described very carefully the pigmentary alterations which are developed in the spleen, liver, and mesenteric glands in intermittent fever. M. Charcot(n) gave a most interesting and careful historical and critical *résumé* of what was known on the subject of melanæmia at the time of his writing in 1857.

3. Flakes (*Schollen*) containing pigment have been described by most writers. These are of irregular form and size, often three or four times as large as a normal colourless blood-corpuscle. Similar masses have frequently been met with in the urine in cases of melanæmia—so-called "melanuria." They consist of a basis of contractile protoplasm, embedded in which are the brownish-black or black granules of malaria-melanin. Frerichs(o) thinks these pigmented flakes are formed in the spleen, and are the broken-up fragments of coagula formed in the venous sinuses of that organ. In one case he was able to trace their formation to the liver. They must clearly, however, be formed at many different parts of the body, for they have been found in the vessels of the brain, kidneys, etc., and of such a size as to have precluded their having passed through the capillaries of the liver and lungs. Busch(p) has described these pigment flakes as having from two to six times the size of colourless blood-corpuscles. Frey(q) has alluded to them as granular lymphoid cells, having often a large increase of volume, containing granules of pigment. They have been attributed by Fuhrmann(r) to the coalescence of the nuclei and granules resulting from the destruction of colourless corpuscles, which, according to him, is a constant feature in ague, and determines the occurrence of the paroxysms. Frerichs has, in addition to these flakes, described and depicted spindle- and club-shaped epithelial (endothelial) cells, which he regards as the detached epithelium of the lining membrane of the sinuses of the spleen infiltrated with the decomposed red matter of the blood.

Seeing the importance attaching to melanæmia in malaria, we are led to inquire, how often is this condition of the blood present? Here authorities differ. In the experience of some, it is very common; in that of others, of very variable frequency. Kelsch, in his exhaustive article on the Alterations in the Blood in Malarial Affections,(s) states that he found it in every one of twenty-four patients suffering from pernicious fever, whose blood he examined for this purpose. And of forty-seven cases of cachexia in which he examined the blood, in twenty-one he met with negative results, whilst in twenty-six he found melanæmia present. Of these twenty-six cases he found pigment in the peripheral vessels in several during life. He says "I am led to believe that the pigment is a constant and characteristic product of severe or long-continued endemic malarial affections." He elsewhere states that the pigment-granules are taken up by the colourless corpuscles in the same way that cinnabar artificially injected is, and that they gradually disappear from the circulation by being deposited in the tissues.

(l) "Sur la migration du pigment sanguin à travers les parois vasculaires dans la mélanémie palustre" (*Gaz. Hebdom. de Méd.*, 1873, No. 3, p. 35). "Des rapports qui existent entre la pigmentation splénique et la pigmentation des autres tissus dans la mélanémie" (*L'Union Méd.*, 1874, No. 4).

(m) *Zeitschrift der Gesellschaft de Aerzte zu Wien*, 1850.

(n) *Gazette Hebdomadaire*, 1857, p. 659.

(o) *Loc. cit.*, p. 324.

(p) V. Busch, S., "Ein Fall von Melanæmia." *Œsterr. Med. Jahrb.*, Heft 11, s. 233.

(q) "Das Mikroskop." Fünfte Auflage, s. 139.

(r) "Beiträge zur Keutniss der Malariar-krankheiten. *Deutsche Militär-ärtzl. Zeitschr.*, No. 12, s. 635.

(s) "Contribution à l'Anatomie Pathologique des Malades Palustres Endemiques," Brown-Séquard's *Archives de Physiologie*, 1875.

Magnus Huss(t) states that he has almost constantly found melanæmia in cases of malarial cachexia observed at Stockholm. Frerichs(t) was led, from the investigations he made, to the conclusion that melanæmia was most frequently met with in quotidian or tertian agues, rarely in quartan: the apyrexia was often imperfect, and the disease manifested a tendency to assume a remittent or even a continuous type. Dr. Hammond appears to have found pigment in the spleen in all the cases he examined. Colin regards the condition as very common. Hertz says,(v) "It occurs less frequently in simple acute malarial fever than in the tedious, long-continued, or pernicious remittent forms, and in chronic infection and malarial cachexia. As we know very little positively with regard to the method of its production, it will probably be long before we can explain the circumstance that this condition exists in the blood of one individual, after a certain number of attacks of fever, whose number, length, and intensity bear no comparison with those which have been suffered by another similarly constituted person, in whom no pigment can be found; in fact, that in some subjects this condition is not developed even after prolonged illness." It is probable that slight grades may pass undetected, for the cachexia which marks the disease is very generally present; and this has been shown, in some cases at least, to depend on the presence of pigment in and around the cutaneous vessels from which it is deposited in the rete Malpighii. Probably the amount of pigment in the blood is variable and dependent on conditions with which we are not familiar, and that under ordinary circumstances, and when the disease is quiescent, the pigment is confined to the spleen. Kelsch states that it appears in the blood at the moment of the access of the fever. It would be particularly interesting if the periods of melanæmia are found to correspond with outbreaks of malarial symptoms. Lussana(x) holds that under ordinary circumstances the poison of malaria is confined to the spleen and portal circulation, and that it is only when it passes beyond these limits into the general circulation that the phenomena of intermittent fever make their appearance.

In the few cases I have examined I have failed to find pigment in the blood in all except the case which I have related in detail. But from the rapid manner in which the pigment disappeared from the blood in this case—whether to reappear I know not, as the patient went to sea—I should be careful to examine the blood on more than one occasion if possible, and to look through several slides before deciding that there was no melanæmia. The presence of pigment in the blood has been observed for periods extending over some months.

That melanæmia, though a frequent consequence of malarial poisoning, may be independent of the pigment-granules derived from decomposing algæ is quite clear, however. It has been noticed in connexion with melanotic cancer;(y) and here the pigment in the blood is obviously derived from the local pigmentary disease, which in its turn must obtain its colouring matter directly or indirectly from the blood.

Further observations are wanted before we can decide whether the particles of brown or black pigment, or malaria-melanin, found in the blood and tissues in intermittents are the actual germs or ferment which give rise to the phenomena which characterise malarial diseases. Enough has been said to show the great interest attaching to the subject, and the importance of examining the blood in cases of intermittent fever.

I have purposely avoided discussing the germ theory of malaria, except in so far as it relates to melanæmia. I may add, however, that it seems to me the only rational explanation of the phenomena of the disease.

GERMAN GYNÆCOLOGICAL SOCIETY.—A great number of obstetricians having resolved to found a Gynæcological Society, a committee, consisting of Professors Credé of Leipzic, Hecker of Munich, and Hegar of Freiburg, has framed the rules and by-laws, and has just called the first meeting at Munich on September 15 and 16, for the purpose of discussing these, and entering upon the general business of the new Society, for which purpose numerous papers have already been forwarded.

(t) Mentioned by Charcot, *loc. cit.*

(v) *Op. cit.*, page 634.

(x) Quoted by Dr. Lauder Brunton, *British Medical Journal*, 1876, vol. i. page 257.

(y) Copland's "Dictionary of Practical Medicine," vol. ii. page 828-32. Nepven and Nyström, *Centralblatt*, 1874, s. 505.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LONDON HOSPITAL.

INJURIES TO SPINAL COLUMN AND CORD.

Case 1.—*Fracture of Dorsal Vertebræ—Recovery, with Partial Paralysis of Lower Extremities.*

(Under the care of Mr. RIVINGTON.)

Frederick F., aged twenty-eight, labourer, was admitted into the London Hospital on February 20, 1872. A bag of clover-seed weighing 10 cwt. fell on the patient's back, contusing him rather severely. On admission it was found that he could not move his legs or pass his water, and there was partial loss of sensation in both feet. A projection of the spines of one or two of the lower dorsal vertebræ was noticed a few days afterwards. On the 25th his urine had a specific gravity of 1025; it was acid, without albumen or sugar, but with a copious deposit of lithates. He passed his fæces involuntarily.

On March 2 his water was thick, high-coloured, and partially decomposed, with an offensive smell. He still required the use of the catheter. There was a circular sore on one buttock, occasioned by the bruising.

March 4.—He could move his legs a little. He expressed himself as much better. His water had begun to collect to the extent of some ounces, and then to dribble away. He was ordered strychnia.

19th.—Patient's legs had obviously wasted. His feet hung helplessly on his legs, and there appeared to be no power over the muscles below the knee either in front or behind. The muscles of the thigh had recovered their power.

24th.—Patient had more power over his legs, and could retain his water better than before. Ate and slept well, but his feet were still in the same condition. There was decided impairment of sensation in both legs. Galvanism was ordered and kept up for several weeks without benefit.

On May 20 he was allowed to go home.

The record of the temperature and pulse taken throughout the case was as follows:—February 22, pulse 80, temperature 100·4°; 25th, pulse 88, temperature 101·2°; 26th, pulse 90, temperature 101°. March 1, pulse 90, temperature 99·2°; 2nd, pulse 92, temperature 100°; 14th, temperature 99°; 15th, temperature 99°. The paralysed parts were a little warmer than the rest of the body.

Case 2.—*Partial Dislocation of the Spine between the Fourth and Fifth Cervical Vertebræ—Death on the Second Day—Autopsy.*

Thomas D., aged forty-one, a cashier, was admitted on December 24, 1872, at 1.30 p.m. On December 24, at 12.30 a.m., he fell down a flight of fourteen or fifteen stairs. He did not know for certain whether he fell forwards or backwards, but thought that it was forwards, and that he put his hand out to save himself. He had been drinking, and he thought that he got up and went off to sleep. Was restless, and discovered himself about 9 a.m. on the floor. His wife stated that she heard him fall at 12.30 a.m.; went to his assistance, found him at the bottom of the stairs, tried to raise him in order to assist him upstairs, but he could not move, and, not being able to get assistance, made him up a bed on the floor. About 5 a.m. she obtained assistance, had him carried upstairs to bed, and sent for a doctor, who advised his removal to the hospital.

On admission, at 1.30 p.m., he was at once sent into the wards and ordered a water-bed. On examination, his body was warm. He complained of pain in the neck about the fifth cervical vertebra. There was complete loss of sensation in the lower extremities, and in the trunk below a straight line drawn across the chest from the tendon of the right pectoralis major to that of the left. On the inner and part of the front surface of the upper extremities there was loss of sensation; but sensation existed on the outer side of the arm, and also in front between a line running along the inner border of the biceps down the forearm near the middle to the centre of the front of the wrist, and then across the palm and along the centre of the index-finger, and another line running down the centre of the back of the arm, diverging near the elbow, so as to cross the arm almost transversely outwards, and afterwards to run down the outer side of the forearm to the centre of the back of the wrist, over the dorsum, and along the centre of the index-finger. Hence, in the hand, sensation existed only in the thumb, over the muscles of the thumb, and outer half of the index-finger. Sensation and motion were alike on both sides of the body. He could abduct his arms perfectly, but could not adduct them. He could flex his forearms, but not extend them, nor could he extend his fingers. He lay on his back with his arms fully abducted at right angles with his body, and his forearms flexed, and his hands and fingers semi-flexed. There was slight priapism on admission, but this soon subsided. There was no indication of reflex action on tickling or pricking, and there did not seem to be any hyperæsthesia at the limit of sensation in front of the chest. In ordinary and deep inspiration his intercostals did not act. Diaphragmatic breathing was well marked. The pupils were equal, and acted. There was no water in his bladder. The abdomen was distended and tympanitic. All the muscles of voluntary motion belonging to the trunk and lower limbs were paralysed. Pulse 68; temperature 98·4°. 12 p.m.: A small quantity of urine was drawn off.

December 25.—Total paralysis of bladder. A small quantity of water drawn off. Free perspiration; temperature 104·2°. He died quietly at 6 p.m., a day and three-quarters after the accident.

26th.—Autopsy conducted by Mr. Rivington, twenty-two hours after death. Body well nourished. Viscera healthy, with the exception of old pleuritic adhesions and congestion of the lungs. On removing the soft parts from the front of the cervical region of the spine, an irregularity was detected opposite the interval between the fourth and fifth cervical vertebræ. A slight extravasation of blood existed at the spot. The anterior common ligament was entire. The fourth cervical vertebra, with the vertebræ above carrying the head, were freely movable forwards on the fifth. There was no appearance of fracture in front, but simply a tearing of the intervertebral disc. On cutting down to the vertebræ behind in the median line, a great deal of extravasated blood was found by the side of the vertebræ and in the muscular interspaces. The left tubercle of the spinous process of the fifth cervical vertebra was torn or broken off. As the head hung down from the table, the body being prone, an interval of about three-quarters of an inch could be felt between the laminæ of the fourth and fifth cervical vertebræ, and at the bottom the theca vertebralis, apparently untorn, could be distinguished. On further examination it was found that all the ligaments between the fourth and fifth vertebræ except the anterior and posterior common ligaments had been torn, and that the only fracture was that of the tubercle before mentioned. Partial luxation of the upper part of the spine forwards was thus permitted, and during this movement the spinal cord was compressed against the upper border of the body of the fifth cervical vertebra. A little blood was effused between the dura mater and the spinal wall. The theca was untorn, and the spinal cord entire. No perceptible softening existed. The dislocation would appear to have occurred by forcible flexion of the cervical spine. In the fall downstairs the head was probably doubled down underneath the body. The early death appears to have resulted partly from the disturbance to the function of respiration which followed the loss of power in the muscles of inspiration and expiration, and partly from shock.

Case 3.—*Concussion—Fracture of Lumbar Vertebræ—Epileptic Fits—Paralysis of Lower Limbs—Recovery.*

John C., aged seventeen, worker in a floorcloth manufactory, was admitted into the London Hospital at 9.15 a.m. on June 8, 1872. He had fallen through a trap-door in a loft for a distance of thirty-seven feet, pitching on a wooden floor. It was thought that he had fallen on his side. He was insensible; his pupils were both dilated; his breathing was difficult. He did not speak till the evening, when he asked for his parents, but did not seem to understand what was said to him. Between 5 and 6 p.m. he vomited, bringing up a little milk which he had taken, and some blood. He passed a restless night, and drank a great deal of water.

On the morning of the 8th he ate an egg. His pupils were smaller; his pulse regular. His water was drawn off with a catheter; his bowels were relieved by an enema; his head was shaved, and ice applied. His legs remained motionless and did not respond to tickling or pricking of his feet, but he

seemed to have reflex power in his arms, and tried to push away the ice-bag. He continued in much the same state till the evening of the 11th, when he regained the power of passing his water. On the following day he spoke rationally, and asked for various articles of diet. His legs remained paralysed, but he possessed sensation on the surface of the abdomen and upper part of the thighs. His cremasters acted. In the evening his mouth appeared to be drawn a little to the right side. On the morning of the 14th he was conscious, and spoke rationally. At eleven o'clock he had a convulsive seizure; his mouth was drawn to the right side; he flexed his arms; his hands twitched, the fingers of the left hand being clenched over his thumb; his legs remained inactive. Four more fits followed in the course of the day. On the 15th he had some fits in the morning. In one his mouth was drawn to the left side, and the facial muscles of the left side were twitching; in previous fits the right facial muscles had been affected. In this fit the muscles of the left arm and left leg twitched, while the right arm and right leg remained perfectly still. The fits continued on the 16th and 17th. Hydrate of chloral was then administered, and the fits ceased on the 18th, when he began to regain power over his left leg as well as over his rectum. On the 20th he had sensation over the whole of the surface of the body, with the exception of his right leg, which still continued paralysed.

An examination of his head did not result in the detection of any depression or irregularity, but inspection of the back showed an abnormal prominence of the spinous processes of the second, third, and fourth lumbar vertebræ, whilst the articular processes on the right side stood out against the soft parts. The left articular processes could not be detected. The lumbar spine was evidently deflected to the right side. The right gluteal muscles were flabby. Galvanism was ordered on July 18, and was regularly applied every day for a month. He gradually improved, and by August 19 was able to get up and walk about on crutches. Subsequently he was sent into the country for change of air. In November he returned to the hospital, and was then able to use both legs and take a good deal of exercise, but fatigue soon followed exertion. He was ordered a spinal support. The abnormal prominence and displacement of the lumbar vertebræ were very evident.

Case 4.—Fracture of Dorsal Spine—Ulceration of Bladder—Death on the Fifty-fourth Day.

George W., aged thirty-four, admitted on August 30, 1871, was struck on the back by an empty salmon box weighing half a hundredweight whilst he was in a stooping position. The box had fallen on him from a height of twenty-two feet. On admission he was found to have a scalp wound about two inches and a half in length, which had laid bare a portion of the left parietal bone. There was loss of sensation and motion in the lower extremities, the loss of motion extending as high as Poupart's ligament. The penis was in a state of semi-erection. There were retention of urine and incontinence of fæces. On passing the hand down the back no inequality of the line of spinous processes could be felt, but on tapping the spine with the fingers he complained of pain at one spot in the lower dorsal region.

During the first five days the water was drawn off regularly twice a day with the catheter. After that it dribbled away freely. The urine, at first clear and acid in reaction, became alkaline and offensive by the end of the first week.

On September 19 an examination of the urine gave the following result:—Specific gravity 1015, alkaline; albumen one-sixth; pus, mucus, phosphates, and blood. The temperature of the legs was a degree higher than that of the body.

October 2.—Entire loss of motion and sensation as high as Poupart's ligament on each side. Partial loss higher up for a distance of two inches above the ligament. No spot of hyperæsthesia. He complained of severe shooting pains passing through his thighs, and increasing in severity daily. His bladder was washed out with warm water slightly impregnated with carbolic acid.

Towards the close of the case the floor of the bladder ulcerated, all his urine passing from the rectum. He lingered till October 23. A post-mortem was refused by the friends.

At a special Board of Examiners at the Royal College of Surgeons of Edinburgh on the 2nd inst., Jas. Hugh McClosky obtained the diploma of the College.

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Medical Times and Gazette.

SATURDAY, JUNE 30, 1877.

THE ARCTIC COMMITTEE ON SCURVY.

Last week we published the letter which had been addressed, on June 5, by the Lords Commissioners of the Admiralty to Sir George Nares, in reference to the conclusions of the Committee on the question of the provisioning of the sledge parties in the late Arctic Expedition; and it might have been taken as a fitting close to the articles we have had on the subject to which the letter referred. But it would be hardly fair, perhaps, to Sir George Nares to allow the discussion excited in the House of Commons, on the 18th ult., on the subject pass without some brief notice. Dr. Lyon Playfair called attention to the Report of the Admiralty Arctic Committee on the outbreak of scurvy—a disease which, he observed, had almost disappeared from our Navy. He remarked that the question was one that concerned not only an Arctic Expedition, nor only the Navy; but that the Army was as much interested in the subject as the Navy. "In every military expedition scurvy was certain to make its appearance after the first campaign, and therefore it was important that our naval and military authorities should not fall asleep on the subject." He pointed out that in the late Expedition the crews were carefully selected from men between twenty and thirty years of age in excellent health, and that the ship's dietary was very carefully drawn up, the food being excellent in quality, ample in quantity, and sufficiently varied, though he thought that the daily allowance of lime-juice might well have been doubled. But the ships were very badly ventilated, the atmosphere of the sleeping-decks being far worse than that of a crowded law court, or of any East-end theatre; and from five to eight times worse than good atmosphere. "The cubic space allotted to each man was only 107 feet on board the *Alert*, and 140 feet on board the *Discovery;* and as each man required for his healthy existence from 3000 to 4000 feet per hour it followed that the air on board those vessels should have been

changed twenty-five times per hour,—a thing which it was impossible to do, because it would have produced a draught that the men could not have endured, no mechanical means having been provided for warming the air before it entered the sleeping-place." In this foul atmosphere the men slept for the 140 sunless days of an Arctic winter. Nevertheless, when the time for the spring sledging expeditions came, the men appeared to be in remarkably good health. Dr. Playfair then spoke of the dietary of the sledging crews, and blamed the Admiralty for having regulated that dietary according to the experience derived from former expeditions, while "in nothing had we made greater advances of late years than in that of knowledge relating to food, and its effect upon the human constitution." The only substitute for fresh vegetables which the sledges carried was preserved potatoes, which were to be served out to the men at the rate of two ounces a day—a mere insignificant amount. "But there was an excellent substitute in the form of lime-juice, and since the adoption of that substitute in 1795 scurvy had disappeared from our Navy"; and this substitute had been provided in abundance, with a memorandum of recommendations from the Medical Director-General of the Navy, pointing out that lime-juice was necessary for the health of men, both on board ship and in sledging expeditions. But, as everyone now knows, lime-juice was not supplied to the sledging-parties, and scurvy broke out very speedily in the most hardworked expedition, and in the other expeditions after a longer interval. Sir George Nares felt so strongly the inconveniences that would attend the carriage of the frozen lime-juice, and the fuel to thaw it, and the loss of time in thawing it, that he decided not to send it; and he had also, to support that decision, the experience of former sledging expeditions, in which no lime-juice had been provided, and in which scurvy scarcely made its appearance. Dr. Playfair fully sympathised with the difficulties with which Sir George had to contend, but asked "how it was that the Admiralty had not applied for advice on the subject to some scientific chemist, who could have informed them that it was possible to concentrate the lime-juice, and so to render it more portable. Concentrated lime-juice had been used one hundred years ago, and had been most successful." He remarked that there had been too much public condemnation of Sir George Nares, and concluded his very able and temperate speech by observing that all he wished was that "they should profit by the lessons of the Expedition, and learn precisely the hygienic condition which had caused its failure." Dr. Cameron, in continuing the discussion, thought that eggs and condensed lime-juice ought to have been carried by the sledging parties instead of rum, and that more fresh meat should have been allowed; and after some observations from Mr. Gourley, Mr. Goschen, and Dr. Lush, Mr. Ward Hunt complimented Dr. Playfair on the value of his speech, and on the generous way in which he had spoken of Sir George Nares; but denied that the recommendations of the Medical Director-General were to be considered as orders from the Admiralty. Perhaps, he said, the Admiralty were to blame for not giving an order to the Commander to obey those recommendations; but the fact was that the order had not been given, though, of course, the Commander was expected to give due weight to them. He also denied that the Expedition had failed in its primary object on account of the outbreak of scurvy. "The Pole was impracticable; therefore it was wrong to say that the Expedition failed in its main object by reason of the outbreak of scurvy." On both these points opinions, no doubt, differ greatly; and certainly the Medical Director-General supposed that his recommendations would be regarded as orders. In his evidence before the Arctic Committee, after stating that the Admiralty had called on him to draw up suggestions and recommendations "for the information of the commanding and medical officers of the Expedition," he goes on to say: "I did so, and forwarded them to the Admiralty, and by the Admiralty they were forwarded to the commanding officers of the *Alert* and the *Discovery;* and these suggestions and recommendations, I find, are alluded to in the sailing orders of the captain of the *Alert*. Hence I assume that they partook rather of the character of orders than of suggestions and recommendations; otherwise, I do not see why the Admiralty should have called on me to draw them up, had they not intended them to have been strictly followed, or why they were embodied in the sailing orders if it was not intended that they should be considered as orders and so acted on." It is equally certain, however, that the Commander of the Expedition regarded them only as "recommendations," to be carried out or not at his discretion; and that the Admiralty agree in his view of the matter. There is therefore nothing more to be said about it but that his disregard of them was a lamentable error of judgment.

The evidence produced before the Arctic Committee clearly proved "the fully established value of lime-juice, and that the conveniences attending its use render it greatly superior to all other suggested antiscorbutic remedies; and we may take a future opportunity of referring to the concentrated preparations of it that were suggested by some of the witnesses. In the "Paper on Scurvy," written by the medical members of the Committee, it is observed that "it seems of the greatest importance that the value of these preparations should be thoroughly tested—in the first place with respect to their curative value, and then, if these trials prove satisfactory, with respect to their prophylactic value"; and as the First Lord of the Admiralty spoke of this paper as "an elaborate and valuable document, which it is a great advantage to the country to possess," we may hope that the recommendations and suggestions contained in it will be carried out, and their practical value tested in earnest, and without any unnecessary delay.

THE BRADLAUGH TRIAL.

It was a matter for public congratulation when the case of "The Queen *versus* Bradlaugh and another" was concluded, after a trial of *only* three days and a half; and all Englishmen and women of healthy minds and instincts have rejoiced that the sound common sense of the jury enabled them to triumph over the clever pleadings of the defendants, and to return the verdict that the work called "Fruits of Philosophy" is "calculated to deprave public morals." That was the question they had to try; and we venture to regret that they went out of their way to add to their verdict that they "entirely exonerated the defendants from any corrupt motives in publishing it." Such an expression will, but too probably, weaken the effect of the verdict in the minds of the classes to whom the pamphlet is likely to be most injurious, and lead them to believe that to break the law with good intentions lessens the legal guilt of the act. Everyone must, no doubt, regret that the defendants were prosecuted, on account of the enormously increased publicity thereby given to the book in question, but we do not see how it could have been avoided. This last prosecution seemed to arise necessarily out of the former ones, and it must be remembered that the defendants openly challenged prosecution, defying any restriction on their right to publish whatever would in their opinion be for the public benefit, however much it might offend against what are ordinarily considered the decencies and proprieties of our daily domestic life. The pamphlet in question is called "An Essay on the Population Question," and advocates the prevention of over-population by the use of "scientific checks" to conception. And one of the strongest and most painful circumstances of the trial is the fact that one of the defendants is a woman, who is a wife—though not the wife of the male defendant,

—and is the mother of at least one daughter; and who defended herself with great ability, and still greater boldness. We have no intention whatever of examining into the various pleas put forward by the defendants; but we must observe that poverty, misery, drunkenness, and all other kinds of vice existed before over-population, to which they apparently would attribute them all; and we protest in the strongest possible way against the use they made of medical works, and of the writings of various authors on the evils of over-population. Medical, and all other writers on this subject, and on the evils to health of over-childbearing, recommend restraint and subjection of the desires and passions as the remedy for them; but the "well-intentioned" publishers of the "Fruits of Philosophy" scorn restraint, and openly teach and advocate indulgence, with a preventive, *contra naturam* in its character, against the consequences. The subjects they handle have to be faced at times in the confessional of the consulting-room, and are there dealt with with the utmost delicacy and reserve by those who, by the teachings and practice of their profession, are made well acquainted with the passions, the powers, and the weaknesses of human nature, and can with wisdom as well as knowledge inculcate the discipline and education of continence and self-government, as or when these may be necessary. But in this work, intended for the million, and sold in our streets for sixpence to all that choose to buy it, without regard to age or sex, the anatomy of the female sexual organs and the physiology of generation are described with a fulness and minuteness far beyond what would be necessary, even were it granted that a popular knowledge of such subjects is desirable; and indulgence of the sexual appetite is recommended as early as is compatible with health, together with the employment of "chemical checks," the manufacture and mode of use of which are minutely described, in order to interfere with the laws of nature, and prevent conception. And this, by a prostitution of terms, is called science and philosophy! The philosophy is the philosophy of licence; the science, the science of the gutter. It was with a feeling of humiliation that we observed that even one medical man could be found to come forward and declare that he thought the work an "excellent one." What he meant by further stating that it did not excite any libidinous feeling in him, "but rather the reverse," we are, indeed, at a loss to understand, unless he meant that it excited disgust; and, if so, we so far agree with him. But can anyone really believe that *the* doctrine the work teaches, if ever under any circumstances admissible, can be safely taught to the multitude?—that it would not be used to promote immorality, and make incontinence "safe"? We venture to assert that this *must* be the result of such teaching; the pamphlet is issued by the "Freethought Publishing Company," inculcates the free gratification of "our appetites," and tells us that "it becomes us," with thanksgiving, "to make the most" of the means that our talents may devise for preventing evils that might arise from that gratification. Why should the disciples of such doctrine continue to submit to the restraint of marriage any more than to any other restraint? "Free-love" would assuredly follow in the wake of such free-thought, and the freedom from other restraints advocated in the "Fruits of Philosophy."

It would be idle to address to such Freethinkers any appeal founded on the doctrines or teachings of the Christian religion, but it may, perchance, seem less vain and foolish to invite them to learn a lesson from the wisdom of the most popular English poet of our day. In one of the lays of his "In Memoriam," Tennyson puts the question—

> " . . . dare we to this fancy give,
> That had the wild oat not been sown,
> The soil, left barren, scarce had grown
> The grain by which a man may live?"

and after then saying,—

> " Oh, if we held the doctrine sound
> For life outliving heats of youth,
> Yet who would preach it as a truth
> To those that eddy round and round?"

he concludes with this advice,—

> " Hold thou the good; define it well,
> For fear divine Philosophy
> Should push beyond her mark, and be
> Procuress to the Lords of Hell."

BRITISH AND AMERICAN MEDICAL ASSOCIATIONS.

At a time when the preparations for the Manchester meeting of the British Medical Association are rapidly approaching completion, there comes to us from the other side of the Atlantic the presidential address delivered to the American Medical Association by Dr. Henry J. Bowditch, of Boston. This address, which deals mainly with the internal affairs of the Association, affords us material for a comparison between the British and American bodies which is at least instructive. The American Medical Association is now just thirty years old, having been embodied in 1847. How different the state of things is nowadays in America from what it was then need not be here alluded to. We know what the change has been in our own country; but in America the mighty struggle of the Civil War, and the immense addition to the population, will suffice as landmarks to give us some idea of what the other internal changes must be. To the earlier meetings of the American Association there were some drawbacks; but on the whole, says Dr. Bowditch, they were characterised by great enthusiasm and earnestness. They were attended, moreover, by the *élite* of the profession from all parts of the country; but such is not the case now. The President says, "I think we must admit that our meetings, with perhaps a few exceptions, rarely are carried out with the entire co-operation of the *whole* profession, as they were in the earlier years of our existence. I am sure the meetings have lost reputation in the Eastern and Middle States. This I know by personal experience with some of our chief Associates of Philadelphia, New York, and Boston. I infer that a similar feeling exists elsewhere, because I notice the absence of some of the prominent Western and Southern men." Various reasons are assigned for this. Men who came for scientific discussion found themselves involved in furious discussions on points of order or the ethics of professional etiquette. Many were disappointed in the work of the Society; time was wasted in listening to vain babblers. The only outcome of the meetings, the *Transactions*, were too bulky and too empty. Other reasons, less general in their character, were adduced as causes of failure; but we leave them on one side, and shall endeavour to apply those given above to our English institution.

Certainly the history of the British Medical Association has been different in many respects from that of its American cousin. It was founded with no great flourish of trumpets, and was originally, and up till a recent date, a thoroughly provincial institution. Its growth has been exceedingly gradual, and it is only of recent years that it has extended its ramifications so widely. Neither can it be said to be in any way showing signs of senility. Its popularity is rather extending than otherwise. Nevertheless, we are by no means to conclude that there are no further risks to be run in the course of its onward progress. These risks are many, but as yet, at all events, all serious obstacles have been severally overcome. As it seems to us, who can hardly, however, speak with authority at this distance of time and space, one great drawback to the success of the American Medical Association has been the immense

amount of space sought to be covered by it, and the consequent conflict of interests which can hardly fail to take place. In the case of the British Medical Association, this too, we think, is fairly illustrated. The body might be described as essentially English in its constitution; it has never, comparatively speaking, flourished in Scotland or Ireland. The interests and conditions of the profession in those countries are not identical with those which prevail in England; whilst all over England and Wales they do not greatly vary. Magnify this discrepancy a hundredfold, and we have some idea of what things are in America. In point of fact, we believe the local or even State societies to be a weakness in the American body; they are the stronghold of the English institution. We have no notion in this country of what prevails in certain State and even county societies in America. It is often the complaint that the distinguished foreigner cannot do this, that, or the other thing with regard to practice in England; that he cannot be put on the Register save by an English qualification; he cannot sue for fees; but he may have the best and largest *clientèle* in London—that is to say, in the world. But if a stranger wants to settle down in some of the American States, before receiving the right hand of fellowship from his brethren he has to submit to an examination in some hole-and-corner place, before men often utterly incapable of appreciating his mental status. From this many men shrink; but these small close burghs have had, we fear, a good deal to do with the want of success in the American Medical Association. In England we have none of this. The branches of the British Medical Association have fortunately nothing to do with registering qualifications; but they have much to do with spreading good feeling and good fellowship through the ranks of our profession. Still more is this the case with the great annual meetings. There men discover, to their great surprise, that practitioners they had somehow learned to distrust as not being such excellent fellows as they might be, are not so bad after all. And much good follows. Men of all ranks in the profession mingle together; and useful lessons are learnt both by high and low. We have seen and taken part in many of these meetings; and, were it only on this ground, we could still strongly advocate their utility.

But when we come to what must for us meanwhile be the last important distinction between the American and British bodies, to our mind we have not far to seek. It rests on the existence of the British Medical Association as a permanent entity, with a powerful and skilled staff, and a regular means of intercommunication in an ably edited journal. In this way every member of the Association, being also *ipso facto* a subscriber to the journal, is kept perfectly posted up, not only in what is going on in his own locality or branch, but what is going on in all the branches of the Association—in fact, in the whole medical world. The American Association has none of this. It is a helpless concourse of atoms, a few of which are brought together every year, but with the result that might be expected from such a concourse. To us it seems that the great thing wanted in America is the strengthening of the State societies, with an abolition of their system of examination as conducted in some parts; and the corollary to this, something approaching to an equalisation of the only medical qualification known—that of M.D.,—as granted at the different colleges and universities,—shops not included.

That the British Medical Association has not to complain of the abstention of the best men in our profession, the following list of office-bearers and others will show. This is the forty-fifth annual meeting, and it is to be held in the Owens College, Manchester, on Tuesday, Wednesday, Thursday, and Friday, August 7, 8, 9, and 10, under the presidency of Mr. A. Eason Wilkinson, M.D., Senior Physician to Manchester Royal Infirmary. The readers of the Addresses will be—in Medicine, William Roberts, M.D., F.R.S., Manchester; in Surgery, T. Spencer Wells, F.R.C.S., London; and in Obstetric Medicine, Robert Barnes, M.D., F.R.C.P., London. The following will be officers of Sections:—

Medicine: President—Sir William Jenner, Bart., K.C.B., M.D., F.R.S. Vice-Presidents—Samuel Crompton, M.D.; Wilson Fox, M.D., F.R.S.; Henry Simpson, M.D. Secretaries—Julius Dreschfeld, M.D., 292, Oxford-road, Manchester; F. T. Roberts, M.D., F.R.C.P., 53, Harley-street, London, W.

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Physiology: President—Arthur Gamgee, M.D., F.R.S. Vice-Presidents—John Cleland, M.D., F.R.S.; Thos. Lauder Brunton, M.D., F.R.S. Secretaries—Joseph Coats, M.D., 33, Elmbank-street, Glasgow; William Stirling, M.D., University, Edinburgh.

Psychology: President—J. C. Bucknill, M.D., F.R.S. Vice-Presidents—H. Rooke Ley, M.R.C.S.; G. W. Mould, M.R.C.S. Secretaries—P. M. Deas, M.B., County Asylum, Macclesfield; Thos. Claye Shaw, M.D., Middlesex County Asylum, Banstead.

The Local Secretaries are—Dr. Leech, 96, Mosley-street, Manchester; C. J. Cullingworth, Esq., 260, Oxford-street, Manchester; and Dr. Hardie, St. Ann's-place, Manchester.

Such names attached to the programme of what, after all, though a very important meeting, is a provincial one, sufficiently indicate the position of the best men in the country with regard to this Association. It would be difficult to happen upon three men more distinguished in their respective spheres than the three who are to read the Addresses on Medicine, Surgery, and Obstetrics. The names of William Roberts, of Spencer Wells, and of Robert Barnes are to the medical practitioner, in whatever part of the world he may be placed, as household words. When, moreover, we see such a man as Sir William Jenner accepting a, comparatively speaking, secondary position as president of a Section, even though it be as important as that of Medicine, nothing further is necessary to demonstrate the value placed by our profession on these great annual gatherings.

THE WEEK.

TOPICS OF THE DAY.

JUDGMENT was last week delivered in the case of Perkins *v.* Lewis, by Mr. Justice Fry. It will be remembered that this was an action for the specific performance of a contract to purchase a house and grounds called Fawley Lodge, at Hythe, near Southampton. An agreement was entered into on January 21, 1876, by which the plaintiff agreed to sell the property to the defendant, and within seven months to do all acts requisite to obtain a good and sufficient supply of water wholesome for drinking purposes, and to verify a good title. It was also agreed that it should be determined by Messrs. Shore and Brierley, public analysts, whether the water was wholesome after filtration through "an ordinary Lipscombe filter." On July 4, 1876, the analysts certified that the water was rendered wholesome by this process of filtration. On August 22, 1876, however, notice to rescind the contract was given, and the present action was brought to compel specific performance.

His lordship held that the contract had not been complied with as to the supply of water, and that therefore the defendant was entitled to rescind; but, inasmuch as wholly unfounded charges of misrepresentation had been made in the defence set up, the defendant would be left to pay his own costs.

The Newmarket magistrates recently inflicted a fine of £5, with £10 11s. costs, upon George Gristwood, a general draper, of Roman-road, Old Ford, Bow, for knowingly sending from his house in February last a domestic servant in his employ, whom he caused to be conveyed by railway to her home at Newmarket while suffering from small-pox. Amongst thinking people it is beginning to be acknowledged that in flagrant instances of the dissemination of contagious diseases a money fine is scarcely a sufficient punishment for the amount of suffering and risk to life entailed by wanton disregard of all sanitary laws.

A large party of the representatives of the various local boards of guardians, with several eminent engineers, and others practically interested, last week visited, by invitation, the extensive works of the West Kent Main Drainage System now in progress under the direction of Mr. Alfred Williams, C.E., on either side of the Sidcup Station of the South-Eastern Railway. These works not only illustrate an important movement in the means of improving the sanitary conditions of a large region by the combination of the Authorities immediately concerned (thus rendering practicable the carrying out of engineering works on a scale too large for individual efforts), but they also bid fair to become second only to the great undertakings of the metropolitan area itself. The works extend for a distance of fifteen miles from the north-east of Croydon, over Beckenham, North Bromley, Chislehurst, Eltham, and Sidcup, to Bexley, where they are joined by a branch from the Cray Valley. Thence, the main sewer, which had hitherto been of the dimensions of six feet by four feet, increases in size, and after running a short distance with a circular section of five feet, enlarges to five feet six inches, and so continues to the outfall into the river Thames at Long Reach. The total length of the section, as before stated, is fifteen miles; eight shafts have already been sunk, and are being worked at the rate of two lengths of twelve feet per day at each of the two falls. Of the tunnel itself, about 300 feet has been done, the material used for the sewer being concrete applied with much skill and to good purpose. The total cost of the present undertaking is estimated at from £160,000 to £200,000. In revising this scheme in 1874, Sir Joseph Bazalgette proposed that the main sewer should be continued westward from Croydon, by Mitcham and Merton, to Kingston, and it is now probable that this idea will ultimately be carried out, by the example now set being followed by the whole of the Authorities interested in the sanitary improvements of the higher districts of the Thames Valley.

A meeting of the Council of the Hospital Saturday Fund was held last week at the Charing-cross Hospital, the board-room of that institution having been placed at their disposal for that purpose. Mr. Morley, M.P., presided. The subject under discussion was—"Are Provident Dispensaries justified in looking for assistance from the Hospital Saturday Fund?" The argument was, that in giving support to provident dispensaries, as had hitherto been done, the usefulness of hospitals would be curtailed. Sir C. Trevelyan said his answer to this was that the hospitals were for the more serious and difficult cases, whilst the dispensary was for the more trifling cases. He thought that the patients in the London hospitals were very much mixed up, and owing to their great number it was impossible for the medical men to give the proper time to each patient. Mr. Carter, of St. George's Hospital, thought that the contributions sent in on Hospital Saturday should not be given to dispensaries, which, if they were doing their duty, would be supported by the benevolent in the district. The hospitals were institutions for conducting medical education, as well as attending to patients. If they took from the hospitals all those cases which could be treated in the out-patient wards they would be striking at the very root of medical education. Mr. Hill said the day might arrive when the metropolitan hospitals might introduce something of the provident element themselves. The meeting broke up without any definite settlement of the question having been arrived at.

On Saturday last the Earl of Beaconsfield opened the new buildings which have been erected by the Metropolitan Artisans' and Labourers' Dwellings Association, on a most advantageous site near Battersea-park. The objects of the Company are stated to be to supply healthy and comfortable homes for artisans, and more especially for the class termed labourers. Owing to the high price of land, it has been found more practicable to build the dwellings in flats, instead of in separate houses or cottages. Acting on this principle the Association are erecting two classes of dwellings—one for artisans, and the other for labourers and persons earning small wages. Each tenement consists of three good rooms, and great care has been taken in perfecting the necessary sanitary arrangements. Although to be let at small rentals, the Council express their belief that there will be a return of at least 5 per cent. on all capital invested. A number of distinguished visitors were present to meet Lord Beaconsfield, who, after carefully examining the premises and addressing the assemblage, declared the building open, at the same time stating that her Majesty had expressed a wish that her name should be associated with the undertaking, for which reason the buildings were to be known in the future as the Victoria Dwellings for Artisans.

At the meeting of the Sanitary Institute of Great Britain, to be held at the Royal Institution on the 5th prox., the diploma of the Institute is to be presented to Dr. de Pietra Santa, M. A. Chevallier, and Dr. Passant, the President and two members of the Council of the Société Française d'Hygiene. The presentation is to take place after the opening address, which is to be delivered by Dr. Richardson.

A general meeting of the subscribers to the Trained Nurses' Annuity Fund was recently held in the picture-gallery of Grosvenor House, which had been placed at the disposal of the Society by the Duke of Westminster, who presided. The object of the Society is to provide annuities for those nurses who, after acting in that capacity for a certain number of years with irreproachable character, are unable to continue their avocation. It is desired to make the existence of the Fund more generally known, in order to secure an increased number of subscribers; and it was for this purpose, principally, that the meeting was held. Mr. Jenkins, M.P., proposed the only resolution put forward, viz.:—"That this Fund has proved itself of great benefit to a highly deserving class of persons, and that it is, in the opinion of this meeting, desirable to extend its operations." This was seconded and carried unanimously, and the meeting then terminated.

The town of Banbury has recently been putting forth claims for notoriety which will scarcely enhance its reputation for wisdom. A census has been taken there on the question of compulsory vaccination, and the following is stated to have been the result: Against compulsion 957, for compulsion 100, neutral 407. In the event of a small-pox epidemic unfortunately occurring in Oxfordshire, it would be well to avoid fixing upon the town of Banbury as a place of residence.

Two rather remarkable cases of poisoning by carbolic acid have recently been made public. Mr. Humphreys, the coroner, held an inquest at Hackney, on Monday last, relative to the

death of Sarah Silver, aged fifty-two, a widow. Deceased had been engaged to attend the wife of a corn merchant residing at Stone-road, Hackney. On the 21st inst. two bottles of champagne were drunk, of which deceased, who had the key of the wine-cellar, took part. The servant afterwards found her on the floor of the kitchen, apparently the worse for drink, and on the table was a pint champagne bottle, labelled "Carbolic Acid, Poison." A doctor was summoned, but she died in three hours from poisoning by carbolic acid. The jury returned a verdict of "Death from misadventure." An inquest was also held by Mr. Bedford, at the York-street Board-room, on Monday last, on the body of Frederic Cresswell, aged four years, of 174, Vauxhall-bridge-road. On the 19th inst. a bottle of carbolic acid was inadvertently left on the washstand in a room where three infants were playing, and on the mother's return she found the deceased insensible, and another child very ill. Mr. S. K. Birch, a surgeon, stated that when he was called there was a strong smell of carbolic acid in the room. There was an unaccountable patch on the stomach of the deceased, and another on the head. The inquest was adjourned for an analysis to be made.

In London the fatal cases of small-pox, which had steadily though slowly declined in the six preceding weeks from 78 to 55, decreased in the week ending June 23 to 44—a lower number than in any week since the beginning of November last. Of these, 15 occurred in private dwellings, and 13 of the 44 were deaths of children under five years of age, all of whom were certified as having been unvaccinated. The number of small-pox patients in the Metropolitan Asylum Hospitals had declined to 726; and the admissions of new cases during the week were only 93, against numbers declining from 254 to 145 in the five previous weeks.

About twenty sufferers from the Bath bridge accident still remain in the Bath Royal United Hospital. All are progressing favourably, with the exception of Mr. Bissett, of Bishopston, Bristol, whose thigh was fractured, and who is also suffering from spiual iujurics. His condition has within the past day or two assumed a more serious aspect. Six of the injured persons have been discharged from the Hospital during the past few days, and several others will be allowed to go to their homes in the course of this week.

A meeting of the committee and gentlemen interested in the question of training volunteers to attend to wounded men in the field, and to procure for the volunteer force a thoroughly efficient medical department, was held on Wednesday last at the United Service Institution, Whitehall-yard.

The Queen has been graciously pleased to confer a pension of £100 a year on Dr. Rumsey's widow, at the recommendation of Earl Beaconsfield.

The Scientific Grants Committee of the British Medical Association are now prepared to receive applications for grants in aid of research for the advancement of medicine and the allied sciences. Applications should be accompanied by full particulars of the character and objects of the proposed research, and addressed to the General Secretary, 36, Great Queen-street, London, W.C.

THE UNIVERSITY OF LONDON AND THE ADMISSION OF WOMEN TO DEGREES IN MEDICINE.

In February last the Senate of the University of London took their medical graduates by surprise by a decision to admit women to examination for their medical degrees; but after receiving an influential memorial from the medical graduates, strongly objecting to the proposed step as likely to be detrimental to the interests of the University, the Senate postponed further action in the matter till after the meeting of Convocation in May. That meeting was a very exceptionally large one, for there was an idea, or hope, that for once at least some definite result might follow its decision. The debate was a prolonged one, and the divisions important, 142 voting against, and 129 for, a motion by Mr. Nesbitt to thank the Senate for their recent action; while an amendment proposed by Mr. Savory, and seconded by Dr. Barnes—"That this house is of opinion that it is unadvisable to admit women to the degrees in medicine before it shall have considered the general question of their admission to the degrees of all faculties"—was carried by a still larger majority, viz., 144 to 116. The Senate met again on the 20th inst., and by a vote of 16 to 11 decided to pursue the course they had already determined upon, and to disregard the strongly expressed opinion of the only body which represents the members of the University. It is not our intention at the present time to enter into a discussion of the merits of the general question, but we wish to indicate a few points which seem to us to be of very great importance. In the first place, it would have been impossible for the Senate to make so considerable a change without consulting the opinion of Convocation and obtaining a new charter, were it not for this permissive Act of last session. We should have thought, therefore, that they would have felt bound, under the circumstances, to attend to a request so decisively put forward. But by thus methodically disregarding the opinion of Convocation they are going about to destroy any interest which graduates may feel in the affairs of their University—an interest the want of which is often complained of, and which can alone give rise to an *esprit de corps* which is now sadly deficient among them. And in the second place, the mildly worded amendment sufficiently indicates what is of itself only too obvious—that the step is to be taken principally with the object of granting a *qualification* to women, thus reversing the order of things as it applies to men who take the degrees of the University of London as *distinctions*, and not for the sake of the licence to practise which they carry along with them. Lastly, it is an ominous fact that, while protestations are being constantly made by those high in office that the degrees are to be offered to women on precisely the same terms as they are now given to men, Sir James Paget is said to have spoken of necessary changes in the subjects of the examinations. Nor is he the first who has hinted at this; more than one of the present examiners have, indeed, openly stated that they would not and could not examine a female candidate on the same range of subjects as male candidates must now submit to. It thus appears that the University must sustain one of two disadvantages, if not both of them—the loss of many most distinguished men from their examining staff, and a deterioration in the value of their degrees.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Annual Report on the affairs of the Royal College of Surgeons of England, by the President, which has just appeared, does not contain much that is not already known to our readers; but a few items of interest may be gathered from it. Only four Members of the College, of the required standing, have been *elected* to the Fellowship since July, 1876. For the Primary Membership of the College 792 students were examined, of whom 546 passed, and 246 were referred back to their studies. For the Pass Membership 569 were examined, and 432 were approved, while 137 were sent back. For the Primary Fellowship 87 candidates presented themselves, of whom only 44 were approved, and 43 were rejected. But of 37 examined for the Final Fellowship 27 passed, and 10 were rejected. Exactly the same number of candidates (37) presented themselves for the diploma in Dental Surgery; and exactly the same proportion (27 out of 37) succeeded as in the Pass Examination for the Fellowship.

The President, for the time being, of the College was, at the invitation of H.R.H. the Prince of Wales, appointed a Com-

missioner in the British Section of the Paris Exhibition for 1878.

The Fellows are informed that "the legal requirements with respect to the proposed new regulations for the Fellowship not having been as yet completed, the Council cannot at present give effect to them."

The President and Vice-Presidents of the College are engaged in the consideration of the best mode of giving effect to the decision of the Council, that, while they regard women as not eligible to become Members or Fellows of the College, and are therefore "not prepared to admit them to be examined for those qualifications, whether at the examinations as now conducted, or with the proposed machinery of joint examinations," yet they will be willing, if legally authorised, to take part in special joint arrangements under which women would be able to acquire the registrable titles for practice.

A committee appointed by the Council to consider "certain questions relating to the diploma in Dental Surgery," of which our readers have been kept informed, have unanimously arrived at the conclusion, and have recommended accordingly, that the dental diploma shall in itself be deemed a sufficient qualification to enable the holder to undertake the appointment of lecturer on dental anatomy, dental physiology, or dental surgery, or of the post of surgeon to a special dental hospital or the dental department of a recognised hospital. And the committee were of opinion that certificates should not in future be received from teachers unless, in addition to any other qualification they may possess, they also hold the licence in Dental Surgery of the College. Further, the committee recommend that the Dental Board shall gradually increase the severity of the test by which the said licence is obtained, with a view of giving greater importance and value to it. The report of the committee has still to be considered by the Council.

UNIVERSITY OF DUBLIN.—THE NEW DEGREE IN MIDWIFERY.

At the annual meeting of the Senate of the University, held in the Examination Hall, Trinity College, on Saturday, the 23rd inst., the Rev. Dr. Longfield, Senior Proctor, proposed the adoption of the following "grace" from the Provost and Senior Fellows of Trinity College:—"That the degree of Magister Artis Obstetricæ (M.A.O.) be conferred (*honoris causâ*) on Edward B. Sinclair, M.D., and on Alfred H. M'Clintock, M.D." He said these gentlemen had been appointed examiners for the new degree, and it would be obviously proper that they themselves should proceed to the degree, and it seemed to the Board of Trinity College that the degree should be conferred on them *honoris causâ*. Everyone residing in Dublin knew that each of these gentlemen had a very high professional character, and that each of them had made contributions to the literature of their branch of the profession. Dr. Sinclair was joint-author of an important work, "Practical Midwifery," and the author of many valuable papers in the medical journals. He was the founder of the Army Midwifery Class, under the patronage of the Queen and the Commander-in-Chief. The great value of this institution was, he believed, acknowledged by everyone who had the means of forming an opinion on the subject. Dr. M'Clintock was the editor of "Smellie's Midwifery," the joint-author with Dr. Hardy of "Practical Observations on Midwifery," etc. It was unnecessary to say more. The Senate would admit that this would be a very proper inauguration to the new degree. The motion was adopted.

THE REGISTRATION OF HONORARY DEGREES.

Our readers will not have forgotten that during the recent session of the General Medical Council a long debate was held on the question of the registrability of honorary degrees, excited by a formal application from Dr. Eustace, Fleet-Surgeon, an officer of long standing and acknowledged high merit, for the registration of the M.D. degree conferred on him *honoris causâ* by the Queen's University in Ireland. The Registrar of the Branch Council for England had refused to register the degree on the strength of an opinion given by Mr. Bowen, Q.C.; but the law officers of the Crown in Ireland had given an opinion contrary to Mr. Bowen's. The General Medical Council finally decided to submit the case to the consideration of the law officers of the Crown in England. They have confirmed the opinion of the Irish law officers, and the degree has been registered. We have the pleasure of adding a copy of the opinion of law officers of the Crown for England:—

"We think that, looking to the terms of the charter of the Queen's University in Ireland, the gentleman on whom the honorary degree of Doctor in Medicine has been conferred, under the powers contained in that charter, is a graduate and a Doctor of Medicine of that University, and possessed, as such, of a qualification which entitles him to be registered under the Medical Act.

"It may, possibly, be doubtful how far such a result was in the contemplation of the framers of the Medical Act (1858), the provisions of which point to courses of study and examination as requisites for obtaining qualifications. But we are of opinion that any inference thus arising cannot alter the meaning of the terms used in the Act, and that the honorary degree in question is a degree coming within the description contained in Schedule (A) to the Medical Act (1858) of the qualification of "Doctor of Medicine of any university of the United Kingdom. "John Holker.

Hardinge S. Giffard.

F. Vaughan Hawkins."

THE INDIAN MEDICAL SERVICE.

It will be remembered that, in our number for April 28 of this year, we warned our readers that a radical change was contemplated in the organisation of the Indian Medical Service. The information we had received on the subject was confirmed by a statement made last week in the House of Commons. In answer to a question from Sir C. O'Loghlen, "why the examination of medical officers for promotion to the rank of surgeon-major was retained in the Indian Army, although discontinued in the British Army?" Lord George Hamilton replied that the point had been brought to the notice of the Secretary of State by the Government of India; but as a report on the general question of the organisation of the entire Indian Medical Service was shortly expected from India, it had been determined to await that report before coming to any decision on this individual point. Considering the effects of the last Medical Army Warrant on the Medical Service of the British Army, this statement cannot be regarded as encouraging news for either those now in, or those who are thinking of entering, the Indian Medical Service.

HOSPITALS FOR THE WELL-TO-DO.

An important meeting was held on the 27th inst., at the Mansion House, under the presidency of the Lord Mayor, to consider the propriety of establishing an association to provide homes in various parts of the metropolis for private patients who can afford to pay for the accommodation. We are not able to-day to notice the meeting at any length, but the following resolutions were carried:—"That it is desirable to establish an association with the object of providing hospital treatment, skilled nursing, convalescent institutions, and other accommodation much needed at present, for the benefit of all classes who can afford to pay for such advantages, when attacked by illness;" and "That the Home Hospital Association will render material public service by co-operating with the managers of the present hospitals supported by endowments or private charity, in preventing the abuse of such hospitals by people who can afford to pay for their treatment, and by providing for the benefit of the public, and for the assistance of the medical profession, well-regulated hospitals and convalescent institutions, to which the latter can send

with confidence patients willing to defray the cost of the accommodation which they require, and cannot otherwise obtain." A provisional committee was also appointed to take steps to fulfil the objects named in the resolutions.

FROM ABROAD.

Sudden Death in Typhoid Fever.

At a meeting of the Biological Society (*Gaz. des Hôp.*, No. 47), Dr. Dieulafoy observed that sudden death in typhoid fever is far from being of very rare occurrence; and since he has paid attention to the subject he has been able to collect fifty cases. On comparing these together, one fact is strikingly prominent—viz., that all these cases have occurred at from the seventeenth to the nineteenth day of the course of mild typhoid fever. A recent case furnishes an example of what takes place in all of them. A man, eighteen years of age, passed through a mild typhoid fever without any bad symptom during sixteen days, and seemed to be convalescent, when on the seventeenth day, while talking with a nurse, he was seized with convulsive movements of the face, became pale, and died immediately. To explain these sudden deaths in typhoid two theories have been advanced, which may be said to be based the one on physiology and the other on pathological anatomy. According to the first of these—advocated by Prof. Paul Bert, Dr. Tarchanoff, and Dr. Dieulafoy himself,—a reflex influence must be admitted, which, taking its departure from some point in the intestinal canal, reacts on the bulb, giving rise to an arrest of the heart's action and fatal syncope. The other theory, based upon pathological anatomy, and chiefly advocated by Dr. Hayem, explains death in these cases by a granulo-adipose degeneration of the muscular fibres of the heart. The researches of Zenker had already proved that typhoid fever is a disease which often gives rise to such degeneration. But if we confront clinical practice with pathological anatomy, we find that there are a great number of diseases, and even certain diseases of the heart itself, which much more frequently than typhoid fever cause this degeneration of the muscles of the heart, and yet which never terminate in sudden death. On the other hand, in six of these cases of death in typhoid, the most minute microscopical and macroscopical examination revealed no change whatever in the cardiac muscular fibre. In particular was this observed in the case mentioned above, in which the microscopical examination of the heart made by M. Malassez could detect no degeneration whatever. The occurrence is therefore not to be explained by pathological anatomy; and if we cannot regard the physiological theory demonstrated, we must admit that the pathogeny of the affection has yet to be sought.

M. Laborde observed that this theory had been somewhat hastily deduced from experiments made on frogs, as if what is observed in them is true also in man. The frog, as is well known, has the power of arresting the action of its heart at will, so to say—the slightest contact sufficing to produce such arrest; so that such a special susceptibility should be borne in mind; and before any conclusions were drawn from M. Tarchanoff's experiments on frogs, they should have been repeated on animals more approaching man—for example, dogs. Now, in dogs, arrest of the heart can only be produced with the greatest difficulty, for in them the abdomen may be opened, and duodenal or gastric fistulæ formed, without causing death or the accidents which are observed in frogs. Still, while maintaining great reserve with respect to the physiological interpretation of these sudden deaths in typhoid, M. Laborde agrees with M. Dieulafoy as to the insufficiency of the explanation furnished by pathological anatomy; and he suggests that account should be taken of anæmia and modifications of the blood in the explanation of the cases collected by M. Dieulafoy. M. Onimus observed that in physiological experimentation the action of the heart is never completely arrested by irritation applied to the intestine, and in his opinion it is to the region of the bulb we must look for the cause of death in these sudden deaths. The heart is, in fact, the last portion of the economy that ceases to perform its functions. In cases of asphyxia from chloroform, for example, the heart continues to beat long after the nervous system has become exhausted. M. Dieulafoy, in reply, observed that he had never intended to establish any parallel between man and the frog; but there exist facts, borrowed from man himself, which may be cited in favour of the physiological theory. One of these is the case of a child seven years of age, who, having swallowed several cherry-stones, was seized with epileptiform convulsions and died suddenly; and at the autopsy these stones were found in the intestinal canal. Clinical practice is indeed rich in cases of this kind, in which a foreign body in the intestinal canal is the point of departure of epileptiform convulsions, and often of sudden death itself. As to anæmia and conditions of the blood, he does not think that they need be taken into account; for is sudden death met with in cancer, chronic tuberculosis, articular rheumatism, and other cachectic conditions, which all give rise to much greater anæmia than typhoid fever?

GENERAL CORRESPONDENCE.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

Letter from Dr. Joseph Rogers.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust you will permit me to remind the members of the Poor-law Medical Service that the annual meeting of the Association will be held at 3, Bolt-court, Fleet-street, on Tuesday, July 3, at 3 p.m. precisely, when, besides certain matters of a routine character, subjects of considerable interest to metropolitan as well as provincial members will be discussed, such as the abuse of authority by the police in converting workhouse infirmaries into continuous police stations; the extension of the provision by boards of guardians of expensive medicines; the necessity for the establishment of dispensaries in provincial towns; the consideration of some important correspondence with the Local Government Board anent the question of extra fees; the Permissive Superannuation Act, etc. The work done by the Council during the last twelve months, though not attracting public attention so markedly as in past years, has, nevertheless, shown the absolute necessity for such an organisation, seeing that we have been frequently applied to for information, advice, and support by Poor-law medical officers, who, without our assistance, would have been at a loss to know where to turn for help.

The Council therefore trust that members and friends of the Association will strive to put in an appearance, as it is very desirable that no apathy or lack of interest should be exhibited.

I am, &c., Joseph Rogers,
Dean-street, June 25. Chairman of the Council.

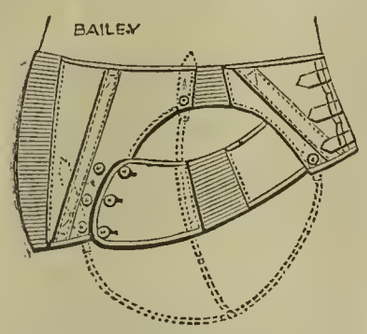
The Hunterian Museum.—The members of the Royal College of Surgeons resident in London, and those about to visit the metropolis, will be glad to know that the preparations about to be added to the fine collection are now on view in the theatre of the College, and include the large and valuable series so generously presented by Dr. Peacock, and for which the large gold medal of the College was presented to that gentleman; it includes also some of the Indian trophies presented by H.R.H. the Prince of Wales. After Thursday next, the 5th prox., they will be removed, as the theatre will be required for the primary examinations for the membership.

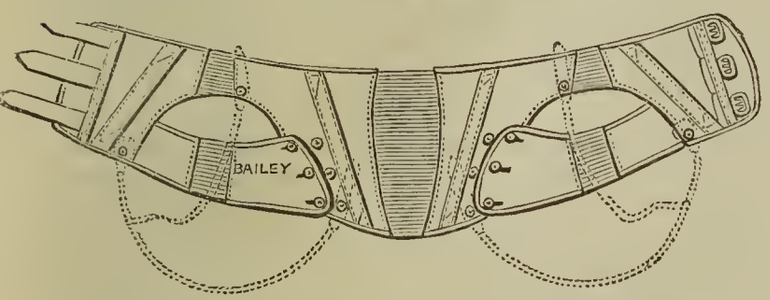
Sulphate of Quinine and the War.—Formerly when war broke out it was thought only a scourge for the belligerents, others feeling little concern in it. At the present day, however, the human family is influenced by even the most distant struggles, and here, as in all social phenomena, it is the wretched and unfortunate who are the chief victims. An example of the pharmaceutical order is found in what has happened during the present war with respect to sulphate of quinine, which in the course of a few months has nearly tripled in value. At the beginning of the year it was worth 300 fr. the kilogramme, whilst at the present time its price is near 800 fr. This increase is due to the large purchases made by the belligerents. The Turks in one day bought more than 100 kilogrammes of one of the principal Paris houses. Who would have thought that the expense of an intermittent fever would be so seriously increased by the Czar and Sultan coming to blows!—*Lyon Méd.*, June 24.

NEW INVENTIONS AND IMPROVEMENTS.

BAILEY'S PATENT ABDOMINAL BELTS.

We have received from Messrs. Bailey, of Oxford-street, a new Abdominal Belt for Women, which appears to us to possess some very decided advantages. It is well known that the great and common defect in most, if not all, the supports of this kind is the difficulty of keeping them in place, of preventing their "rucking up." In their new belt Messrs. Bailey have provided orifices through which the hip-bones project, and thus the upper part of the belt is supported and kept in position, while the combination-straps, passing underneath, and connecting the back and front, secure the lower part. Rucking or riding up is thus prevented to a





degree that we have not found approached in any other form of belt we are acquainted with. The belt is well made, gives great support, and is easy and comfortable.

Messrs. Bailey construct also, on the same principle, a Gentlemen's Riding Belt, which will, we should think, be found very useful when, for any reason, special abdominal support is desirable.

RABUTEAU'S ELIXIR FERRUGINEUX, AND DRAGÉES FERRUGINEUSES.

Messrs. Clin and Co., the well-known chemists of Paris, have forwarded to us samples of the above-named preparations. The Elixir and Dragées are very elegant preparations; they render the administration of iron easy, and palatable even to the most fastidious. There need no longer be any difficulty in getting children to take steel, so long as they can have it in such a form as this. We can recommend their use from personal experience.

Death from Milk in the Trachea.—At the Geneva Medical Society, Dr. Odier related the case of a boy about four years of age, who, while taking some milk at table, sank his head and became suddenly pale, death taking place in two or three minutes without struggle or cyanosis. At the autopsy a small fragment of bread was found in the epiglottis, and at the bifurcation of the bronchi there was also found a little bread softened with milk, but which in nowise obstructed the bronchi. A little lower down in the bronchi there were also fragments of the same of the size of a pin's head. Death in this case must have taken place from syncope, and not from suffocation. The heart and lungs were quite healthy, and there were neither subpleural ecchymoses nor bronchial foam. Dr. D'Espine referred to the rapidity with which asphyxia occurs in children who have undergone tracheotomy on the escape of the canula, so that death is imminent unless this be instantly replaced. Dr. Juillard met with the case of an infant at the breast found dead in its cradle. Some coagulated milk was found in the trachea, but not in sufficient quantity to produce obstruction. Dr. Prévost believed the mechanism of death in these cases is similar to that produced in animals by stimulating the central end of the inferior laryngeal, which arrests the diaphragm and respiration. In these cases there may be a similar reflex action due to the foreign body conjoined with the spasmodic element. —*Lyon Méd.*, June 24.

OBITUARY.

JOHN CRONYN, F.R.C.S. Ire., etc.

We much regret to announce the death, at the comparatively early age of fifty years, of this estimable member of the profession. Dr. Cronyn died at his residence, Molesworth-street, Dublin, on Friday, June 22, after an illness of rather more than two months' duration. In the beginning of April he had been attacked with a gouty affection of the heart, followed by pulmonary and renal congestion, and finally by organic disease of the kidneys. Several weeks ago his life was in imminent danger, but a naturally strong constitution and untiring care enabled him for a time to weather the storm of disease to which he was exposed. Dr. Cronyn was deservedly popular amongst his professional brethren. Only three weeks before his decease his name had been returned at the head of the poll at the election for the Council of the Royal College of Surgeons in Ireland. In the School of Surgery attached to the College he had been Professor of Midwifery since shortly before the death of Dr. James Sawyer in 1875. He was also Obstetric Physician to the Dublin Infirmary for Diseases of the Eye and Ear, and Physician to the Bank of Ireland. As a writer he undertook no ambitious works, but made various contributions to obstetric medicine in the pages of the *Dublin Journal of Medical Science* and of the *Medical Press and Circular*.

MEDICAL NEWS.

University of Durham.—Easter Term.—The following gentlemen, having satisfied the examiners, had their degrees conferred on Tuesday, the 19th inst. The degree of M.D. for practitioners of fifteen years' standing:—

Cassidy, James L. | Goldsmith, George P.

The degree of M.B.:—

Emmerson, John B. | Fenwick, Bedford.

University of Dublin.—School of Physic in Ireland.—At the Trinity Term examination for the degree of Bachelor of Medicine, held on Monday and Tuesday, June 11 and 12, the following candidates were successful:—

Malet, Henry.	Barton, Travers B.
O'Dwyer, Malachi.	Hamilton, Thomas W.
Patterson, John.	Adams, John J.
Walsh, William B.	Booker, William A.
Mallins, Clement.	Hall, James C.
Dobbs, Arthur F.	Manning, George H.
Crofts, Freeman W.	Byrne, William.

At the examination for the degree of Bachelor in Surgery, held on Monday and Tuesday, June 18 and 19, the following candidates were successful:—

Malet, Henry.	Crofts, Freeman W.
Thompson, James E.	Taylor, Sidney.
McCartie, Frederick F.	Booker, William A.
O'Dwyer, Malachi.	Wrightson, Richard B.
Dobbs, Arthur F.	Adams, John.
Hamilton, William.	McDermott, Rudolph J.
Byrne, William.	Hall, James C.
Sheppard, Henry D.	Conolly, John W.

The names in the foregoing lists are arranged in the order of merit of the candidates' answering. Mr. Malet was recommended to obtain the degree of B.Ch. *stipendiis condonatis*, as he had won first place at both the medical and the surgical degree examinations.

Royal College of Surgeons.—The following gentlemen having undergone the necessary examinations were admitted Licentiates in Dental Surgery at a meeting of the Board on the 26th inst., viz.:—

Fisher, W. M., Dundee.	Pedley, T. F., High-street, Boro'.
Gill, C. L., Bow-road.	Read, Lawrence, Gower-street.
Girand, L. G., Paris.	Rowney, T. W. F., Hull.
Margetson, W. E., Dewsbury.	Tuxford, J. E., Boston.
Matheson, Leonard, Wharton-st.	Welch, J. E., Brighton.
Morison, J. C., Powis-square, W.	Williams, E. L., Rhyl.
Murphy, O. B., Derby.	

Four candidates were rejected. The following were the questions submitted to the candidates:—Anatomy and Physiology: 1. Describe the outer wall of the cavity of the nose, and name the sinuses in immediate relation with it. 2. Describe the distribution of the third division of the fifth pair of nerves, and state what are the functions of its

branches.—Pathology and Surgery: 3. What are the most common causes of necrosis of the lower jaw? Describe the process of exfoliation of a sequestrum. 4. Describe the appearances of those diseases of the tongue which more or less resemble epithelioma; and state the causes which give rise to them.—Dental Anatomy and Physiology: 1. Describe specimens 1, 2, and 3 under the microscope. 2. Sketch the history of the development of, and changes in, the osseous and dental portions of the inferior maxilla, from the period of birth to the age of seven years. 3. Give the chemical composition of enamel, cementum, and dentine. Describe the chemical changes which occur in the latter during the progress of caries, and state how they are probably effected.—Dental Surgery and Pathology: 1. Enumerate all the circumstances under which the extraction of sound temporary and permanent teeth may be necessary. 2. What are the conditions of the pulp which would induce you to endeavour to preserve or destroy it? Describe the treatment in both cases. 3. Describe the form and structure of (*a*) syphilitic teeth, and (*b*) teeth with rocky or honeycombed enamel, pointing out the distinctions between the two.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 21:—

Cardew, George Arthur, Cheltenham.
Taylor, Moses, Cannock, Staffordshire.
Webb, Henry Langley, Cheadle.

The following gentlemen also on the same day passed their primary professional examination:—

Oxley, Alfred James Rice, London Hospital.
Pritchard, Samuel Evan, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DOWSE, THOS. STRETCH, M.D., F.R.C.P. Edin.—Physician to the North London Consumption Hospital, Hampstead.

ORD, WM. MILLER, M.B., F.R.C.P. Lond.—Physician to St. Thomas's Hospital, *vice* T. B. Peacock, M.D., resigned.

SMITH, RICHD. T., M.D., M.R.C.P.—Physician to the North London Consumption Hospital, Hampstead.

SQUIRE, W., M.D., M.R.C.P.—Physician to the North London Consumption Hospital, Hampstead.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Staff Surgeon Thomas Kipling has been placed on the Retired List of his rank from June 14.

DERBYSHIRE YEOMANRY CAVALRY.—Frederick William Wright, gentleman, to be Surgeon.

BIRTHS.

EVANS.—On June 25, at Cheshunt, Herts, the wife of Nicholl Evans, M.D., of a son.

GRANT.—On June 12, at Corradino House, Malta, the wife of Surgeon-Major R. A. P. Grant, M.R.C.S. Eng., of a son.

WHARTON.—On June 25, at 39, St. George's-road, Kilburn, the wife of Henry Thornton Wharton, M.A., M.R.C.S., of a son.

MARRIAGES.

BOUTFLOWER—SAXON.—On June 21, at St. Margaret's Bowden, Edward Boutflower, solicitor, Manchester, youngest son of John Boutflower, F.R.C.S., to Mary Elizabeth, eldest daughter of the late Wm. Saxon, C.E., The Castle, Northwich.

CLEGHORN—BARROW.—At Naini Tal, East Indies, James Cleghorn, M.D., Surgeon-Major Bengal Army, to Tryphena Esther, daughter of Colonel de S. Barrow, Madras Staff Corps.

EAGAR—WEBB.—On June 20, at Holy Trinity Church, Amblecote, Robert Taylor Sumner Eagar, M.D., to Caroline Josephine, fourth daughter of the late Joseph Webb, of Coalbourn Brook, Stourbridge.

LLOYD—LEWIS.—On June 21, at St. Paul's, Wokingham, Robert H. Lloyd, M.D., of South Lambeth, son of H. Lloyd, Esq., of Kentish Town, to Frances Harriet Nunn, daughter of the late Mr. G. P. Lewis, of Wokingham.

LOWES—BEESLEY.—On June 19, at St. George's, Hanover-square, Frederick John Lowes, M.D., late of Anglesey, Hants, to Marianne, only daughter of the late William Beesley, Esq., of Leicester.

MCDONNELL—MCCAUSLAND.—On June 21, at the residence of the bride's father, Robert McDonnell, M.D., F.R.S., President of the Royal College of Surgeons in Ireland, to Susan Isabella Elizabeth, second daughter of Sir Richard B. McCausland, of Fitzwilliam-square, Dublin.

DEATHS.

ACLAND, HERBERT DYKE, of Christ Church, fourth son of Henry W. Acland, M.D., of Oxford, at Newera-Eliya, Ceylon, on June 4, aged 22.

COOPER, GEORGE, F.R.C.S. and J.P., at Brentford, Middlesex, on June 23, in his 85th year.

LALLEMAND, FREDERICK FRANCIS, F.R.C.S., at Parvey House, Higher Sutton, Macclesfield, on June 20, aged 79.

MACRORIE, DAVID, M.D., of Mount Vernon, near Stroud, late of Liverpool, on June 17, aged 90.

MUIRHEAD, ANN NELSON, wife of Henry Muirhead, M.D., of Longdales, at Bushy Hill, Cambuslang, Lanarkshire, on June 24.

RANDELL, HENRY LLOYD, M.R.C.S. Eng., Surgeon-Major and Principal Medical Officer, Straits Settlements, in Singapore, on June 22, aged 43.

WHITE, EDITH LŒTITIA, wife of Surgeon-Major Charles White, M.R.C.S. Eng., youngest daughter of Joseph Seaton, M.D., of Sunbury, at Indore, Central India, on May 28.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident House-Surgeon. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Society of Apothecaries of London, and registered under the Medical Act. Diplomas and testimonials, under seal to the Chairman of the Committee of Management, at the Institution, Queen's-road, Brighton, on or before July 2.

ATTEMPTED SPOLIATION.—It is with some satisfaction that we have learned that the Local Government Board has rejected the proposal of the Richmond Rural Sanitary Authority to acquire four acres of Barnes Common for sewage purposes. Any limitation of the area of this favourite place of resort for recreation could only be justified under the most urgent circumstances.

LECTURES ON MEDICAL JURISPRUDENCE AT THE PARIS MORGUE.—The Paris Faculty of Medicine is now engaged in making arrangements with the Préfet de Police in order to obtain authority to give lectures on Legal Medicine at the Morgue. In the probable event of obtaining this it is proposed to give lectures to senior students twice a week during winter upon any of the bodies which have not been claimed within a given interval. Bodies of persons supposed to be the victims of crime will only be available by the professor after the judicial experts have terminated their investigations, and the bodies would be otherwise buried. Nor will he interfere with those that are claimed, except by permission of the friends of the deceased.—*Lyon Méd.*, June 24.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

L.S.A.—There is no chance of the Bill passing this year, but the sooner you are registered the better.

Anglicanus.—Outdoor relief in France is administered by Bureaux de Bienfaisance. Those in Paris may be taken as fairly representing the rest of France. The direction of the public organisation for the relief of the Parisian poor is confided to a general Administration of Public Assistance under a responsible director, who administers not only the hospitals and almshouses, but also the lunatic asylums, infant homes, lying-in houses, etc., and, through twenty Bureaux de Bienfaisance, the whole outdoor relief service. This director, under the control of a board, is subordinate both to the Prefect of the Seine and to the Minister of the Interior. The Administration employs between six and seven thousand officials, of whom about two thousand are medical.

Dens Sap.—The list is published in another column. The following gentlemen are the members of the Dental Board—viz., Messrs. F. Le G. Clark, F.R.S., chairman; W. S. Savory, F.R.S.; John Birkett, Senior Vice-President of the College; S. J. A. Salter, F.R.S.; T. A. Rogers; and H. J. Barrett.

F.R.C.S. Exam.—The Honorary Secretaries of the Fellows' Festival have always been men of note. Mr. Lowne has just been elected in succession to Mr. William Allingham.

THE SANITARY AUTHORITY WANTED.

A contemporary publishes the following letter from Mr. G. Mitchall, 166, Brompton-road, S.W., dated the 23rd inst.:—"I want to call attention to a case that came under my notice this morning. A child came to my yard for a kettle of water. I accompanied him home, and found eighteen persons living without water, as they had been for five weeks, closets stopped, and the place converted into a fever den through the cutting off of the water. The amount of the rate had been proffered, but through the arrear an extra half-quarter was demanded, which could not be raised. Now, I ask, ought the sanitary authorities to permit crowded houses to be deprived of water to the danger of the neighbourhood?"

ENCLOSING CHOBHAM-COMMON.

The Secretary for War issued notices, on Saturday, to persons having rights on Chobham-common, that, in pursuance of the provisions in the Lands Clauses Consolidated Act, 1845, Chobham-common would be enclosed, and all parties having commonable and other rights would be compensated for extinguishing their interests. The Common comprises 2050 acres of land.

Mortality in the Indian Army.

From the annual report of the health of the British Army in India for 1875, recently issued, the higher death-rate in India than at home is shown to be as follows:—The average number of deaths in the army in England is about 11 in the 1000 per annum; in India the average amounts to no less than 17·48 per 1000. In England soldiers from thirty years of age and upwards die at the rate of about 17 per 1000; in India the death-rate is 47·52. In 1875 the death-rate among new arrivals was 24·39 per 1000, against a little over 17 per 1000 for the seasoned troops, notwithstanding every precaution being taken to send young soldiers to healthy stations on their first arrival. Out of every 1000 cases admitted to hospital, no less than 205 are due to disease brought on by their own immoral conduct. It is stated that every soldier in the British Army in India was 20 days in hospital in 1875; in Bombay the maximum was 38 days per man; in Bengal, 39; and in Madras, 44. The annual death-rate of officers of British regiments is 17·09 per 1000, and of officers of the Indian Army 13·09 per 1000. To the careful medical examination every officer has to undergo before being admitted as a probationer for the Indian Staff Corps, the low rate of this latter class is most likely due.

COMMUNICATIONS have been received from—

Dr. Pavy, London; Dr. Levy Marsh, London; Dr. J. Dudgeon, Pekin; Dr. W. R. MacDonald, Ayr; Dr. R. Smith, Sheffield; Dr. J. B. Peacock, London; Sir D. Corrigan, Dublin; Dr. J. Rogers, London; Mr. T. Holmes, London; Dr. Edis, London; Dr. Sturge, Paris; Mr. Brudenell Carter, London; Mr. Burdett, Greenwich; Mr. F. Fowke, London; L.S.A.; Mr. J. H. McClosky, London; Mr. F. Seymour Haden, London; Librarian of the Charing-cross Hospital; Secretary of the Meteorological Society; Mr. A. A. Denham, London; Dr. Stephen Mackenzie, London; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

A General Report of the Cases under Treatment at the Seamen's Hospital, Greenwich—Dr. Edward Levenstein, Die Morphiumsucht—H. B. Sands, M.D., On the Treatment of Intussusception by Abdominal Section—St. George's Hospital Reports, vol. viii., 1874-76—Francis Seymour Haden, F.R.C.S., The Etched Work of Rembrandt Critically Reconsidered—Sampson Gamgee, F.R.S., Our Medical Charities: an Address delivered June 26, 1877—Salt and Son, Medico-Electric Apparatus, and How to Use it—Fourth Annual Report of the London Temperance Hospital.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—La Province Médicale—Maryland Medical Journal—Lyon Médical—American Practitioner—Leisure Hour—Sunday at Home—Morningside Mirror—Cincinnati Clinic—Students' Journal and Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

June 30. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

July 2. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal Institution, 2 p.m. General Monthly Meeting.

3. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

4. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex. 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.

Obstetrical Society, 8 p.m. Specimens. Mr. T. Spencer Wells, "Additional Cases of Ovariotomy performed during Pregnancy." And other Communications.

5. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.

Sanitary Institute of Great Britain (Royal Institution), 4 p.m. Dr. B. W. Richardson, "On the Future of Sanitary Science—in relation to Political, Medical, and Social Progress."

6. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 23, 1877.

BIRTHS.

Births of Boys, 1148; Girls, 1122; Total, 2270.
Average of 10 corresponding years 1867-76, 2131·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	672	599	1271
Average of the ten years 1867-76	660·9	598·4	1259·3
Average corrected to increased population ...	...	...	1347
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	3	1	1	6	1	2	...	6
North... ...	751729	17	8	4	3	4	1	3	2	6
Central ...	334369	...	4	...	1	2	...	...	1	4
East	639111	4	21	5	...	7	1	3	1	13
South... ...	967692	19	6	4	2	16	2	4	1	17
Total	3254260	44	42	14	7	35	5	12	5	46

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·760 in.
Mean temperature	63·3°
Highest point of thermometer	84·4°
Lowest point of thermometer	46·0°
Mean dew-point temperature	50·4°
General direction of wind	E.
Whole amount of rain in the week...	0·01 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 23, 1877, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1877.*	Persons to an Acre. (1877.)	Births Registered during the week ending June 23.	Deaths Registered during the week ending June 23.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3533484	46·9	2270	1271	84·4	46·0	63·3	17·39	0·01	0·025
Brighton	102264	43·4	48	33	78·4	55·0	62·8	17·12	0·15	0·38
Portsmouth ...	127144	28·3	86	32	73·0	54·0	62·0	16·67	0·18	0·46
Norwich	84023	11·2	48	29	79·2	51·0	61·4	16·33	0·47	1·19
Plymouth	72911	52·3	44	24	75·0	53·5	62·5	16·95	0·28	0·71
Bristol	202950	45·6	141	81	84·0	49·2	63·6	17·56	0·34	0·86
Wolverhampton ...	73389	21·6	54	31	80·5	46·2	61·7	16·50	0·34	0·86
Birmingham ...	377436	44·9	267	183	...	...	...	...	...	...
Leicester	117461	36·7	82	43	81·8	46·8	61·0	16·11	0·48	1·22
Nottingham ...	95025	47·6	66	40	80·4	46·8	61·6	16·45	0·67	1·70
Liverpool	527083	101·2	382	253	79·0	48·5	61·9	16·61	0·32	0·81
Manchester ...	359213	83·7	223	169	88·0	47·0	63·9	17·72	0·56	1·42
Salford	141184	27·3	100	82	82·7	44·5	61·4	16·33	0·18	0·46
Oldham	89796	19·2	75	48	...	...	...	...	...	...
Bradford	179315	24·8	102	73	80·0	46·6	61·5	16·39	0·10	0·25
Leeds	298189	13·8	212	115	79·0	47·0	61·5	16·39	0·12	0·30
Sheffield	282130	14·4	194	114	80·0	43·0	60·2	15·67	0·29	0·74
Hull	140002	38·5	104	42	72·0	48·0	58·1	14·50	0·27	0·69
Sunderland ...	110382	33·4	72	46	73·0	47·0	56·8	13·78	0·49	1·24
Newcastle-on-Tyne	142231	26·5	106	46	...	...	...	...	...	...
Edinburgh	218729	52·2	158	93	65·0	44·5	55·6	13·12	0·74	1·88
Glasgow	555933	92·1	438	228	76·0	45·0	59·1	15·06	0·28	0·71
Dublin	314666	31·3	156	152	81·1	38·8	60·9	16·06	0·29	0·74
Total of 23 Towns in United Kingdm	8144940	38·3	5428	3228	88·0	38·8	61·0	16·11	0·33	0·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·76 in. The highest reading was 29·94 in. on Tuesday morning, and the lowest 29·39 in. on Friday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1877 by the addition of six years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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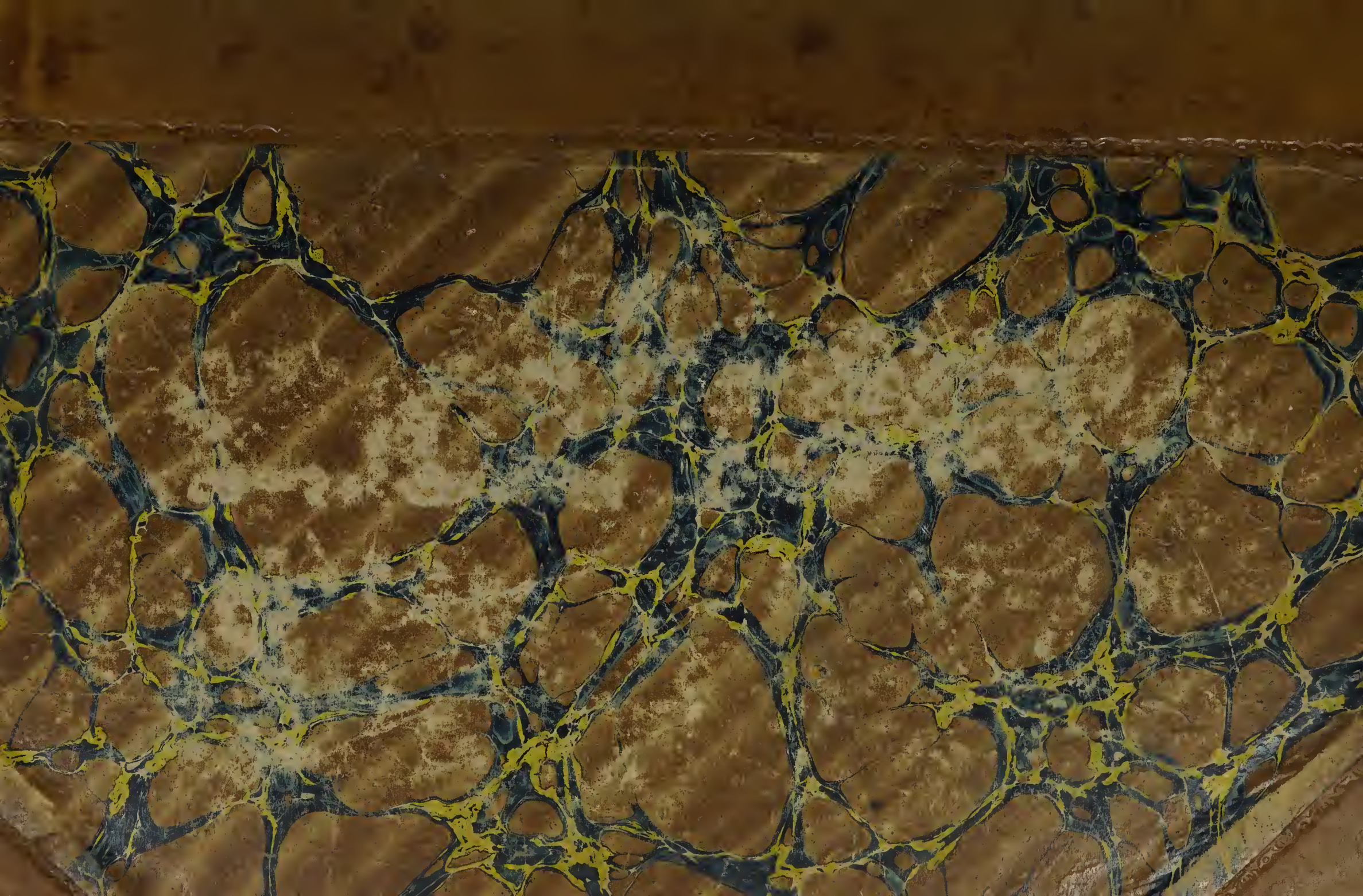
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